


The Impact of Learning Disabilities on Adulthood: A Review of the Evidenced-Based Literature for Research and Practice in Adult Education

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Abstract

It is now well established that learning disabilities (LD) persist into the adult years, yet despite a developing literature base in this area, there is a paucity of evidence-based research to guide research and practice. Consistent with the demands of the adult stage of development, autonomy and self-determination are crucial to quality-of-life issues to adults in general, and specifically to adults with LD. There are many areas of functioning in which adults need to adapt successfully, such as employment, family, social and emotional, daily living routines, community, and recreation and leisure. In essence, there are a myriad of challenges and outcomes as adults navigate the trials and tribulations of LD as it manifests itself into adulthood. This review of the extant evidence-based literature seeks to discover relevant knowledge that can be shared with practitioners who serve adults with LD in a variety of professional and volunteer roles, particularly in adult education settings.

Keywords

adults with LD, adults with dyslexia, adults with LD outcomes, adults with LD and employment, adults with LD and life span issues

Learning disabilities (LD) form a heterogeneous group of cognitive disabilities (with a variety of subtypes). Since there is not an adult-specific definition for LD, there are consequently a myriad of adult outcomes. Taymans, in this issue, addresses the legal and definitional issues related to specific LD and how they currently inform policy, practice, and research. For the purposes of this article, the definition developed by the National Joint Committee on Learning Disabilities (NJCLD, 1991) is most fitting. When reviewing the LD literature, it is common to read about a wide range of functioning from highly successful to moderately successful, to those who are either marginally adjusted and/or totally dependent on others (Gerber & Reiff, 1991).

Moreover, by nature adults with LD can be placed on a continuum of severity, ranging from borderline or low average intelligence to superior intelligence (Reiff & Gerber, 1991; Shaywitz, Morris, & Shaywitz, 2008). Complementary to the issue of severity is a range of adaptive behaviors that can have implications for daily functioning and social skills that must be utilized consistently and effectively in numerous adult contexts (Gerber & Reiff, 1991; Roffman, 2000). Issues of comorbidity are also part of the adult with LD experience. It is not uncommon for adults with LD to also have ADD/ADHD, anxiety, depression, personality

disorder, and age-related conditions (Gerber et al., 1990; San Miguel, Forness, & Kavale, 1996). A small subset of the LD population is gifted (Dole, 2000). Therefore, the mantra for thinking about adults with LD is “one size does not fit all” because there are a wide array of interindividual differences. Therefore, it is not surprising to find very diverse outcomes for adults with LD. In essence, the impact of LD on adulthood is multifaceted with a whole host of challenges.

The stage of adulthood also poses an interesting set of dynamics. At the onset of adulthood, there can be as many as 70 or more years, the longest stage of human development. However, the adult stage of development can best be thought of in phases, from early to middle to late adulthood (Erickson, 1963; Gould, 1978; Havighurst, 1972; Levinson, 1978, 1986). Numerous adult development theorists have conceptualized a sequence of development that provides a useful framework, but none has proffered one specific to

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adults with LD. However, when judging the developmental challenges of any or all of the phases of adulthood for those who are LD, it is helpful to refer to adult normative development frameworks for guidance (Bassett, Polloway, & Patton, 1994; Gerber, 1993).

Developmental challenges and milestones in a series of domains provide a matrix for adult functioning. Those domains vary depending on adult theorists, but they typically include employment, family, personal–social, and so on. Overall, the path that emerges from the adult development literature is typically one of competitive employment, independent living, family involvement, community participation, leisure and recreation pursuits, and possible continuing education. These areas of functioning are germane to adults with LD as well.

Unlike the school-age years, the adult with LD experience is not centered on education. In fact, LD may be viewed by adults with LD as purely an educational construct, relegated only to the school-age years. Moreover, because of the invisibility of LD, disclosure becomes a choice in adult settings mediated by the dynamics of risk and reward. The ultimate question for adults with LD is “to be LD or not to be LD” (Gerber, Price, Mulligan, & Williams, 2005). There are legal protections emanating from Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990 and its reauthorization the Americans with Disabilities Act Amendments Act of 2008 that are important to adults with LD. These laws are relevant to only education and employment, however. The rewards are the use of the laws to prevent discrimination, to gain equal access, and to provide “a level playing field” when competing with nondisabled peers. The risks are misunderstanding, stigma, negative self-esteem issues, and social isolation reminiscent of the school-age years (Gerber & Price, 2006).

Generalizing about the impact of LD on adulthood can be very complicated. It must be nuanced to capture its complexity. Without question, there are trials and tribulations in the many phases of adulthood, from day to day and from year to year (Gerber, 1992a, 1994). At the same time, there are many good examples of successful adjustment where adults with LD have achieved a good quality of life—finding their niche by focusing on their strengths and compensating for weaknesses within their individual profile (Gerber, Ginsberg, & Reiff, 1992; Reiff, Gerber, & Ginsberg, 1997; Spekman, Goldberg, & Herman, 1992). Currently in the field of LD, there is a developing literature base on adults with LD, but only a limited set of research. The purpose of this review is to present evidence-based findings about the adult with LD experience that can inform the practice for professionals and volunteers who work with adults with LD, particularly in adult education settings.

Procedures for Searching the Research Literature

The literature search on the impact of LD on adulthood focused on research in the following databases: ERIC Clearinghouse, PsycINFO, InfoTrac One, Academic One File, and Dissertation Abstracts International. In addition, hand searching was done in a number of journals from the past 17 years (beginning with the passage of ADA in 1990), including *Journal of Learning Disabilities*, *Learning Disability Quarterly*, *LD Research and Practice*, and *Remedial and Special Education*. One exception should be noted. The Rogan and Hartman (1986) study cited in this review was included because it is considered one of the seminal outcome studies of adults with LD. The search included only articles published in refereed journals.

Websites pertaining to the topic were searched as well. They included the websites for the Division for Career Development and Transition, the International Dyslexia Association, the Job Accommodation Network, the Learning Disabilities Association of America, the National Center for Learning Disabilities, the National Center for Special Education Research, the National Center for the Study of Adult Learning and Literacy, the National Collaborative on Workforce and Disability, the National Institute for Literacy, the NJCLD, the National Transition Longitudinal Study 2 (NLTS2), and the U.S. Department of Education, LDOnline.org, and SchwabLearning.org.

The search was done with disability-specific focus. Only the terms *learning disabilities* and *dyslexia* were used. Terms such as *mildly disabled* and *high incidence disabilities* were not included. Also excluded from the search were articles pertaining to LD in British journals because LD is an umbrella term for a wide array of disabilities including developmental disabilities. ADD and ADHD were not searched as primary disabilities. They were included for the purposes of reporting a small select set of data reported by the NLTS2.

All work cited in this review was considered via the standards of the Council for Learning Disabilities Research Committee (Rosenberg, 1993). The research review on low-literate adults with LD cited in the next section was done via the standards set by the National Reading Panel (2006a, 2006b).

The search for the literature in the area of impact of LD on adulthood was driven by a primary question to guide the review of the evidence-based research: “What do we know about the adult with LD experience that informs practice for transition preparation and adult education that can foster positive outcomes in the adult years?” Excluded from the search was a body of substantive research on persons with LD who continued on to higher education after their school-age years.

View of the Research

The research literature in this area is sparse, and most of the scholarly work lacks methodological rigor. A notable issue is the ages of the adult population investigated in most studies. Studies of adults with LD are skewed toward early adulthood, rarely targeting adults older than 30 despite the many years that encompass adulthood. Moreover, most longitudinal studies are follow-up studies (typically having only two data points) that are chronologically compressed, yielding only partial data about long-term trends. Last, studies of adults with LD seem to lack a conceptual model regarding how to investigate the adult years. Studies rarely address variables of adulthood (i.e., contexts and developmental phases) and tend to explain findings within a narrow perspective, losing out on the “big picture” as well as the complexities of adult life. Oftentimes findings from studies lack comparison to adult norms or trends found in nondisabled adults.

The research used for this review came in a variety of forms. Besides the studies cited from the literature search, some basic information used for the introduction of this article was gleaned from books reporting research specifically pertaining to adults with LD. The research cited was both quantitative and qualitative in nature. Qualitative work used standard scientific methods as well as accepted scholarly procedures for case studies, ethnographies, surveys, and questionnaires. The area of adults with LD is not as well researched as other topical areas in the area of LD. Therefore, at times, it was useful to refer to policy statements pertaining to LD by federal government agencies, professional associations, and learned societies, as well as private and publicly vetted websites.

Report of the Findings

Prevalence of Learning Disabilities

Ever since the passage of Public Law 94-142, the Education of All Handicapped Children Act, in 1975 (now reauthorized as the Individuals with Disabilities Education Improvement Act of 2004, or IDEA), LD has been the highest incidence disability category. According to data available from the National Center for Educational Statistics (2005), the incidence of all students with disabilities ages 6 to 21 served under Part B of IDEA was 9.15%. Of that percentage, the percentage of students served as being LD was 5.6%. From reporting year 2000–2001 to 2005–2006, the incidence range was 6.0% to 5.6%. That is by far the largest percentage of the 13 disability categories covered by the IDEA mandate. The NTLIS2 reported in 2000 that the number of students with disabilities in America’s schools

was 10.6%. The number of students with LD ages 13 to 16, the scope of their analysis, was 1,167,204, or 5.84%, the largest of any disability group. Consequently, each year thousands and thousands of students with LD leave high school and begin their adult lives, facing a wide variety of challenges leading to a broad array of outcomes.

There are other incidence indicators of adults with LD beyond the school-age years, albeit they are dated. The U.S. Department of Labor (1991) reported that 15% to 20% of Job Partnership Training Act clients may have had LD. Kusserow (1992) reported that the inspector general of the U.S. Department of Health and Human Services stated that LD was one of the two most frequently cited functional impairments of Aid to Families with Dependent Children (AFDC) clients. Giovengo, Moore, and Young (1998) found that 36% of AFDC (now called Temporary Assistance for Needy Families) clients were diagnosed as LD.

Considerations for Deriving Meaning From Follow-Up Studies

It is important to derive meaning from follow-up studies about individuals with LD knowing that typically they are fraught with methodological limitations and, in some cases, methodological flaws. Robins (1977) described some common methodological problems found in follow-up studies. Those that are relevant to this review are (a) failure to control for a change in definitions over time, (b) failure to incorporate control groups into designs for comparisons, (c) failure to control for attrition, and (d) difficulty in predicting individual outcomes from group designs. Needless to say, the follow-up research on the impact of LD in the adult years is not immune to the above warnings. Therefore, the following research should be understood with those considerations in mind.

Learning Disabilities in Adulthood

Although the research base pertaining to adults with LD is not extensive, there are a number of studies that shed light on the myriad of issues pertaining to the beyond-school years. To view a progression of thought and findings, the research is presented chronologically. Chronologically sequenced investigations and their findings can give a sense of how the research has unfolded in focus and scope.

Although this review emphasizes research since the 1990s, the work of Dr. Laura Rogan Lehtinen, a pioneer in LD who worked with Dr. Alfred Strauss and Dr. Heinz Werner, is warranted. Rogan and Hartman (1986) followed up their 1976 seminal comprehensive study of former Cove School students (a private LD school in Evanston, Illinois) who were from middle and high socioeconomic status

families. The purpose of the study was to ascertain whether the findings of their previous investigation had held up over the 8- to 10-year period since their first study. Their 88 original respondents were between 30 and 40 years old at the time of their second investigation. They divided the sample into three parts: 30 who completed 4 years of college, 34 who completed regular high school and had some experience with community college education, and 21 who attended self-contained LD programming before leaving high school. Three of their original sample had dropped out of school and were treated separately. Rogan and Hartman (1990) were able to locate only 68 individuals and obtained their data via questionnaire and telephone surveys.

They found that the positive trends seen in their 1976 study had continued for most of the participants. Former students whose future was in question in the 1976 study showed little improvement in the ensuing adult years. The basic skills of reading, math, and spelling continued to be a challenge. Overall, Rogan and Hartman (1990) attributed the positive outcomes to cooperation of families, early detection of LD, and duration and intensity of remediation. It is interesting that they concluded that LD was "no longer the dominant feature of their adult lives" (p. 99). Moreover, they deemed all three groups successful. Their ultimate criteria were "maintaining their adult lives in the workplace and in their personal lives" (p. 102).

Haring, Lovett, and Smith (1990) followed up graduates of self-contained LD programs who attended school in New Mexico from 1983 to 1985 to investigate adult outcomes 1 to 4 years after leaving school. The sample consisted of 64 randomly selected graduates, 60% male and 30% Hispanic, 24% having received vocational training in high school. Three life domains were investigated: (a) employment, (b) residential environment, and (c) social or interpersonal networks. Data were collected through a phone interview, which used an interview protocol that reflected the extant research on adults with LD at the time of inquiry.

A number of interesting findings were culled from the data analysis. Generally speaking, the outcomes demonstrated minimal adult adjustment. The unemployment rate of the sample was 31%, twice the national average, and more than twice the figure of the comparison group of young adults in New Mexico at that time. Only 35% of the sample went on for postsecondary training (none at 2- or 4-year college programs). However, their education and training did not enhance their employability. Women were reported as underemployed, leading the researchers to observe that LD programs did not adequately address their beyond-school skills. Overall, 60% were engaged in competitive employment, although the vast majority of the sample was not employed on a full-time basis. In all, 87% reported they were happy with their jobs. In the area of job finding, it is not surprising that most young adults with LD found their jobs through family and friends. Mobility

around their community was not an issue. General satisfaction was noted in both the social and recreational domains, albeit the researchers observed that they were limited to a narrow range of experiences.

Werner (1993), in her work investigating risk and resilience in her longitudinal study in Kauai, Hawaii, traced the development of 22 children with LD and matched them to 22 control participants on gender, ethnicity, and socioeconomic status. She found that most of the adults with LD, in adulthood (age 32 years old), had successfully adapted to their adult lives. Employment, marriage, and divorce rates were similar to those of controls, and mental health problems and criminal activity declined from adolescence to adulthood. Protective factors that created positive outcomes were attributed to self-efficacy, not only from academic competence but also from taking pleasure in interests and hobbies. Moreover, positive self-esteem was promoted through supported relationships.

Johnson (1994) reported her findings from a clinical study of 14 adults with LD. They were chosen from a pool of 400 clinic evaluation files of the Northwestern University Learning Disability Center. The purpose of her study was to investigate the psychoeducational patterns of adults who were reading at the fourth grade level or below and who had an IQ of 85 or greater in their verbal performance IQ scores. Assessment measures included mental ability, reading, oral and written language, mathematics, and various cognitive skills. Developmental, educational, social, and occupational histories were also included. All but two participants had graduated high school, and all of them were employed at the time of testing.

On completing diagnostic work, Johnson (1994) and her associates implemented an intervention described as "individual and interactive" (p. 43). Emphasis of intervention was placed on vocabulary development, reading strategies, and written language in sessions from 60 to 90 min per week (duration not described). Progress was noted in 4 of the 14 center's clients; 3 had progressed from third or fourth grade reading to seventh or eighth, resulting in seeking a higher level occupational positions as well as enrollment in community college programs. The fourth client's progress had been slowed because of family obligations.

Those who went through the diagnostic process gained knowledge of their strengths and weaknesses as well as the realization that LD was not their fault. Johnson (1994) observed, "[W]ith motivation and individualized instruction even small gains may provide them [adults with LD] with more educational, occupational and social mobility" (p. 50). How their gains outside of the clinic actually affected their lives is very difficult to say, however. The design of the study did not include a follow-up phase.

Post-high-school outcomes of high IQ adults with LD were studied by Holliday, Koller, and Thomas (1999) to ascertain their occupational and social adjustment. Participants

were chosen from a pool of 3,500 participants from a large university clinic in Missouri of those who had been referred for LD evaluation by the Department of Vocational Rehabilitation. In addition to the standard definition of LD, clients also had to meet the Rehabilitation Services Administration criteria for having functional limitations that impede the ability to work and engage in independent living. The authors noted that the vocationally oriented criteria used in their study were more stringent than most educationally oriented LD criteria focusing on academic deficits such as reading, writing, and mathematics.

Wechsler Intelligence Scale for Children-Revised Full-Scale IQ scores ranged from 94 to 131 with a mean of 114.35 ($SD = 8.78$), classifying them as “high IQ adults.” Mean performance IQ for the entire group was 122.21 versus 106.25 for the verbal IQ score. In all, 92% had graduated high school, but only 21% had completed more than 4 years of college and 5 years post-high school education and training. The major finding was that 95% of the participants in the study had not been told of their exceptional abilities, not only in school but also while being served by vocational rehabilitation services. Although individuals with LD had performed at the 90th percentile on cognitive measures, they were not told of their high aptitude and subsequently were not able to use the information in formulating vocational goals. It is interesting that the high IQ adults were “functioning at levels consistent with their LD deficits rather than at levels commensurate with their identified intellectual strengths” (Holliday et al., 1999, p. 266). These findings can be interpreted as a classic example of LD being looked on as a “deficit model,” whereas strengths, in this case significant strengths, are overlooked or not parlayed into identifying strategies to foster success fitting individual profiles. This is another example of how adults with LD ultimately can find themselves in jobs in which they are “underemployed.”

In a qualitative and ethnographic study, Gerber and Reiff (1991) explored the lives of nine adults with LD, ages 22 to 56, on a continuum of adjustment—highly adjusted, moderately adjusted, and marginally adjusted to adulthood. It was the first time that the adult with LD population was stratified according to a key life span variable, a construct operationalized as adjustment. The study focused on a variety of adult areas, including education, employment, social and emotional functioning, and daily living routines. Gerber and Reiff (1991) summed up the lives of the three subgroups:

A wide variety of functioning was seen both within groups and between groups in the areas of inquiry. Degree of vocational success typically was a function of extent of education, and in some cases related to severity of impairment. Participants who had received advanced degrees were progressing successfully in

their careers. Vocational success also characterized the group of moderately adjusted participants despite a string of different jobs and an unsystematic transition from school to employment. All marginally adjusted participants were unemployed and had no near term or long-range plans for education or training. Generally, their lives were noted for their dependency, whether with parents or with spouses. In the area of social and emotional functioning, the moderately adjusted group was qualitatively more proficient than the other two groups. They simply had an easier time navigating the many contexts of daily adult life with more ease and efficiency. All participants seemed to be very cognizant of their struggles during childhood. They were aware of the residual effects of LD in adulthood. Adulthood was not the end of their struggle, however. In their adult lives their hurdles seemed to be as numerous. However, they tended to be only as debilitating as the severity of their learning disabilities or the success of their own systems of accommodation. (p. xiv)

Gerber et al. (1990) investigated the persistence of LD across the span of adult years. A group of 133 adults (81 males and 52 females) ranging in age from 23 to 71 (mean age = 42.1) categorized as moderately successful and highly successful with LD were studied. Participants were asked to rate 13 characteristics of LD (e.g., listening, speaking, coordination, impulsivity, attention span) both retrospectively (in school) and currently (in their present adult lives) using a Likert-type scale (from 1 to 7 with increasing levels of severity).

Both groups responded that their LD got worse when comparing their school-age years to their adult years. Some stability of LD characteristics such as speaking and spelling was noted as well. Roughly 25% of all respondents reported increasing difficulties in adulthood on every item. However, the authors pointed out that the findings might be a function of the ever-increasing complexities (being developmentally appropriate) of work and daily routines as adulthood unfolded. Moreover, Gerber et al. (1990) commented that after the issue of persistence of LD from school to beyond school had been established in the thinking of LD professionals, a new realization became part of the conversation—“that things do not get better over time, and that problems associated with LD can even get worse in the adult years” (p. 572).

Data from a follow-up study of 27 Dutch adults with dyslexia (Hellendoorn & Ruijsenaars, 2000) revealed a wide array of outcomes as well. The severity range of dyslexia in the participants ranged from mild to severe, albeit 66% of the sample was described as having moderate severity. Participants ranged in age from 20 to 39 years (mean age = 28.5 years). All respondents pursued some form of

postsecondary training after completing high school, including 11 who attended a university program. The interview data were analyzed both quantitatively and qualitatively.

In adulthood dyslexia still had an impact on the lives of the adults in the study, particularly in the areas of education and employment. Moreover, most respondents reported they encountered social and emotional problems. However, they recounted that parental support was a powerful predictor of positive adult adjustment and well-being. Moreover, those who had positive recollections of their school-age years evidenced more acceptance of their dyslexia in their adult years.

In sum, the studies investigating adults with LD are illustrative of a heterogeneous group of individuals whose commonality is simply that they are all adults with LD. Without question the focus of the studies above give us an indication of a wide variety of issues and challenges. Most important, the notion that “one size does not fit all” holds true generally but also specifically for adults with LD. There are too many mediating variables such as cognitive ability, severity, context, self-determination, and support.

National Longitudinal Transition Study–2

The NTL2S (Wagner, Newman, Cameto, Garza, & Levine, 2005b) provided a follow-up to its initial effort to study the outcomes of youth with disabilities 10 years after its first wave of inquiry. NTL2S has provided data via a series of research reports focusing on different aspects of its research efforts. The NTL2S sample included a nationally representative sample of more than 11,000 youths who were ages 13 and 16 and were receiving special education services for their disability in schools in Grade 7 or higher on December 1, 2000, for the school year 2000–2001. Data were collected via phone interview and mail surveys with former special education students, representing each of the 13 special education federal disability categories, and their parents in spring through fall 2003.

NLTS2 has provided interesting findings (Wagner, Newman, Cameto, Garza, & Levine, 2005a). When disaggregating the data, the following findings were reported about the LD population combined with the ADD/ADHD population noted as “other health impaired” in the report (note that through necessity this is the only time in this review that aggregated LD and ADD/ADHD data are reported together).

1. About three fourths of out-of-school youth with LD or other health impairments had completed high school, almost all of them with a regular diploma.
2. More than three fourths had been engaged in school, work, or preparation for work since leaving high

school, and about 45% were currently employed at the time of the Wave 2 interview.

3. About one third were expected by their parents “definitely” to go on to postsecondary education after high school, and about that many had done so within 2 years of leaving high school. A 2-year college experience was their typical pursuit.
4. Youth with LD and other health impairments had experienced the broadest changes in their leisure-time and friendship pursuits, with large reductions in passive leisure activities (e.g., watching television or using the computer) and large increases in seeing friends often.
5. Although these youth were among the most likely to register to vote (about 70%), they also had experienced declines in participation as well as in pro-social organized groups and volunteer activities.
6. Youth in these categories were second only to youth with emotional disturbances in the likelihood of being involved in the criminal justice system, and those with other health impairments showed the only significant increase in arrest rates in the 2 years between Waves 1 and Wave 2 (p. ES-6).

The report contains a disclaimer affirming the great diversity of experiences of youth with disabilities experience once leaving school. It warns the reader that “it is important to be cautious in assigning either success or failure to transition outcomes achieved during this very early period after high school” (p. ES-10).

Other findings that are LD specific are contained in the report titled *An Overview of Findings from Wave 2 of the National Longitudinal Transition Study–2* (Wagner, Newman, Cameto, Levine, & Garza, 2006, p. 11). They are the following:

1. Among out-of-school youth with LD or other health impairments, 87% and 78%, respectively, had been engaged in school or preparation for work since leaving high school, and about 45% were currently employed at the time of the Wave 2 interview.
2. Among youth with LD and health impairments, 27% and 33% respectively, were expected by their parents “definitely” go on to postsecondary education after high school, and 33% and 37% of the two groups had done so within 2 years of leaving high school. Enrollment in 2-year colleges was most common (22% and 31%; note that these data are an elaboration of the data reported in Item 3 in the research report described above).

In the report *Changes Over Time in the Early Post-School Outcomes of Youth with Disabilities* (Wagner et al., 2005b), a number of areas are reported, including school completion, household arrangements and social activities, postsecondary education, employment, and engagement in school, work, or preparation for work. Unfortunately, when the data were disaggregated according to disability category, LD was not included despite being the highest incidence of all school-age disability areas.

The findings that have been reported from NLTS2 are just a snapshot of the immediate years after leaving school. Indeed, these are important years that lay the seeds of success and failure, consequences and unintended consequences, during the adult years. Therefore, the data portend possibilities and no certainties. In addition, aggregating the “other health impaired” category with LD does a disservice to the findings, which need much more interpretation when investigating the complex issues of LD beyond the school-age years. The ultimate question is, without a comparison group, how do we know that the LD sample is much different from others who are in their early 20s? Credit goes to the NLTS2 investigators, who warn readers through the disclaimer cited above.

Caution is necessary in citing the NLTS2 findings. Not included are data that speak to the issue of persons with LD who have dropped out of school, estimated at 25% (National Center for Learning Disabilities, 2009). Moreover, the reports of those with LD who go on to 2-year postsecondary schools are encouraging, but the data are based on attendance and not completion. Similarly, employment is tricky as well. The kinds of jobs are not reported, and job advancement is not tracked. Most important, the longitudinal nature that characterizes the work is important, but the window of years of study is somewhat limited and may convey the wrong message. In lieu of the dearth of scholarly inquiry in the area of adults with LD, the NLTS2 work has much influence, but it cannot be taken at face value.

Low-Literate Adults With Learning Disabilities

Gerber (2005) reviewed the literature of low-literate adults with LD. Low-literate adults were defined as adults who do not go on to postsecondary education (the majority of the population) after leaving school-age programming. They are heterogeneous in nature, having low-average to high-average intelligence, with a variety of profiles of intraindividual differences. The standards of the research reviewed came from three areas of guidance. *Bringing Evidence-Driven Progress to Education: A Recommended Strategy for the U.S. Department of Education* (Coalition for Evidence-Based Policy, 2002) had as one of its central principles “scientifically-based research and education

policy based on that body of knowledge” (p. 7). Two reports focused on reading: *Putting Reading First: Kindergarten Through Grade 3* focused on school-age reading (Ambruster, Lehr, & Osborn, 2006), and *Research-Based Principles for Adult Basic Education Reading Instruction* (Kruidenier, 2002) addressed adult reading. The three reports were heavily influenced by the rigorous scientific standards set by the National Institute for Childhood Health and Diseases, an institute of the National Institutes of Health.

All of the literature reviewed on low-literate adults with LD was done prior to the three quality standards of research listed above. In fact, the span of review was 18 years (1986–2004). Moreover, the literature was characterized as sparse and lacking scientific rigor set for experimental and quasi-experimental methodologies. Generally speaking, research in this area was random in its focus and unsystematic in its approach, and convenience samples were the norm. Their only commonality was that research activities sought to investigate some issue pertaining to adults with LD. Of the 452 documents found in the initial search, only 75 were used after being vetted according to the research criteria listed above.

What was found in the Gerber (2005) review mirrored the research review done by Scanlon et al. (1998) 7 years earlier. They had several observations: (a) there was a paucity of research in best practices, (b) research-based information did not exist or was difficult to access, and (c) most information on LD and adult literacy focused more on service delivery than research. The researchers commented, “We do a disservice to adult literacy educators and their students with learning disabilities when we do not provide them with empirical evidence to inform practice” (p. 4). The Gerber (2005) report was clustered into 16 areas, only a few of which are within the purview of this article: adult overview studies, follow-up studies, psychological profiles, neuropsychological findings, screening and assessment, cognitive skills, instructional strategies, reading, writing, functional skills, career development, rehabilitation services, dropouts with LD, poverty and LD, LD and community colleges, and employment and LD. Gerber (2005) commented on the key findings of the research review:

This literature review has shown that the efforts of those in the field who investigate issues about learning disabilities are following their interests rather than subscribing to a research agenda that could be helpful in providing guidance. This is understandable because currently there is not a research agenda to provide direction or directions in researching the salient and complex issues about adults with learning disabilities. (p. 50)

Moreover, Gerber (2005) proffered four findings in his review:

1. The available research at this time does not provide direction(s) for evidence-based practice or systematic research programs.
2. We have little empirical evidence to be convinced that what is being done for adults with LD has efficacy.
3. There is a connection between low-literacy in adults with LD and a variety of adult adjustment issues, particularly economic issues.
4. On the basis of some research showing the coincidence of childhood and adult profiles in LD school-age methods, strategies, and instruction may also be a valuable source of education and training for adults with LD. (p. 51)

Success and Successful Outcomes in Adults With Learning Disabilities

In the absence of any prior studies on how adults with LD become successful, Gerber et al. (1992) studied the alterable patterns (Bloom, 1980) of success in highly successful adults with LD. Their national sample was composed of matched participants (46 highly successful and 25 moderately successful) ages 21 to 65 in a federally funded qualitative or ethnographic study. The sample was thoroughly vetted and screened from a pool of 240 potential participants.

The findings generated an interactive model in which control was the overriding success variable. Control was split into both internal and external variables. Internal decisions were desire, goal orientation, and reframing, a process that had four stages. External manifestations (adaptability) contained persistence, goodness of fit, learned creativity, and social ecologies. Those adults with LD who were deemed highly successful (on five a priori success dimensions) evidenced extensive use of each of the variables in the model both individually and in combination. The moderately successful group of adults with LD showed the same use of the variables, but to a lesser degree. Severity rather than IQ had a significant bearing on use of the model and ultimate success. Thus, challenges in such areas as executive functioning, assorted language areas, and social skills had a marked impact on adult functioning on a daily basis.

The study proved to be a seminal piece for the field that spawned further research and program development. Overall, the model was viewed as a blueprint for success, not a guarantee. Elements of the model such as reframing and goodness of fit have become part of the lexicon of those who are familiar with this body of literature as well as the challenges of adults with LD.

Spekman et al. (1992) reported factors related to success and life satisfaction in 50 adults ages 18 to 25 and included

a comparison group for their study. Themes common to adults with LD were identified as (a) additional life stressors placing them at risk for many difficulties in adulthood and (b) delayed maturation in intimate relationships and independent living creating a sense of dependence on family. Themes related to success were (a) considerable emotional stability and the ability to reduce stress, (b) appropriate goal setting and goal directedness, and (c) the presence and effective use of support systems.

In a follow up of the Spekman et al. (1992) study, Raskind, Goldberg, Higgins, and Herman (1999) sought to discover the “success attributes” of adults with LD from 41 former students (14 female and 27 male, whose ages ranged from 28 to 35 years old) who attended the Frostig Center, a private LD school in Pasadena, California, from 1969 to 1975. The students were divided into two groups. Their groups were categorized as unsuccessful and successful according to a rating of eight dimensions of success. The longitudinal qualitative and ethnographic study sought to find the predictors of success 20 years after leaving school. They identified six success attributes, some of which coincided with the Gerber et al. (1992) and the Spekman et al. (1992) studies cited above: (a) self-awareness, (b) proactivity, (c) perseverance, (d) appropriate goal setting, (e) effective use of social support systems, and (f) emotional stability and coping strategies. Moreover, in further analysis they found new themes in their work (Goldberg, Higgins, Raskind, & Herman, 2003), some coinciding with the Spekman et al. (1992) initial investigation of the same population. They were the following: (a) LD exerted critical influence over the life span, (b) there were differences in participants’ family functioning, and (c) there were differences in participants’ social relationships with family and friends.

In composite, the studies cited above provide the contours for what it takes to be successful in adulthood. However, it is not surprising that there are no guarantees, particularly in the adult years. Both sets of findings stress that there is an interaction between internal and external variables for success. The integrative approach of both of the models denotes a greater understanding and sophistication of the complexities of successful LD adult life. The overlap provides some validation for the findings that were derived independently.

There is no doubt that each of the derived variables is important independently, but they do have a bearing on each other. For example, it is important to reframe success to find a good “goodness of fit.” Part of goodness of fit, however, is support. Control is not achieved without perseverance in combination with focused goals on a moment-to-moment and day-by-day basis. In essence, there are no shortcuts when it comes to success—particularly when one is LD. Moreover, there are commonalities in the formula for success whether one is LD or nondisabled. The difference is

that LD is the “wild card” that can manifest itself at any time and in any context in a wide variety of challenges. As an example, one participant in the Gerber and Price (2006) study revealed in his interview, “I am always faced with the question of whether I am going to be brilliant or dumb. I never know each day” (p. 53).

Employment and Learning Disabilities

Murray, Goldstein, Nourse, and Edgar (2000) studied the employment rates and earnings of graduates with LD 5 and 10 years after graduation as part of a larger study titled “The First Decade Project.” They studied students with LD from graduating classes in three large school districts in the northwestern United States. For comparison purposes they included in their design a group of nondisabled students matched by school district, gender, and year of graduation. A total group of 166 graduates with LD and 315 graduates without LD were studied. The numbers in the 1985 and 1990 graduating groups of individuals with LD were 82 and 84, respectively. An analysis of both groups revealed that there were little employment and earnings benefits associated with educational status (including postsecondary training). In both the LD and nondisabled groups females made less money than their male equivalents. The limited number of individuals with LD in the sample who went on to postsecondary training was identified as a limitation of the findings, however. Moreover, the investigators did not identify any educational or curricular characteristics of the high school programs that the sample of students with LD attended.

Gerber (1992b) studied the impact of the ADA (1990), a law that has major implications for people with LD in the workplace, 2 years after its passage and in its first full year of implementation. He queried nine private-sector businesses in the greater Richmond, Virginia, area that were major local and regional employers. He found two main categories in his analysis—perceptions of employers and expectations of employees with LD. Findings revealed that compliance with the ADA in the early going was focused on physical access for people with disabilities (an issue not fitting the LD population) and that they knew little about the characteristics and challenges of people with LD. Moreover, a set of expectations was placed on employees with LD that included self-disclosure, knowledge of the ADA, ability to explain LD, and their specific strengths and weaknesses as well as issues surrounding reasonable accommodation to foster effectiveness and efficiency in their work. For the first time there was empirical evidence that responsibility shifted to individuals with LD when moving from school to employment.

A replication of the 1992 study sought to find if the degree of progress of the ADA (Price & Gerber, 2001) of the ADA in its first decade of implementation. Studying 13

local and regional employers in the greater Richmond, Virginia, and Philadelphia, Pennsylvania, areas, the authors found there was little change in the impact of the law for persons with LD. Employer responses echoed the same findings as the 1992 study with regard to access and compliance. There was still a lack of knowledge regarding LD, and understanding of the issues of reasonable accommodation was not evident. Moreover, it was surprising that employers had not had a great deal of experience with persons with LD despite its high incidence. The pace of progress of the ADA was called into question.

Price, Gerber, and Mulligan (2003) began a line of inquiry focusing on the experiences of adults with LD in the workplace with respect to their view of the ADA as well its impact on them. In interviewing 25 adults with LD from New Jersey ages 19 to 32, they found that Title I of the ADA, pertaining specifically to employment, was underutilized. Disclosure of being with LD was rare, and reasonable accommodations were almost never a part of their employment experience.

More specifically, more than half the sample did not believe they had LD any more. More than two thirds of the sample never heard of the ADA; the rest were not confident enough to use it in a self-advocacy process. Their findings provided added insight to the first studies done in the ADA era. Consequently, the investigators proffered the opinion that the realities of the workplace for adults with LD did not match the prevailing wisdom in the field of LD. After asking a question, “Is the glass half full or half empty when it comes to adults with LD in the workplace?” they commented,

The data in the present study suggest the glass is half empty, if one uses the criteria that in the ADA era self-disclosure and accommodation are of paramount importance. On the other hand, it is difficult to say emphatically that the quality of their work life is being hampered by the distinct absence of the ADA in their work environments. (p. 357)

Similar findings were found in a qualitative study of Canadian adults with LD in employment settings in the province of Ontario (Price, Gerber, & Shessel, 2003). A total of 24 adults with LD were queried in the areas of job getting, experiences on the job, job advancement, self-disclosure, and responses of employers. Their rights were protected by the Canadian Charter of Rights and Freedoms and the Ontario Human Rights Code (in Ontario), a law not as extensive or disability specific as the ADA. The data revealed that disclosure was minimally used in the workplace, and success for the majority of participants was noted through performance evaluations and advancement. The participants felt they knew little about their federal and provincial laws, how to think about their LD, and how to

explain it to others in employment settings. They had serious concerns about the consequences of disclosure. Contrary to the conventional wisdom of transition preparation, most participants got their first job through their networks of friends and family rather than a formal job-searching and job-getting process, a finding similar to that of the Haring et al. (1990) study cited above.

When comparing the American and Canadian data sets, Gerber, Price, Mulligan, and Shessel (2004) found a great deal of similarity in the experiences of American and Canadian adults with LD. The surprise was how similar they were despite two different workforces working under two different federal laws. The authors observed,

One would think the work experience for Americans with LD would be qualitatively more progressive than in Canada because the ADA is more far-reaching, is more specific and has more “legislative teeth” than the Canadian Charter for Human Rights and Freedoms. Such is not the case, however. (Gerber et al., 2004, p. 290)

Attitudes and Perceptions of Learning Disabilities of the American Public

When reviewing the literature on the impact of LD on adulthood, it is noteworthy to mention the attitude and perceptions of the American public regarding LD. After all, what is encountered in the interactions of adults with LD in beyond-school environments is linked to the realities of adulthood altogether. The Roper Starch Worldwide (1995) poll was commissioned by the Emily Hall Tremain Foundation and sought to find out attitudes and perceptions of the American public. The data were corrected via telephone interviews of 1,200 adults older than 18 years old. A random-digit dialing sampling methodology was used during the month of January 1995. The poll portrayed a world that poses both empathy and challenges:

1. Americans recognize that learning disabilities are prevalent, yet at the same time they are widely misunderstood. (p. 50)
2. The American public’s true ignorance of learning disabilities becomes abundantly clear when asked what conditions are associated with learning disabilities. Between 60% and 85% incorrectly identified a number of conditions, including mental retardation, blindness, and emotional problems as being associated with learning disabilities. (p. 7)
3. Children are not the only one struggling with the impact learning disabilities present, and majorities of Americans agree that adults who have learning disabilities suffer injustices as well. (p. 7)

4. 89% of those polled believed that adults with learning disabilities suffer a lot of pain and humiliation. (p. 55)
5. 65% believe that adults with learning disabilities are sometimes fired when their learning disability becomes public. (p. 55)

A summary table of the findings from this section has been organized chronologically by domain (see Table 1).

Discussion of the Findings

Despite the Education of All Handicapped Children’s Act of 1975 and IDEA (reauthorized from the 1975 law), Section 504 of the Rehabilitation Act of 1973, the U.S. Department of Education’s focus on transition of students with disabilities in the early 1980s, and the Americans with Disabilities Act of 1990 and its subsequent reauthorization as the amendments of 2008, there still is an inadequate research base to guide practice for adults with LD. Each of these legislative initiatives has provided impetus to catalyze efforts and address the needs of adults with LD in each decade. Yet the field still struggles with an adequate response to investigate the variety of experiences and outcomes of adults with LD through its many phases and in its many contexts. In the early days, the field of LD ascribed to the conventional wisdom, “Don’t worry, she or he will outgrow it.” The focus back then was childhood developmentally and the elementary school years educationally. As time went on, the field has moved the marker to adolescence and secondary school programming. Transition, as part of secondary curriculum, is mandated in the later years of school for entry into the beyond-school years. Yet those in adulthood have been left to fend for themselves. The notion of life span implications for LD and the fact it has persisting challenges belie the state of the science today.

There seem to be a number of things that are holding back the field of LD when studying the issue of adulthood. This is not new; it has been a stumbling block for the field since a coherent research agenda was called for at a state-of-the-art meeting on adults with LD convened by the U.S. Department of Education in 1983 (Gerber & Mellard, 1985). This conference’s work was soon followed by “Adults With Learning Disabilities: A Call to Action” by the NJCLD in its 1987 article outlining areas of inadequacy in knowledge that needed to be addressed by research to inform practice.

First, research has not adopted a conceptual model to investigate adult issues reflecting the complexities of the adulthood itself. Therefore, research efforts in this area are disconnected because the empirical work mostly reflects the researchers’ interests as well as accessibility to convenience samples. Consequently, the product of their work reflects a focus that “cherry-picks” important variables such

Table 1. Summary of Findings Regarding Impact of Learning Disabilities (LD) on Adulthood by Domain

LD-Related Skills	N	Impact on Adulthood
Rogan and Hartman (1990)	88	Reading, math, and spelling still a challenge; LD no longer dominant feature in adult lives
Johnson (1994)	14	Small gains via educational tutoring
Hellendoorn and Ruijsenaars (2000)	27	Dyslexia affects further education
Gerber et al. (1990) LD and Self-Determination Gerber (1992b)	133	Listening, speaking, coordination, impulsivity worsen; stability in speaking and spelling
Holliday, Koller, and Thomas (1999)	9	Employers expect self-disclosure, knowledge of ADA, self-knowledge, and reasonable accommodation issues of employees with LD
Price and Gerber (2001)	30	95% of sample were not told of their superior abilities in school or by vocational rehabilitation services; information not used in vocational choices
Price, Gerber, and Mulligan (2003)	13	Same findings as Gerber (1992b) study despite time span
Price, Gerber, and Shessel (2003) Success and LD	25	Disclosure rare, accommodations rare, ADA underutilized; lack of confidence to use ADA
Spekman, Goldberg, and Herman (1992)	24	Disclosure minimal; little known about rights; very little self-advocacy
Gerber and Reiff (1991)	50	Support was a significant protective factor; competence related to factors such as coping, perseverance, goal setting, and acceptance of strengths and weaknesses
Gerber, Ginsberg, and Reiff (1992)	9	Success function of education and lack of severity; moderately successful easier time navigating adult challenges; marginally adjusted are dependent on others
Raskind, Goldberg, Higgins, and Herman (1991)	71	The highly successful "in control" of their lives; extensive use of variables identified for success; the moderately successful use variables but do not maximize them; severity rather than IQ affects success outcomes
Goldberg, Higgins, Raskind, and Herman (2003) Employment and LD	41	Six success attributes identified—self-awareness, proactivity, perseverance, goal setting, effective use of social systems, and emotional stability and coping strategies
Haring, Lovett, and Smith (1990)	41	Six success attributes identified LD exerted critical influence over life in a variety of social relationship success
Murray, Goldstein, Nourse, and Edgar (2000)	64	Unemployment twice the national average, 87%; happy with jobs found through family and friends; postsecondary education did not enhance employability
NLS2 (2004) General adjustment issues	144	Little employment of earnings benefits associated with educational status; females with LD earn less than males
Haring, Lovett, and Smith (1990)	11,000	75% employed at least one time since leaving high school
Werner (1993)	64	Minimal adult adjustment; general satisfaction with social and recreation aspects of adult life
San Miguel, Forness, and Kavale (1996)	44	Most adults with LD adjust to adult life employment; marriage and divorce rates about the same; mental health issues and criminality declined
Dole (2000)	111	Psychiatric comorbidity issues with LD population
Hellendoorn and Ruijsenaars (2000)	49	Giftedness found in a subset of the LD population
NLS2 (2004)	27	Social and emotional problems in adult lives
Gerber (2005)	11,000	Decline in participation in volunteer organization; brushes with law not as common; passive leisure pursuits common
	75	Connection between low literacy and adult adjustment; particularly economic issues

Note: ADA = Americans with Disabilities Act.

as random age brackets within the adult years, isolated developmental challenges, and domains of functioning that often lack context and rarely incorporate an integration of adult demands.

Second, typically the research is lacking a context for adult development, rarely acknowledging the continuum of phases from early to late adulthood. Often outcomes are investigated and the findings are explained in isolation, just

being one or few of the variables that are part of the larger scheme of adult functioning. Moreover, the study of adults with LD is difficult because there are many challenges to finding individuals and groups to study. Therefore, as mentioned before, convenience samples predominate the work, which can place limitations on the findings and generalizations of the research. Typically studied are 2- and 4-year college students, adult students in literacy programs, and vocational rehabilitation clients. Consequently, an overview of the best work in this area focuses on a younger population of adults with LD, almost to the exclusion of adults who are in their 30s and older.

Third, confusing the issue is research that groups LD with other high incidence disabilities—such as ADD, ADHD, mental retardation, and behavior disorders. Even Phases I and II of the NLTS, the most extensive outcome study of disabilities to date, have aggregated most of their outcome data, leaving disaggregated data specifically about LD, as lacking enough precision to provide informed practice for the field. Other research found in the literature is culpable as well. Despite the mantra of researchers in the field of special education in general and LD more specifically that samples should be pure, verified, and refereed with high standards of trustworthiness, a good amount of research is published without being LD specific. To make matters worse, the long-term trend of funded research from the U.S. Department of Education has focused on issues pertaining to high incidence disabilities, whereas trends in funding for low incidence disabilities have been more disability specific.

Fourth, there is little known about literacy in the context of adulthood for individuals with LD. Currently, there is no research investigating the degree of literacy adults with LD needs in the variety of contexts in adulthood. Depending on the needs of adults, they can vary widely from employment, to family, to daily living challenges, to leisure and recreation—even the degree of literacy needed in such specific areas as computers or the Internet and the broad area of health issues. We simply do not have a stratified conception of the literacy challenges of adults whose outcomes range from high success to marginally adjusted to the demands of adult life to provide guidance for best practices.

Fifth, assistive technology as it pertains to adult literacy is also a key issue to consider. It is an important part of accommodations for students with LD that are found in a variety of forms in school-age programs in both learning and testing. It also becomes an important issue when providing reasonable accommodations in adult education, postsecondary education, and the workplace under the provisions of Section 504 and the ADA. Assistive technology is defined generically in the Technology-Related Assistance for Individuals with Disabilities Act of 1988 (Pub. L. No. 100-47). More specifically, it has been defined for persons with LD by Raskind (1994):

Any technology that enables an adult with LD to compensate for specific deficits. In some instances the technology may assist, augment or supplement task performance in a given area of disability, whereas in others it may be used to circumvent or bypass specific deficits entirely....It strives to accentuate strengths, rather than weaknesses, to enable expression of abilities at a level commensurate with intelligence, and ultimately to enhance quality of life for persons with LD. (p. 152)

A successor to the 1988 technology act was the Assistive Technology Act (ATA) of 2004 (Pub. L. No. 108-364). Although including all persons with disabilities, it had great relevance and practicality to individual with LD. The purpose of ATA was to support state efforts to improve the provision of assistive technology to individuals with disabilities through comprehensive statewide programs of technology-related assistance for individuals with disabilities of all ages that are designed to

- Increase the availability of, funding for, access to, provision of, and training about assistive technology devices and assistive technology services
- Increase the ability of individuals with disabilities of all ages to secure and maintain possession of assistive technology devices as such individuals make the transition between services offered by educational or human service agencies or between settings of daily living (e.g., between home and work)
- Increase the capacity of public agencies and private entities to provide and pay for assistive technology devices and assistive technology services on a state-wide basis for individuals with disabilities of all ages
- Increase the involvement of individuals with disabilities and, if appropriate, their family members, guardians, advocates, and authorized representatives, in decisions related to the provision of assistive technology devices and assistive technology services
- Increase and promote coordination among state agencies, between state and local agencies, among local agencies, and between state and local agencies and private entities (such as managed care providers), that are involved or are eligible to be involved in carrying out activities under this act
- Increase the awareness and facilitate the change of laws, regulations, policies, practices, procedures, and organizational structures that facilitate the availability or provision of assistive technology devices and assistive technology services
- Increase the awareness and knowledge of the benefits of assistive technology devices and assistive technology services among targeted individuals and entities and the general population

In addition, ATA provides states with financial assistance that supports programs designed to maximize the ability of individuals with disabilities and their family members, guardians, advocates, and authorized representatives to obtain assistive technology devices and assistive technology services (29 U.S.C. 3001). Assistive technology is known to be helpful in mastering the tasks of daily adult living as well. To date, there is no research to inform practice on the transfer of assistive technology from school-age settings to a wide variety of adult environments. Moreover, the efficacy of assistive technology in preparing adults with LD to take the GED has not been investigated.

In sum, when considering LD we simply do not know the “big picture” when it comes to the literacy needs of adults with LD. The focus currently is on delivery of services, effective instruction, and successful completion of the GED degree. The GED is one outcome criterion; the others are more spurious. It is difficult to judge how positive outcomes could have been accentuated and how trials and tribulations could have been prevented or mitigated with more literacy wherewithal.

Recommendations for Research on Adults With Learning Disabilities

The following recommendations emanate from this literature review:

1. Research on adults with LD (including literacy issues) should be focused on a disability-specific basis. Best practices should have that moniker only if those practices used with an LD population have been vetted via a research effort.
2. Research on literacy and adults with LD should acknowledge the changing needs of literacy over the many years of adulthood (perhaps phase by phase). The field needs more empirical work that provides guidance on literacy needs beyond the goal of GED preparation. Moreover, research on adults with LD should be balanced on an age basis and less skewed toward early adulthood. This can be achieved through directed research competition by funding sources.
3. A consensus should be forged on criteria to be used when investigating the issues of adults, including adult literacy issues. Once again the field needs to convene a conference similar to the one held in Georgetown (Washington, D.C.) in May 1983 on the state of the art of adults with LD sponsored by the then-named National Institute for Disability Research and Rehabilitation of the U.S. Department of Education to forge understandings and directions about research directions and opportunities (Gerber & Mellard, 1985). The

field of LD needs to understand the “adult with learning disabilities experience” through a longitudinal lens. More extensive studies need to focus on LD and literacy on an adult phase-by-phase basis.

Recommendations for Adult Education Practitioners

While the field of LD, in collaboration with the field of adult education, is sorting out the best research to inform practice, adult education practitioners continue working with adults with LD on a daily basis, year after year. Research is slow to find itself into practice, yet there is value in what the field has come to know so far. This review has uncovered a number of findings that lay out the contours of forging a productive approach with adult education students who are learning disabled. No doubt the focus of adult education is primarily skill development, whether increasing the basic skills proficiency or preparing for the GED. The modalities of education and training have proven to be successful for the most part. Yet there is more that can be done with the population of adults with LD.

First, to meet the needs of adults with LD, the adult basic education curriculum needs expansion. Currently, there is a basic understanding about the myriad of challenges for adults with LD, but a more directed approach is needed for practitioners to see growth in their students and adults with LD to see value in their time and effort. As Yogi Berra, the often-quoted New York Yankees icon, said, “If you don’t know where you are going, you will end up somewhere else.” The witticism is true when working with adults with LD.

With the centerpiece of adulthood being independence and autonomy, practitioners must keep in mind that successful adjustment in adulthood starts with helping adults with LD to find their niche (a fit to their adult lives that incorporates skills, interests, motivation and lifestyle; Gerber et al., 1992; Reiff et al., 1997). That niche provides guidance for what needs to be accomplished, including skill-specific development, thus providing direction for an individualized educational approach. Niche finding is predicated on an understanding of strengths and challenges that are present in the adult years. Practitioners can serve a valuable role in helping adults with LD consolidate elements of self-understanding, the core of niche finding, because that does not come through introspection alone.

Second, self-efficacy, as pointed out in the Werner (1993) research, is key to the ultimate goals of independence and autonomy. It is important for adults with LD to know how to navigate effectively in adult domains. Therefore, the processes of self-advocacy become of utmost importance. They need to know who they are, how LD

affects them in a variety of adult settings, and how to compensate for any deficiencies. Moreover, they should be able to discuss their specific challenges and collaborate on compensatory actions and accommodations with friends, family, and employers to experience success.

Third, as pointed out by the success models discussed in this article (Gerber et al., 1992; Raskind et al., 1999) social supports are important for successful adjustment in the variety of adult domains. Therefore, adults with LD need to understand that they cannot do it alone. When adulthood and LD converge support is needed in terms of ongoing encouragement and providing complementary skills for adult tasks. Moreover, adulthood has many stressors, and LD can intensify the stress. Social supports can help mitigate the stress or prevent it altogether. Therefore, it is important that effective social skills and an understanding of the importance of social reciprocity become part of the repertoires of adults with LD.

Last, because adulthood encompasses a span of so many years, adult education practitioners can serve the function of helping to prepare adults with LD for their next set of challenges. There can be many throughout the many years of adulthood. Sometimes they can be small; other times they might seem daunting. An example is the case of T. J. (Gerber, 1992a; 1994), who was on his way to a successful special education teaching career after a remarkable first year, only to leave teaching after a disastrous third year. After a brief time of being unemployed, he switched careers and skill sets to become an ATM troubleshooter for a well-known multistate bank. Ever since his job change he has enjoyed sustained employment, garnering high marks on successive performance evaluations.

What the extant research literature has told us so far on adults with LD is that “one size does not fit all.” There are too many variables, settings, challenges, and surprises over the many years of adulthood. If one is not to heed the words of Yogi Berra, then the best intentions with adults with LD can lead to unproductive educational approaches and ultimately unfruitful outcomes. Therefore, at this point research tells us that best practices should incorporate flexibility in approach, an understanding of the complexities of adulthood, and an appreciation of what is unique when working with adults with LD.

Author's Note

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