Chapter 10

INTEGRATING FINDINGS of STUDIES of SUCCESSFUL ADULTS with LEARNING DISABILITIES: A New Comprehensive Model for Researchers and Practitioners
by Christine A. Schnieders, Paul J. Gerber, and Roberta J. Goldberg

Abstract
A new conceptual model of success integrates two empirical studies that were conducted exclusive of each other. Both examined the lives of two separate groups of adults with learning disabilities (LD) and found internal, linking, and external factors that impacted the success of the participants. Career development professionals will find the model important as a new perspective for individual client planning as well as program development. Directions for future research and practice are discussed.

As the field of learning disabilities was growing in the 1970’s and 80’s a few groups of researchers focused their inquiry away from examining the struggles of school-age populations to exploring the complexities of adulthood for individuals with learning disabilities (LD). The result was a small body of research that indicated that some individuals who survived school and independent skills development found eventual success. The elements that comprised their success have been the foundation of some of the research on the challenges facing adults with LD. Two of the studies that identified elements of success are the centerpiece of this article that is an introduction to a new conceptual model.

The purpose of this article is to present a conceptual model that links factors that were found to influence the success of adults with LD in two seminal research endeavors conducted separately at the same time. Both analyze the lifespan of individuals growing up with LD and broaden the scope of domains covered while focusing on a context of adult outcomes. The new model is superior to the previous ones and can better assist practitioners and researchers when considering the multitude of tools that an individual with LD needs to succeed into adulthood. The first part of the article will present previous studies of outcomes of students and adults with LD offering a scope of the issues involved. Second, other conceptual models will be reviewed that give a sense of the range of possibilities for framing the current discussion. Third, the new conceptual model will be explained in detail. Finally, implications will be discussed for practitioners and researchers to give directions for future consideration in application and study.
Studies of Outcomes
The majority of the studies used to create the current conceptual model were disseminated in the early 2000’s. The initial work at the Frostig Center in Pasadena, CA explored life success for a group of former students who had enrolled in Frostig from 1968 to 1975 (Spekman, Goldberg, & Herman, 1992; Spekman, Goldberg, & Herman, 1993). The researchers examined “internal factors and external events” (Goldberg, Higgins, Raskind, Herman, 2003, p. 223) that impacted the success of the group of now young adults ages 18 to 22. Ten years after the first study was completed, the same group of former students participated in a similar, follow-up study. The purpose of the second study was to address additional questions related to their disabilities and re-examine their life outcomes as adults (ages 28 to 35). The results of that study are detailed in several publications reporting both qualitative (Goldberg et al., 2003) and quantitative findings (Raskind, Goldberg, Higgins, & Herman, 1999), as well as, examining a singular attribute (Higgins, Raskind, Goldberg, & Herman, 2002) and suggesting possible activities to foster the development of what are known as the success attributes (Raskind, Goldberg, Higgins, & Herman, 2002). The success attributes are self-awareness, goal setting, proactivity, perseverance, use of support systems and emotional coping strategies.

Gerber’s work with other collaborators resulted in a model of alterable patterns in employment success for adults with LD. The publications about the research involved an in-depth analysis of the model from the qualitative study (Gerber, Ginsberg, & Reiff, 1992; Reiff, Gerber, & Ginsberg, 1997) analysis of the quantifiable data (Gerber, Schnieders, Paradise, Reiff, Ginsberg, Popp, 1990), and several other articles exploring reports from individuals with LD (Gerber & Reiff, 1991). With control as the overarching bridge, the alterable patterns were categorized as internal decisions (desire, goal orientation, reframing) and external manifestations (persistence, goodness of fit, learned creativity, social ecologies).

Since the publication of both the Frostig and Gerber studies, few studies published related to the successful outcomes of adults with LD although success continues to be of interest to the field of LD. Some emphasis has focused on increasing the likelihood of success for college age students through specific interventions addressing one or two of the factors of success. Others have explored specific components related to successful young adults (i.e., self-determination, self-efficacy, etc.).

Other studies have focused on outcomes of adults with LD. Greenbaum, Graham, and Scales (1996) studied a group of college graduates to determine the impact of their LD on their lives. In part, this study supported the findings of the Gerber and Frostig studies in that the sample was self-aware and used support systems to accomplish goals. Current studies tend to examine specific variables related to success. Madaus, Zhao, and Ruban’s (2008) study examined employment satisfaction of graduates with LD. Their survey indicated that self-efficacy and self-regulation, related to some factors of success from the Gerber and Frostig studies, were better predictors of job satisfaction than salary and length of employment. Recommendations include further research on the impact of self-efficacy and self-regulation strategies (i.e., goal-setting and reframing) for school-age populations. Others found that individuals with LD had positive educational and vocational outcomes by finding their niche (Horn, O’Donnell, and Vitulano, 2001; McNulty, 2003).
A cluster of studies supports using interventions to teach strategies related to success. Klassen, Tze, and Hannok (2011) conducted a meta-analysis to examine internalizing problems of adults with LD. Their findings point to the need for continued support and instruction in coping strategies for emotional struggles across the life span. Teglasi, Cohn, and Meshbesher (2004) studied temperament and, in part, concluded that goodness of fit and adaptability in children with LD can positively impact others response to children. Others suggest a variety of instructional activities to teach self-determination and goal-setting (Konrad, Fowler, Walker, Test, & Wood, 2007), self-advocacy (Prater, Redman, Anderson, & Gibb, 2014), and networking to facilitate communication and support among peers on a campus (Agarwal, Calvo, & Kumar, 2014). Studies of coping strategies indicated that adults with LD in and out of school continue to use those strategies as a means to deal with academic and other skills deficits (Cowen, 1988; Young, 2005; Vogel & Adelman, 1992).

Since the initial publication of both studies, no other researchers have conducted comprehensive follow-up or longitudinal examination of successful adults with LD. Although the results of the research from Gerber and Frostig is decades old, both continue to be important in the perception and understanding of LD across the life span. In the past several years, extraordinarily successful people (Gerber & Raskind, 2014), entrepreneurs (Coppola, 2007; Love, 2011) and other celebrities have disclosed their learning struggles which seems to indicate that the search for successful role models is imperative to the field.

In 2012, Gerber published a review of the research involving adults with LD to discover information to assist professionals who serve adults with LD. Gerber (2012) observes, “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 from a narrow perspective, losing out on the ‘big picture’ as well as the complexities of adult life” (p. 33).

**Other Conceptual Models**

A review of conceptual models in the literature related to LD is limited. Two models compare and contrast LD with other exceptionalities. Rock, Fessler, and Church (1997) examined overlapping characteristics of LD and emotional/behavioral disorders and formulated a model for serving children with complicated issues. Polloway, Patton, Smith, and Buck (1997) considered the relationship of mental retardation (now termed intellectual disabilities) and LD. Although not specific to adults, both models reveal the complexities of factors related to disabilities. The Pathways Model (Kiernan & Stark, 1986) focuses on developmental disabilities, but it is intended to be used by all individuals. The model considers levels of support and training specific to moving individuals to full employment solely. Murray (2003) presents a framework for transitioning youth with disabilities to adulthood. This model considers risk and protective factors and healthy and poor outcomes of vulnerable students as a guide. While the model takes a holistic view of transitioning to adulthood, many of the factors reflect needs related to school and community rather than focusing on the individual. These models address many of the concerns for improving services for young people with LD; however, the current models lack a focus on how adults with LD can become successful. A model is required that focuses on the thoughts and actions an individual with LD needs to be a success.
New Conceptual Model
The new conceptual model offers a perspective that looks at the lifespan from a global lens and reveals those factors that professionals, families, and individuals with LD must integrate into their thinking and actions in order to reach success. The Gerber study identified the themes of success. Control was the overarching theme of an individual’s success. It was defined as “making conscious decisions to take charges in one’s life (internal decisions), and adapting and shaping oneself in order to move ahead (external manifestations)” (Gerber et al 1992, p. 479). From this key theme, the patterns were broken into internal decisions and external manifestations. Internal decisions were desire, goal orientation, and reframing. External manifestations or adaptability included persistence, goodness of fit, learned creativity and social ecologies.

The Frostig results identified self-awareness, proactivity, perseverance, goal setting, use of support systems, and emotional coping strategies. The attributes differentiate successful from unsuccessful adults with LD. Although “internal factors and external events” (Goldberg et al., 2003, p.223) were considered in the initial study, those internal and external categories were not part of the interpretation of the findings. Additional themes unrelated to the success attributes included LD across the life span, family differences, and social relationships. For both studies, the themes were part of both successful and less successful groups; however, clear differences were delineated between the groups for both studies.

Table 1 [see Appendix] provides definitions of the factors of both studies. The arrangement of the definitions is in the order found in the model. The terms associated with the Frostig study are in italics. Several of the factors have similar terms from both studies. For instance, perseverance in the Frostig study seems to be similar to Gerber’s persistence. In those and other similar cases, definitions are listed below one another in the same column.

The visual representation of the combined factors from the Gerber and Frostig studies is in Figure 1 [see Appendix]. The authors conceptualized the factors as being in one of three areas within the model indicating where each might arise as the individual practices the factors on the way to success. Factors are not mutually exclusive and are dependent upon one another for overall functioning. The importance of each factor changes as the individual matures and experiences challenges and rewards. Some factors are readily implemented by some individuals while others take time to develop fully. Successful individuals with LD utilize the factors throughout their lifespan to first achieve and then maintain their success. Common factors are noted with a slant line as follows: perseverance/persistence, support systems/social ecologies, and goal setting/orientation.

The internal factors are those decisions that an individual realizes, does, and masters consciously, but within their thoughts and processes. They are listed in order of movement toward success. These include two related, but not identical factors, desire and perseverance/persistence, as well as, goal setting/orientation, and self-awareness. Of this group, desire and then perseverance are the starting points. Successful individuals have a “burning feeling” (Gerber, Ginsberg, Reiff, 1992, p. 480) with a determination to move ahead despite adversity. With that desire to keep going, the individual also understands that planning toward an aim is done through careful, incremental steps or goals that change as needed when other factors are addressed. The last element
within the internal factors is self-awareness. This factor requires that the individual understands his or her strengths, weaknesses, and talents. Additionally, as a part of self-awareness, the successful individual will compartmentalize their learning disability to a less overwhelming place and locate a niche that will capitalize on their strengths.

For the internal factors to have usefulness for the individual, linking factors mediate across internal and external factors. The linking factors allow internal factors to engage the external factors. Four factors progress through the linking section. Emotional coping is the first linking factor. It serves as a starting point to all others. These affective strategies, tool, mechanisms must be working to allow individuals to navigate the other factors. The second is reframing that reinterprets the learning disability in positive and productive terms. The next factor is proactivity that represents the control over the environment, the decision making, and the engagement in the world/community. The final linking factor is goodness of fit. The adult is successful because he has tools to regulate stress, can adjust and redefine his learning disability, has a sense of control over the environment. Once those pieces are in place, the individual understands what to do to capitalize on his strengths.

Once the internal and linking factors are in order, two external factors work toward success. Learned creativity represents the strategies, techniques, methods that enhance abilities and takes advantage of strengths. These cognitive tools help the adult with LD shape the environment to her advantage. The other external factor is the use of support systems/social ecologies. This factor acknowledges the need to surround the individual with people who will provide support, guidance, and help. Mentors are especially important when concentrating on this factor. Although the model is presented as sequential, organized, categorized, the authors acknowledge that life for any individual with LD is messy. Utilizing internal, linking, and external factors requires practice and repeated failure. Acknowledging the developmental process of success is important to the overall understanding of the model and its uses.

Implications
The newly presented model that integrates the two studies of successful adults with LD demonstrates a cohesive and sequential flow of a collection of factors that resulted in success for the adults interviewed across both studies. This comprehensive model is leading edge work in this area and is intended to be the foundation for further work in the field. The model provides a framework for researchers to discern LD issues throughout the lifespan and allows practitioners to develop transition and postsecondary activities and programs aimed at the success of youth with LD. By using the framework, the model gives a map of the key struggles and growth points that adults with LD experience as they aspire to success. The fact that the linking factors change as the individual provides a developmental perspective that can be applied throughout an individual’s life.

Vocational Researchers
Future research should explore concerns related to validity of the model. Both experts in the field, as well as successful adults with LD, should critically judge the factors and organization of the model. Additionally, the internal structure of the model should undergo scrutiny to determine the relationships among the factors. The need remains for further study of successful individu-
als with LD to determine if these factors continue to hold their value. The impact of federal regulations, budgetary constraints, attention to and improvement of transition services may have changed outcomes of high school graduates. Additionally, a broader population of students with LD has had to meet more rigorous curricular requirements that may change their life long goals. Certainly, the impact of the economic changes of the past decade will shift success for all young people, and how that affects students with LD both internally and externally has yet to be experienced. The model seems to contain information that would be of value to families and professionals; however, what is immediately apparent is the continued need for attention to adults with LD. As with services for individuals with LD, more funding of longitudinal and follow-up research is necessary for greater insight into the workings of these individuals. As greater numbers of students age into adulthood, their experiences chronicled through words and perceptions are important to document. Populations of students who have participated in programs specific to their needs may result in different findings.

Career Practitioners
The conceptual model has multiple uses for practitioners at the individual client and program levels. Diagnostically, a practitioner can assess how well an individual understands and applies each factor while moving among internal, linking, and external factors. Professionals can integrate the model into their interventions on three basic levels: Instructing during teachable moments, including factors in current activities, and developing new interventions to address specific factors and their relationship to the individual (Frostig Center Educators, 2009). As a group or individual uncover one or more of the factors, the practitioner should highlight the factor and where it rests on the model. For instance, individuals may discover goodness of fit as they begin to refine their career options. Similarly, when an individual or group struggles to complete a challenging task, a discussion of persistence/perseverance may be included in the session. Likewise, reaching a level of self-awareness requires intensive effort and multiple opportunities for refinement. Once the components of the model grow in familiarity, the individual client and professional will be more clearly understanding of the complexities of success.

Conclusions
Very similar findings resulted from two studies interested in what makes an adult with LD successful. The commonalities and difference were gathered across the results of the two sets of findings into a consolidated model of success. The information will prove useful to a variety of professionals who serve students with LD. The model categorizes the success factors as internal, linking, or external. The categories represent a move from the individual’s thoughts to the organization of self through strategies and practice to manipulation of the environment and access to assistance from others. The intent of the model is to present a fresh approach to viewing LD across the life span.

References


### APPENDICES: Table 1: Definitions of Factors

<table>
<thead>
<tr>
<th><strong>Internal Factors</strong></th>
<th><strong>Linking Factors</strong></th>
<th><strong>External Factors</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Desire: desire to excel, to get ahead, move on</td>
<td>Emotional coping strategies: effective means to reduce or cope with stress, frustration, emotional problems</td>
<td>Learned creativity: strategies, techniques to enhance abilities; learn to take advantage of strengths</td>
</tr>
<tr>
<td><strong>Perseverance: keep going despite adversity</strong></td>
<td>Reframing: redefining LD positively/productively</td>
<td><strong>Use of support systems</strong>: significant others that provide support, guidance, and encouragement; consider some mentors</td>
</tr>
<tr>
<td>Persistence: resilient, willing to do whatever is necessary to accomplish goal</td>
<td>Proactivity: engaged in the world, participates in community; power to control their outcomes; makes decisions and acts on them, assertive, self-confident</td>
<td>Social ecologies: surround self with supportive and helpful people, created support networks, consciously selected mentors</td>
</tr>
<tr>
<td>Goal setting: set specific, flexible goals throughout life</td>
<td>Goodness of fit: fit themselves into environments where they would succeed</td>
<td></td>
</tr>
<tr>
<td>Goal orientation: consciously sets explicit goals related to desires</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-awareness: aware of strengths, weaknesses, &amp; talent, compartmentalized LD and pick niche capitalizing on strengths</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Frostig Study  Gerber Study*
APPENDICES: Figure 1: Factors Throughout the Lifespan

Figure 1.
Factors Throughout the Lifespan

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>Linking Factors</th>
<th>External Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desire</td>
<td>Emotional coping</td>
<td>Learned creativity</td>
</tr>
<tr>
<td>Perseverance/Persistence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal setting/orientation</td>
<td>Reframing</td>
<td>Support systems/Social ecologies</td>
</tr>
<tr>
<td>Self-Awareness</td>
<td>Proactivity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Goodness of fit</td>
<td></td>
</tr>
</tbody>
</table>

Note. Frostig study  Gerber study
About the Authors

Chris Schnieders, PhD, is Research Director at the Frostig Center in Pasadena, California. She began working at the Frostig Center in 2001. She is a certified professional developer in the Strategic Instruction Model and is a part time instructor at California State University, Northridge. Prior to moving to California, she worked in higher education. Her K-12 experience includes administrative work at psychiatric hospitals and as a teacher and diagnostician in New Orleans. Her research interests include instructional effectiveness for students with learning disabilities and efficacy of success attributes. Contact her at the Frostig Center, 971 North Altadena Drive, Pasadena, CA 91107. 626-791-1255. Web Site: www.frostig.org

Paul J. Gerber, PhD is the Ruth Harris Endowed Professor of Dyslexia Studies and Professor in the Department of Special Education and Disability Policy at Virginia Commonwealth University. He has written or co-written five books in the area of adults with learning disabilities and over one hundred articles and chapters pertaining to learning disabilities. He is on numerous journal editorial boards and has been the editor of Thalamus, the journal of the International Academy for Research in Learning Disabilities. He has consulted for government agencies. Currently, he is a member of the professional advisory board of the Learning Disabilities Association of America. Contact: Paul J. Gerber, PhD, Professor VCU School of Education, 1015 W. Main St. P.O. Box 842020 Richmond, VA 23284-2020 e-mail: pjgerber@vcu.edu (804) 828-1332. Office: (804) 225-3554

Roberta J. Goldberg, PhD, is a Licensed Developmental Psychologist with 35 years of experience consulting with schools, teachers and parents concerning children’s learning needs. She earned the PhD in Developmental Psychology and School Psychology at the University of Minnesota. At the Frostig Center, she has served as Clinical Director, and is currently Director of the Consultation and Education Department. As Research Associate at the Frostig Center, her main area of interest has been a twenty-year longitudinal project studying children growing up with learning disabilities. She has presented this research at national and international conferences, published numerous articles in the area of success attributes for individuals with learning disabilities and speaks frequently to audiences concerning children’s learning and behavior. Contact her at the Frostig Center, 971 North Altadena Drive, Pasadena, CA 91107. 626-791-1255.