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Editor's Note

Developing an understanding of learning disabilities (LD) is a complex, multifaceted process, with needs for knowledge generation existing in, among other areas: the lived experience and perspectives of diverse individuals with LD (e.g., Yeager & Morgan, 2023); effective assessment and intervention practices designed to leverage assets and address needs for individuals with LD (e.g., Gilmour et al., 2019; Grigorenko et al., 2020); teacher and interventionist knowledge and practice related to the integration of these effective practices in inclusive settings (e.g., Woodcock & Nicoll, 2022); social-emotional supports for individuals with LD (e.g., Aro et al., 2022); postsecondary and vocational education opportunities provided to support goals and quality of life for individuals with LD (e.g., Gartland & Strosnider, 2023); and the intersection of race, gender, socioeconomic status, and access to high-quality educational environments (e.g., Fish, 2019). Scholarship addressing these, and other areas of the educational and social experiences of diverse individuals with LD, should be equally multi-faceted to continue to advance knowledge related to the provision of high-quality instruction, intervention, and services.

To this end, it is important that scholarship using innovative methodologies asking intriguing research questions be centered to develop a more complex understanding of the assets and needs of diverse individuals with LD so that future scholars can integrate effective practices focused on centering the needs of individuals. Whether that is through qualitative methodologies designed to ensure access for participants with disabilities (Kenny et al., 2023), mixed methods approaches that integrate findings from quantitative and qualitative data collection methods to develop a deeper understanding of the variable of interest (Love et al., 2022), or case study approaches that elucidate experiences of individuals with disabilities through in-depth detail of the implementation of a specific variable impacting outcomes (Ghesquiere et al., 2004), it is important that a variety of research questions and methods be used to continue to build the knowledge in the field of LD while simultaneously building knowledge about the experiences individuals with LD have to try and find alignment between effective interventions and positive experiences of individuals receiving or implementing interventions (e.g., students, teachers).

This issue of *LDMJ* features three articles that highlight innovative methodologies designed to better understand the multifaceted experiences of individuals with learning disabilities. In the first article, Lowrey et al. present the findings of a systematic literature analysis focused on transition research for individuals with LD. Authors of this article present their analysis of literature from 1990 until present, focused on types of scholarship and thematic focus of scholarship published in transition and LD. They present the main themes identified in their analysis as well as make recommendations for practice and future research. Recommendations focus on the need for replication and model-testing research in LD to better understand impact of transition instruction and supports provided.

In the second article, Boily et al. discuss the implementation of Response to Intervention (RTI) models on elementary school campuses in Canada. They expand on scholarship that suggests the positive impact RTI can have on prevention and intervention for individuals at-risk for and with LD through the presentation of results of a multi-case study. Their focus was on the roles of teachers in the RTI model, as well as the organization of assessment and intervention services on the school campus. This multi-case study provides additional information on frameworks for the implementation of RTI and other multi-tiered intervention frameworks on school campuses and provides opportunities for the development of additional research to better understand both RTI implementation and the effects on students referred for intervention.

Finally, DeBono et al. present the findings of a study of graduates from Winston Preparatory School, a school for individuals with LD. Authors surveyed graduates of this program to develop an understanding of perceived variables that supported them in postsecondary and employment success after the completion of their program. The goal of this study was to better understand the predictors of success so that these factors could be considered in future programming for individuals with LD. Through their in-depth analysis of the outcomes

of students who completed their educational program at this school, they make specific recommendations to be explored in future research on variables that may influence the outcomes of diverse individuals with LD.

In total, all three of these articles present methods, discussion, or recommendations that challenge the field of LD to consider complex, innovative ways of developing knowledge within the field of LD. I hope that you enjoy the work presented by authors in this issue and that the findings of their scholarship encourage you to think differently about the types of questions we can ask to enhance our understanding of LD in a multi-faceted, intersectional way so that we can ensure we are providing the highest quality educational and social experiences to the individuals we serve. And, as always, I hope that you will consider submitting your scholarship for consideration of publication in *LDMJ.* I am honored and humbled to serve this community of scholars and look forward to the opportunity to highlight your work and continue to build our understanding of LD.

–Joseph John Morgan, PhD, Interim Editor

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An Evidence Review of Key Transition Components for Students with Learning Disabilities

K. Alisa Lowrey
Leonard Troughton
Ryan Nation
Samantha Papp
L. Denise Williams

The purpose of this analysis was to systematically review research specific to the transition of students with Specific Learning Disabilities (SLD) and report identified key components of that process along with identifiable gaps to offer information useful for practitioners, families, and others that may be supporting students with SLD during transition. Researchers reviewed thirty years of research since the 1990 addition of transition to IDEA. Fifty-four articles met established inclusion/exclusion criteria specific to students with SLD in the United States. Articles included qualitative and quantitative studies, literature reviews, policy papers, and conceptual frameworks describing effective transition practices and services. Five themes from the literature were identified. Utilizing a historical frame, researchers analyzed the five key themes identified in the context of previously identified key components for transition planning. Recommendations and implications are suggested for future research.

Keywords: *Transition, post-secondary, literature review*

Transition from secondary education to adult life is a challenging process for many young adults including those with Specific Learning Disabilities (SLD). Students with SLD remain the largest number of students served in K-12 environments across all disability, racial, and ethnic groups, making up 34.9% of all students served (U.S. Department of Education, 2023). Over 70% of these students received their education in general education classroom and graduate with a general education diploma (U.S. Department of Education, 2023). On the surface, these students may appear no different at their exit from high school than any other student graduating. Individuals with SLD must learn to self-disclose their disability and to self-advocate within existing systems to determine eligibility for supports (Madaus et. al., 2008). Legislation and mandated policy exist that should contribute to positive adult outcomes for students with SLD. Analysis of the data collected by those mandates leads to significant questions about whether supports are being used with efficacy for students with SLD in preparation for and support of their transition to adulthood.

IDEA Transition Reporting Requirements

Graduation rates for students with SLD have continued to improve (United States Department of Education, 2023) but adult outcomes for students with SLD are not as positive as their same-age peers with whom they are graduating (Sanford, et al., 2011). Since the 1990 reauthorization of the Individuals with Disabilities Education Act (IDEA), transition services are required for all students aged 16 and older determined eligible as having an educational disability under IDEA, including those with SLD. An Individualized Transition Plan (ITP) is required for each student receiving services and should address all areas necessary to transition into adulthood based on the student's identified need (IDEA, 2004). These areas for consideration for all students with disabilities

include: employment, postsecondary education to include pursuits in college and/or vocational training, community resources and supports, independent living, recreation and leisure, social resources and supports, and any other areas deemed necessary based on the unique needs of the student (Prince et al., 2013). According to IDEA 2004, at age 16, the student's ITP should utilize evidence-based assessment techniques to identify areas of need and student preferences for adulthood, enabling the design of a plan of attainment throughout the student's final years in the K-12 system. A systematic alignment between IEP goals and ITP goals should be completed to ensure the student is moving forward successfully in their current educational environment, while at the same time moving forward with steps designed to lay the foundation for their future success in transitioning to adulthood (IDEA, 2004). However, utilizing the mandated measures required by IDEA to determine how students with SLD are transitioning is difficult (Etscheidt et al., 2023).

IDEA (2004) requires measurement of transition planning and outcomes through Indicators 13-14. Indicator 13 asks states to self-report a discrete "yes/no" as to whether or not the transition planning process includes invitations to the IEP meeting, transition assessments, services, and annual IEP goals related to transition goals as well as adult service participation (IDEA, 2004). The National Technical Assistance Center on Transition (NTACT) reported a 92% rate of states/districts reporting that transition goals were annually updated and included student and agency participation (NTACT, 2017). Appropriateness, comprehensiveness, or success of transition planning was not reported. Indicator 14 tracks the percentage of eligible IDEA students who have exited the k-12 system one year past exit to determine if they were: "(a) enrolled in higher education within one year of leaving high school, (b) enrolled in higher education or competitively employed within one year of leaving high school, or (c) enrolled in higher education or some other postsecondary education or training program; or competitively employed or in some other employment within one year of leaving high school." (20 U.S.C. 1416(a)(3)(B)). NTACT (2017) reported the following median scores for Indicator 14 as reported from all 60 states/territories for School Year (SY) 2015-16: 27.43% of youth with disabilities were enrolled in higher education; 63.03% were enrolled in higher education and competitively employed; and, 78.61% were enrolled in higher education, competitively employed, engaged in some other postsecondary education or training program, and/or some other type of employment. Since Indicator 14 is self-report, these measures only reflect the completers of the survey; in this data set, the number was 133,681completers. For the SY 2015-16, the National Center for Education Statistics (NCES) reported the number of individuals with disabilities exiting school as 403,466 (2018). Of those, 206,204 were identified as having an SLD, a number much greater than the total number (133,681) of completers of the Indicator 14 survey. Indicator 14 data does not accurately report what students are doing post school. In addition, these Indicator 13 and 14 reporting structures do not collect data related to the efficacy of transition plans written for students with disabilities including those with SLD. The IDEA mandated transition data is not enough to know if the transition planning process effectively contributes to better outcomes for students post K-12 environments.

Other Transition Reporting Sources

Other data sources outside the K-12 environment provide information that reflects less successful transitioning once students with disabilities leave public schools. Unfortunately, due to categorical language differences between IDEA of 2004 and the Americans with Disabilities Act of 1990, it is not easy to extrapolate specific outcomes for students identified with SLD in secondary school (Gil, 2007). Data from the Current Population Survey (CPS) of the United States Bureau of Labor Statistics (2019) reported a mere 20.8% of individuals with identified disabilities as participating in the workforce, dropping to 17.9% in updates released in 2021 (U.S.B.L.S., Feb. 24, 2021). Individuals with a disability and no high school diploma are employed at 9.8%, those with a high school diploma but no college are employed at 15.6%, while those with some college are employed at 21.8%. Finally, those with a Bachelor's degree and higher are employed at 28.5%. Comparatively, using the same sequence for those without disabilities, the data indicated that: individuals with no high school diploma were employed at 54%, individuals with a high school diploma/no college were employed at 63%, individuals with some college were employed at 69.7%, and individuals with a Bachelor's degree or higher were employed at 75.5%. The 2020 Annual Disability Statistics Compendium (Houtenville & Rafal, 2020) funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), categorized individuals with disabilities into six disability categories: hearing, vision, cognitive, ambulatory, independent living, and self-care. Overall employment rates indicated that 38.9% of individuals with a disability were employed in 2019 while 78.6% of individuals without a disability were employed, still demonstrating a large deficit in the employment of those with disabilities as compared to those without. The disparity in these employment rates for those with and without disabilities is noticeable. How transitioning adults with SLD calculate into these statistics

is not as clear due to categorical differences in the reports (Houtenville & Rafal, 2020; U.S.B.L.S., Feb. 24, 2021. As a result, aside from the clear distinction that individuals with disabilities are unemployed at a much higher rate than those without disabilities and that postsecondary education is useful to increase the likelihood of employment, these measurements are not as useful for educators planning transitions for students with SLD.

While all eligible students under IDEA should receive effective transition planning, students with SLD have specific learning needs that may affect their transition needs (Olfesh, 2006). Students with SLD are traditionally students who do not achieve adequately to the level of their abilities (Learning Disabilities Association of America (LDA), 2018). They may have average or above average intelligence but experience issues with "acquisition, organization, retention, understanding or use of verbal or nonverbal information" (LDA, 2018, p.1). Often, students with SLD leave K-12 environments with insufficient skills to be successful in employment or postsecondary education (Shaw et al., 2010). Although most frequently alongside their typical peers, they are missing important self-advocacy, self-monitoring, and self-efficacy skills that are important for securing supports in the post-secondary world (Seo, et al., 2008).

Purpose of the Study and Research Questions

In order to extend the knowledge we have from legislated policy reporting gaps as discussed previously and to better understand the unique needs of students with SLD as they transition into adulthood, the following research questions guided the present study:

> First, what extant literature identifies the specific needs of students with SLD when planning for transition to adulthood?
>
> Second, what key components of transition planning have been identified as critical for educators and families to support students with SLD in making successful transitions to adulthood?

To answer these questions, researchers analyzed the transition literature specifically for students with SLD by conducting a systematic review of the existing literature. The purpose of this analysis was to systematically review research specific to the transition of students with SLD and report identified key components of the process as well as identifiable gaps within the larger topic of transition in order to better prepare practitioners, families, and others supporting students with SLD during transition.

Methods

In order to identify research specific to the transition of students with SLD and report the key components and gaps, a systematic review of the literature was conducted (Petticrew & Roberts, 2008; Page, M. et al., 2020). Following the PRISMA model checklist, this review was conducted using a pre-established research protocol that outlined the inclusion and exclusion criteria, explicit criteria for evaluating the methodology of the included research, and categories for analyzing descriptions of participants, outcomes, and recommendations made in each study (Page et al., 2020).

Before beginning the review, a research team was established. This team consisted of a lead researcher with extensive experience in transition-based educational programs and services (researcher A), a secondary researcher with experience in high incidence disabilities to include SLD (researcher B), and two student assistants with research experience (researchers C and D). Researcher A established a research protocol for the literature search based on the PRISMA model checklist (Page et al., 2020). Team-based discussions and reviews of findings were conducted after the initial search to limit a biased interpretation from any one team member. The final phase of the review was conducted by researchers A and B concurrently.

Search Procedures

Initial Search and Inclusion/Exclusion Criteria

Initial search procedures, outlined on the coding sheet (See Table 1) by researchers A and B, were "specific learning disabilities," or "learning disability," or "SLD," or "LD," or "high-incidence disabilities," and "transition." Researchers C and D were assigned search databases (i.e., PsycINFO, Academic Search Premier, and ERIC). Articles to be included and coded in the initial search must have been in peer-reviewed journals, published after 1990 (when more specific transition provisions were introduced in IDEA), and cover transitions that lead to adulthood. Exclusion criteria in the initial search were transition services focused on educational transitions (e.g., transitions from pre-, elementary, and middle school, between grade levels or classes, etc.), educational processes of which one component was transition, and articles published prior to 1990. To ensure that all research on this topic was captured, the research team conducted a hand search, using the same inclusion and exclusion criteria.

Review of Initial Search

Following the initial search, the research team met to discuss and review the initial results in order to establish

Table 1
Directions for Phase 1 Initial Literature Search

Assigned Database:		Person Completing Form:
Use this coding sheet to record LD Transition Articles **Code areas on the code sheet for each article as follows:**		
INCLUDE:		
1.	**SEARCH**	In your assigned database, search all peer-reviewed articles on SLD, LD, High-Incidence disabilities + Transition.
2.	**PROVIDE**	Citation: Provide the full citation including doi.
		Key Words: List key words used as descriptors under the abstract
EXCLUDE:		
1.	**EXCLUDE**	Exclude articles on transition services other than those that lead to adulthood (e.g., transitions from preschool, elementary school, in between classes, etc.).
2.	**EXCLUDE**	Exclude anything prior to 1990.
At the bottom of your code sheet table, provide total number of articles included and excluded from that database.		
Save code sheet by database name. Load into Dropbox.		

reliability of search procedures and control for individual bias of inclusion/exclusion. Researchers C & D called out key words/key elements of each article found to Researcher A who recorded them on a blackboard. As repetitions such as "employment" occurred, topical themes were formed. Categories that were closely aligned such as "legislation and policy" were collapsed into one theme. While reviewing initial literature results of the search, as well as the keywords published under each abstract, the research team identified trends in the literature. After this initial process, themes identified were: (a) Legal and Policy Based Transition Planning Requirements, (b) Transition Steps, (c) Essential Components Leading to Post-secondary Education, (d) Essential Components Leading to Post-Secondary Employment, and (e) Ways to Increase Self-Determination/Self-Advocacy for Individuals with SLD. Also considered were Social Skills/Relationships and Community Access/Community Resources, but due to the lack of literature specific to those areas, researchers A and B decided to embed those foci in each previously identified theme, tailored specifically to the ways they were utilized in each area within the literature.

Next, researchers C and D were charged to independently update their final literature coding sheets (See Table 2) with additional information to include full citation, sample size, method, and abstract. Researchers C and D sorted their findings into the five topical themes using a shared google doc. Results were submitted to researchers A and B for review.

Final Review

Once researchers C and D submitted their findings to researchers A and B, researchers A and B met to concurrently review the literature that was found in the search. Researchers A and B analyzed these findings for inclusion in the final analysis. Additional exclusion criteria were used to allow the full team to answer the research questions. These additional exclusion criteria were; if the article included participants or was conducted internationally, were a dissertation or thesis, and those that were focused solely on intellectual disability. Simultaneously to reviewing literature included in the findings from researchers C and D, researchers A and B reviewed how those articles were sorted into the five

Table 2
Directions for Phase 2 Literature Search

Assigned Database: Person Completing Form:		
Use this coding sheet to record SLD Transition Articles **Code areas on the code sheet for each article as follows:**		
Code For each identified article meeting the inclusion/exclusion criteria (date/postsecondary transition), include the following:		
1.	Citation	Provide the full citation including doi
2.	Research study or Descriptive	Identify if this is a descriptive or research article. If descriptive, try to provide the main idea if not clearly articulated in the abstract. If research, note research and then design (e.g.: Research: Multiple Baseline Design)
3.	Participant Group	Note the disability category/ies included (Mild Intellectual Disability, SLD, ADHD, at-risk—you may also see Developmental Disability, Other Health Impaired or unspecified). If possible, note the sample size.
4.	Abstract	Cut and paste the abstract into the last column. Include key words. **Exclude articles that are specifically on other disabilities
At the bottom of your code sheet table, provide total number of articles included from that database.		
Save code sheet by database name. Load into Dropbox.		

topical themes. Any disagreement between researchers A and B were discussed until 100% agreement was met.

The remaining findings were ranked by researchers A and B as (1) definitely relates to the topic; (2) probably relates to the topic but needs further analysis; or (3) does not relate; can be removed from the analysis. Articles ranked as a 1 or 2 were further analyzed through annotated bibliographies until researchers A and B agreed as to whether the article should be included. Articles marked as a 3 were removed from the analysis. At the end of the final review, the team determined the systematic review complete and began assembling results based on the identified literature.

Results

The initial search resulted in the identification of 645 articles. After the initial exclusion criteria were applied, 137 articles met initial criteria. From the ERIC database, researchers initially identified nine articles. From the PsycINFO database, researchers initially identified 77 articles. From the Academic Search Premier database, researchers initially identified 20 articles. The hand search found an additional 31 articles. In total, 137 articles were identified to be screened for inclusion. In addition, all recurring author submitted key words were recorded from those 137 articles for review by researchers A and B.

All research members met and reviewed the recurring keywords listed from the 137 articles to ensure all IDEA required transition topics had been searched. Key words published under abstracts and identified as recurrent were "transition," "transition into adulthood," "transition from high school to college," "learning disabilities," "mild learning disabilities," "employment and/or vocational training," "postsecondary," "community," "community access," "community resources," "social," "friendship," and "independent living."

Lastly, researchers A and B used the final inclusion/exclusion criteria to narrow findings to 54/137 articles to be used in the evidence review utilizing the concurrent ranking procedure previously described. Figure 1 provides a detailed illustration of the process following the PRISMA Model (Page et al., 2020). From the identified topics in the review of the initial search, under the legal and policy theme there were 27 articles, transition steps had 14 articles,

post-secondary education had 20 articles, post-secondary employment had 23 articles, and self-determination had 13 articles. Several articles addressed more than one theme. The final list of included articles, sorted by theme, can be found in Table 3. Final themes were: (a) Legal and Policy Based Transition Planning Requirements, (b) Transition Steps, (c) Essential Components Leading to Post-secondary Education, (d) Essential Components Leading to Post-Secondary Employment, and (e) Ways to Increase Self-Determination/Self-Advocacy for Individuals with SLD.

Table 3

Results of Systematic Literature Review

Author	Year	Method
Legal and Policy-Based Transition Planning Requirements		
Carter, E. W., Trainor, A. A., Sun, Y., & Owens, L.	2009	Qualitative
Cavendish & Connor	2018a	Mixed
Cavendish & Connor	2018b	Qualitative
Clark, G. M.	1996	Lit Review
Connor & Cavendish	2018	Descriptive
Cummings, R., Maddox, C. D., & Casey, J.	2000	Conceptual
Daviso, A. W., Denney, S. C., Baer, R. M., & Flexer, R.	2011	Quantitative
Dowdy, C. A.	1996	Policy
Dunn, C.	1996	Lit Review
Eisenman, L. T.	2003	Lit Review
Evers, R. B.	1996	Lit Review
Grigal, M., Hart, D., & Migliore, A.	2011	Quantitative
Hamblet	2014	Qualitative
Joshi, G. S., & Bouck, E. C.	2017	Quantitative
Madaus, J. W.	2005	Conceptual
Madaus, J. W., Gerber, P. J., & Price, L. A.	2008	Lit Review
Madaus, J. W., & Shaw, S. F.	2006	Policy
McCall, Z. A.	2015	Quantitative
Morningstar, M. E., Turnbull, A. P., & Turnbull, H. R.	1995	Qualitative
Reiff, H. B. & deFur, S.	1992	Policy
Rojewski, J. W.	1992	Lit Review
Sitlington, P. L.	1996	Lit Review
Sturomski, N.	1996	Policy
Theobald, R. J., Goldhaber, D. D., Gratz, T. M., & Holden, K. L.	2019	Quantitative
Trainor, A. A., Morningstar, M. E., & Murray, A.	2016	Qualitative
Wagner, M. M., Newman, L. A., & Javitz, H. S.	2016	Quantitative
Yu, M., Novak, J. A., Lavery, M. R., Vostal, B. R., & Matuga, J. M.	2018	Quantitative
Transition Steps		
Blalock, G., & Patton, J. R.	1996	Lit Review
Cavendish & Connor	2018a	Mixed
Cummings, R., Maddox, C. D., & Casey, J.	2000	Conceptual
Dowdy, C. A.	1996	Policy
Dunn, C.	1996	Lit Review
Grigal, M., Hart, D., & Migliore, A.	2011	Quantitative
Kelley, S. D. M., English, W., & Schwallie-Gaddis, P.	2007	Qualitative
King, G. A., Baldwin, P. J., Currie, M., & Evans, J.	2005	Conceptual
McCall, Z. A.	2015	Quantitative
Rojewski, J. W.	1992	Lit Review
Sitlington, P. L.	1996	Lit Review
Sturomski, N.	1996	Policy
Trainor, A. A., Morningstar, M. E., & Murray, A.	2016	Qualitative
Yu, M., Novak, J. A., Lavery, M. R., Vostal, B. R., & Matuga, J. M.	2018	Quantitative

Table 3 (cont.)

Essential Components Leading to Post-Secondary Education		
Blalock, G.	1996	Lit Review
Cavendish & Connor	2018a	Mixed
Cleveland, J., & Crowe, M.	2013	Lit Review
Davis, C., & Bullis, M.	1990	Lit Review
Daviso, A. W., Denney, S. C., Baer, R. M., & Flexer, R.	2011	Quantitative
Dowdy, C. A.	1996	Policy
DuPaul, G. J., Pinho, T. D., Pollack, B. L., Gormley, M. J., & Laracy, S. D.	2017	Quantitative
Grigal, M., Hart, D., & Migliore, A.	2011	Quantitative
Hadley, W.	2018	Quantitative
Joshi, G. S., & Bouck, E. C.	2017	Quantitative
King, G. A., Baldwin, P. J., Currie, M., & Evans, J.	2005	Conceptual
Langi, F. L. F. G., Oberoi, A., Balcazar, F. E., & Awsumb, J.	2017	Quantitative
Lee, I. H., Rojewski, J. W., Gregg, N., & Jeong, S.-O.	2015	Qualitative
Madaus, J. W.	2005	Conceptual
Madaus, J. W., Banerjee, M., & Hamblet, E. C.	2010	Quantitative
Posthill, S. M., & Roffman, A. J.	1991	Qualitative
Rojewski, J. W.	1992	Lit Review
Smith, S. G., English, R., & Vasek, D.	2002	Quantitative
Wagner, M. M., Newman, L. A., & Javitz, H. S.	2016	Quantitative
Yu, M., Novak, J. A., Lavery, M. R., Vostal, B. R., & Matuga, J. M.	2018	Quantitative

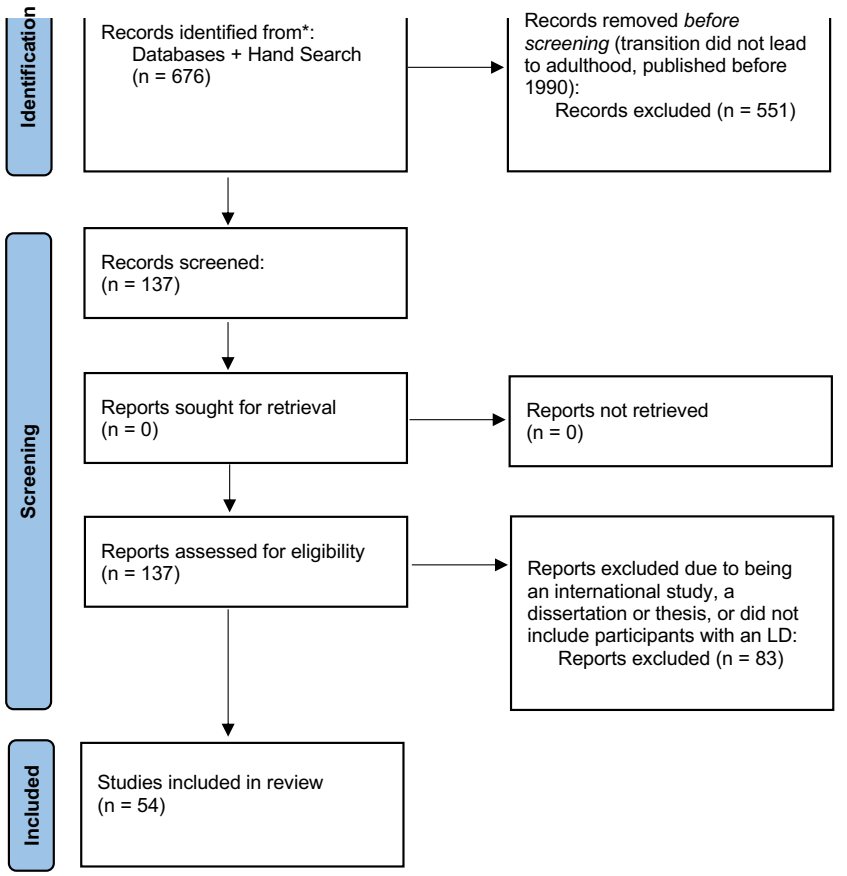
Essential Components Leading to Post-Secondary Employment		
Blalock, G.	1996	Lit Review
Cavendish & Connor	2018a	Mixed
Cleveland, J., & Crowe, M.	2013	Lit Review
Davis, C., & Bullis, M.	1990	Lit Review
Daviso, A. W., Denney, S. C., Baer, R. M., & Flexer, R.	2011	Quantitative
Daviso, A. W., Baer, R. M., Flexer, R. W., & Meindl, R.	2016	Quantitative
Dong, S., Fabian, E., & Luecking, R. G.	2016	Quantitative
Dowdy, C. A.	1996	Policy
Dunn, C.	1996	Lit Review
Eisenman, L. T.	2003	Lit Review
Evers, R. B.	1996	Lit Review
Gonzalez, R., Rosenthal, D. A., & Kim, J. H.	2011	Qualitative
Grigal, M., Hart, D., & Migliore, A.	2011	Quantitative
Ji, E., Schaller, J., Pazey, B., & Glynn, K.	2015	Quantitative
King, G. A., Baldwin, P. J., Currie, M., & Evans, J.	2005	Conceptual
Luftig, R. L., & Muthert, D.	2005	Quantitative
Posthill, S. M., & Roffman, A. J.	1991	Qualitative
Rojewski, J. W.	1992	Lit Review
Shapiro, E. S., & Lentz, F. E.	1991	Lit Review
Sturomski, N.	1996	Policy
Theobald, R. J., Goldhaber, D. D., Gratz, T. M., & Holden, K. L.	2019	Quantitative
Wagner, M. M., Newman, L. A., & Javitz, H. S.	2016	Quantitative
Yamamota, K. K., & Black, R. S.	2015	Qualitative

Table 3 (cont.)

Ways to Increase Self-Determination/Self-Advocacy for Individuals with SLD		
Carter, E. W., Lane, K. L., Pierson, M. R., & Glaeser, B.	2006	Qualitative
Farmer, J. L., Allsopp, D. H., & Ferron, J. M.	2015	Qualitative
Goldberg, R. J., Higgins, E. L., Raskind, M. H., & Herman, K. L.	2003	Qualitative
Hogansen, J. M., Powers, K., Geenen, S., Gil-Kashiwabara, E., & Powers, L.	2008	Quantitative
Kelley, S. D. M., English, W., & Schwallie-Gaddis, P.	2007	Qualitative
McCall, Z. A.	2015	Quantitative
Morningstar, M. E., Turnbull, A. P., & Turnbull, H. R.	1995	Qualitative
Murray & Naranjo	2008	Qualitative
Rojewski, J. W.	1992	Lit Review
Smith, S. G., English, R., & Vasek, D.	2002	Quantitative
Trainor, A. A.	2005	Quantitative
Trainor, A. A.	2007	Qualitative
Zheng, C., Gaumer Erickson, A., Kingston, N. M., & Noonan, P. M.	2014	Quantitative

Figure 1

Identification of Literature Via Databases and Hand Search



Note: Adapted from Page, M.J., McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

Upon completion of the search and review process, researchers A and B noted that the literature were grouped by legislative policy cycles. In 1990, transition procedures were added to the reauthorization of IDEA. Fifteen articles were identified as published after the 1990 reauthorization by researchers A and B. No Child Left Behind (NCLD; 2002) was another legislative marker found in the results. NCLB greatly moved the focus to academic outcomes and accountability. Transition was still included in IDEA, but not as prioritized. From 2002–2008, 14 articles were published. 2008 saw the passage of the Higher Education Act reauthorization, and another marker of published articles on transition. This act increased the focus of individuals with disabilities participating in post-secondary education programs. Twenty-six articles were identified during the analysis of the findings by researchers A and B that were published after 2009.

Additionally, the types of literature identified contributes to the knowledge of transitions on the database of students with SLD. Literature in this review demonstrated there were more reviews of the literature (11), descriptive/policy/conceptual (8) and/or mixed/qualitative studies (15) were published in the transition literature than quantitative studies, respectively. From the 54 articles identified for this review, 18 were quantitative studies (See Table 3).

Discussion

The purpose of this analysis was to systematically review research specific to the transition of students with SLD in the U.S. and report identified key components of that process and identifiable gaps within the larger topic of transition in order to offer information useful for practitioners, families, and others that may be supporting those students with SLD during transition. Fifty-four articles met the inclusion criteria for this analysis.

Alignment with Historical Components

The inclusion of transition planning in IDEA 1990 created an initial surge of 13 identified publications specific to learners with LD. Soon after the initial 1990 mandate, Rojewski (1992) examined nine model transition programs to identify components critical to supporting the transition needs of students with SLD. He presented seven generic components of secondary transition programs: (a) individualized transition planning, (b) integration with mainstream settings, (c) paid work experiences, (d) active family involvement, (e) coordination of data and services, (f) job seeking and placement, and (g) follow-up and/or follow-along (p. 137). Examining the resulting themes from the current analysis of critical transition information, five themes were identified: (a) Legal and Policy Based Transition Planning Requirements, (b) Transition Steps, (c) Essential Components Leading to Post-secondary Education, (d) Essential Components Leading to Post-Secondary Employment, and (e) Ways to Increase Self-Determination/Self-Advocacy for Individuals with SLD. To enhance discussion, researchers utilized Rojewski's generic components of high-quality transition to the current findings and found most literature aligned directly into Rojewski's initial categories. Using Rojewski's essential components compared to findings of this literature review allowed a historical comparison of developments in the literature since 1992. Each of Rojewski's recommended components is integrated with current research findings and explored below.

Individualized Planning and Coordination

Individualized transition planning and coordination was the initial component identified by Rojeweksi in 1992. This aligns with the current themes of Legal and Policy Based Transition Planning Requirements and Transition Steps (e.g., Blalock & Patton, 1996; Carter et al., 2009; ; Cavendish & Connor, 2018a; Dowdy, 1996; Reiff & deFur, 1992). In 1990, based on the mandate IDEA reauthorization regulations, transition planning was a new requirement. Today, transition planning is standard practice for students considered eligible under IDEA 2004. Early on, Posthill and Roffman (1991) identified the necessity of personalized and authentic goal setting as a critical component of successful transition programs. Individualized goal-setting has been shown to enhance Individualized Transition Planning. For example, individualized goal-setting in the transition planning process has directly correlated with student's postsecondary targets and has led to positive effects in the achievement of those targets (Daviso et al, 2011; Hogansen et al., 2008). Clarified in the 2004 reauthorization of IDEA, individualized transition planning should occur at least annually, either as a component of the Individualized Education Plan or as a stand-alone document, and must be included in the IEP by the time that the student reaches age 16.

Although Indicators 13 and 14 of IDEA (2004) require transition plans to meet certain compliance regulations, these requirements may not be enough to promote in-depth individualization of these plans, necessary for successful implementation and outcomes. Professional literature is replete with findings that imply this deficiency to be the case. To illustrate, Trainor (2005) utilized document reviews, observations, and interviews to research the transition planning experiences of 15 students with SLD and found that students' ITP exit goals were not shown to correlate with the goals that students had provided in the interview. Furthermore, Trainor found specific disconnects

between employment goals, postsecondary education goals, and independent living goals, for which goals on the ITP did not make any connection to the current experiences of these students or outcomes expressed for their futures. Trainor also identified the participation of these students in their transition plans as "participating on the periphery" (p. 238). Students may have participated in the plan at school (i.e., attended), but most saw it as a place to schedule the next year's classes. Trainor further found that participants in this study relied heavily on families for authentic transition planning not associated with the school ITP. Trainor (2005) echoed Rojewski's (1992) recommendation that transition planning should be individualized and aligned with each student's unique goals.

In a case study of three students with SLD that included in-depth analysis of each student's transition into college, Connor (2012) noted similar findings. These findings illustrated just how variable students with SLD can be in their goals, strengths, and challenges. Examining the need for individualized supports unique to African-American students with SLD, Durodoye et al., (2004) endorsed the need to support individuals' differences. Individualized transition planning remains a key component of effective transition planning today, while active and authentic student participation (not simply attendance) continues to be a critical factor in successfully individualizing transition plans (Blalock & Patton, 1996). However, teachers need additional training for working with culturally and linguistically diverse students with SLD and their families as they support an individualized transition process (Keel et al., 2018).

Integration with General Education Settings

Rojeweski (1992) originally advocated for integration into mainstream settings on the cusp of the inclusive practices movement. Rojeweski (1992) wrote, "All exemplary transition models stress the need to integrate students with disabilities into normalized environments" (p. 137). The recommendation was that students be included in general education classrooms, work settings, and postsecondary environments. *Resulting literature on Legal and Policy Based Transition Planning Requirements, Transition Steps,* and *Essential Components Leading to Post-secondary Education* all support access to general education settings (Daviso et al., 2011; Hadley, 2018; Lee et al., 2015). Through IDEA 2004, federal law reiterates the need for students to receive services in the Least Restrictive Environment (LRE). Though placement may vary based on unique student needs, students with SLD who are working toward transition goals should be included in the general education setting as much as possible to promote their acquisition of skills useful to an adult world. This includes inclusion in vocational training, job sites, and the community at large.

When it comes to career and technical education classrooms, Theobald et al. (2019) emphasized the need for inclusion in a study of individuals with SLD. Students with SLD who spent more time in inclusive, general education settings graduated from high school on-time at a higher rate, were more likely to attend college, and were more likely to be employed when compared to individuals with SLD who spent less time in inclusive settings. Lufting and Muthert (2005) studied outcomes of 36 students (17 identified as having SLD) who were recent graduates of an inclusionary vocational and technology emphasis high school. Outcomes for students with SLD were overall positive when compared to outcomes for peers reported in other studies. Of note, 94% of the participants were employed, 47% were no longer living at home with their parents/guardians, 94% reported owning a car, and all reported registering to vote/voting. Although the study was small, these findings support the idea that inclusion in generalized settings has been beneficial to the adult outcomes of students with SLD.

In contrast, McCall (2015) conducted a qualitative study of four students' transitions into college and expressed concern that three of the four did not receive specific transition services because they had been in inclusive settings which stressed academics. As McCall found, it is critical to ensure that transition continues to be a priority when students participate in inclusive settings. Least Restrictive Environment, a key provision in IDEA and key component in effective transition services, should not be interpreted as the environment in which the student receives the least amount of supports. Instead, supports—including those that support transition—should be pushed into the environments in which the student has the most access to the general curriculum, peers, and activities while receiving the supports necessary to meet their individualized needs. This is how we can merge transition supports into inclusive classrooms.

Paid Work Experience

"Students receiving paid work experience are more likely to be employed following completion of high school than those not receiving it" (Rojewski, 1992, p. 137). This finding has continued to stand the test of time for all disability categories (Butterworth et al., 2011). *Literature from Legal and Policy-Based Transition Planning Requirements, Transition Steps* and *Essential Components Leading to Employment* all support this (Cleveland & Crow, 2013; Dong et al., 2016; Eisenman, 2003). Luftig and Muthert (2005) found that 53% of their employed

participants had continued in the same job since graduation with wages at or above minimum wage. The need to acquire vocational training and real work experience while in high school is important for students with SLD (Evers, 1996; Luftig & Muthert, 2005). Targeted goals toward achieving paid work experiences while in secondary settings should be included as a key component of any transition services. Students should be supported to participate in paid work experience as part of their transition planning and experiences.

Job-Seeking and Placement

Not only should students with disabilities receive rigorous academic instruction, but students with disabilities should also receive instruction on how to locate and obtain employment. These skills can be beneficial not only for those seeking employment directly after high school but also for those choosing a post-secondary education route. *Literature from Legal and Policy Based Transition Planning Requirements, Transition Steps, Essential Componentes Leading to Post-Secondary Education* and *Essential Components Leading to Employment* all support this (King et al., 2005; Luftig & Muthert, 2005; Posthill & Roffman, 1991). Vocational Rehabilitation has been a primary agent included in transition planning and in supporting transition to employment and post-secondary education. Langi et al. (2017) found that specific types of VR service delivery may have more benefit than others in supporting positive outcomes in transition. Results of the Langi study suggested that VR services delivered through an enhanced, contract-based secondary transition program showed a greater effect in transitioning individuals with disabilities to obtain employment as compared to traditional transition services delivered by VR. Vocational training should also be considered while planning for post-secondary transition. Ji and colleagues (2015) found statistically significant differences in employment rates and income based on gender and ethnicity. College and occupational training were found to be positively correlated to successful employment (Ji et al., 2015). Adequate vocational preparation through college or occupational training for individuals with SLD can support successful employment, regardless of ethnicity or race, which is an important factor to be considered when designing transition services.

Active Family Involvement

Family can provide added support that many students with disabilities require. In 1995, Morningstar et al. established that students with SLD tend to rely on their families as sources of support to successful transitions. Literature from all five themes of the current study supported the active participation of families (Carter et. al., 2006; Carter et. al., 2009; McCall, 2015). Identified supports have included parents, relatives, friends, and teachers (i.e., those who know the student best and who have goals and outcomes they would like to see the student accomplish; McCall, 2015). Parents can be a resource for connections to post-secondary employment and education opportunities, while also providing various forms of other support (e.g., post-secondary supports, medical appointments/medication, advocacy; McCall, 2015). However, in interviews focused on females with disabilities, Hogensen et al. (2008) found a disconnect in the goals of the participants and what their parents/educators' thought were attainable and sensible. Working with families to identify a shared vision for student achievement through transitions is beneficial (Carter et al., 2009). Lee and colleagues (2015) recommended that school programs strengthen their relationships with parents to support their awareness of factors that can impact the educational persistence of students with SLD. Smith et al. (2002) recommended training for parents to assist their high school students to transition to life after high school, as families are a key component of students' transitions. Creating supports for active family involvement helps ensure that support will carry-over once the student exits the K-12 system.

Coordination of Data and Services

Coordination of data and services includes active involvement of all parties (e.g., teachers, school support staff, adult service providers, post-secondary education, etc.), collaborative agreements to share information (including data), and resources that will benefit the student during the transition planning towards adulthood. Using a Transition Planning Inventory with teachers, parents, and students, Carter and colleagues (2009) found significant variability in identifying transition needs among the ratings of teachers, students, and families. By comparing ratings of these three groups on 160 students (101 with SLD), the research demonstrated the importance of including multiple perspectives in transition planning. A resulting recommendation was to encourage teachers, parents, and students to collaborate so that transition planning can be consistent and shared across groups. Sharing and coordinating data around needs is critical to effective transition.

In 1996, Dowdy recommended specific coordination steps shared between Vocational Rehabilitation (VR) counselors and Special Education Teachers for the education, training, and support of individuals with SLD in transition. These recommendations clearly outline the roles teachers and VR counselors should share and/or complete independently to support the transition

of students with SLD. Examples include things such as VR Counselors providing an inservice for secondary teachers; sharing educational and vocational assessment data; VR counselors visiting the classroom informally; teachers modeling appropriate employment behavior in the classroom and so on (Dowdy, 1996, p.146). While Dowdy (1996) provides an extensive list, many of these recommendations for coordination of data and services are still viable today in more current literature (Cavendish & Connor, 2018a; Madaus et al., 2010). These recommendations could be reconfigured to fit any adult agency, including postsecondary education agencies or other agencies involved in students' transition.

Follow-Up and/or Follow-Along

Finally, to understand the impact that transition planning had on post-secondary outcomes for students with disabilities, follow-up or follow-along measures should be used to determine additional support for those in post-secondary settings and to evaluate transition planning services (Rojewski, 1992). When examining recommendations made from literature in each of the five themes identified in this study, follow-up or follow-along supports and assessments are recommended (current literature citations). In 1991, Shapiro and Lentz found that the efficacy of vocational training programs may be impacted if follow-up is not continued post-completion. However, it is important to recognize that transition into adulthood has a much wider definition than just education and employment. Janus (2009) found that individuals with SLD may be employed but may not reach other adult outcomes, such as an independent residence, marriage, and children. Hogansen and colleagues (2008) found that gaining their own family was an important goal for their participants with disabilities, even though it was not a shared goal of participants' families and teachers. Connor (2012) found that two of the three participants with SLD had difficulty making friends in college. Longitudinal service supports may be beneficial in identifying additional needs to support transition post-graduation and in other areas outside of employment. This may be particularly salient for students with SLD who have shown success in employment but display some deficits in other quality of life domains.

New Developments

Since 1990, two additional components have arisen as foci of successful transition for students with SLD (Farmer et al., 2015; McCall, 2015; Rojewski, 1992). Based on the results of the literature review, Self-Determination/Self-Advocacy and Evidence-Based Practices should be added as key components addressed in the delivery of successful transition services for students with SLD.

Self-Determination/Self-Advocacy

In Individualized Transition Planning, active participation is an important component of individualizing transition services (Daviso e al., 2011; Hogansen et al., 2008; Trainor et al., 2016). However, effective and active participation can be difficult without having the proper skills and knowledge to support that participation. Learning self-determination skills that include self-advocacy is critical to authentic involvement in one's transition process. In the Hogansen et al. (2008) study, researchers found a large gap between what students and what parents/teachers saw as feasible goals for transitioning to adulthood. Self-determination skills, beginning with self-awareness, may be useful in narrowing that gap and/or in providing students the skills to advocate for higher expectations. Madaus et al. (2008) found it imperative that students be taught self-determination skills before leaving the school environment. Findings from this research demonstrated that adults with SLD are largely unaware of the workplace supports provided by the Americans with Disabilities Act of 1990 and lacked the self-determination skills to secure appropriate work accommodations. Similar to recommendations from Dowdy (1996), researchers recommended teaching students about their SLD while still in secondary settings in order to assist in their own self-advocacy in future decisions. Self-awareness as to the impact of their disability is key in producing informed decisions and advocating for necessary supports into adulthood.

Smith et al. (2002) recommended training for parents to teach their transitioning students how to move from other adults advocating for them to a position of self-advocacy as well as toward learning self-disclosure skills. Such skills are necessary for students to attain success when transitioning to adult environments and opportunities to practice self-determination should be provided as often as possible (Carter et al., 2006). Self-determination, including self-advocacy, should be seen as a key component to effective transition for students with SLD.

Toward Evidence-Based Practices

There are many strategies and approaches to providing best practices for transition planning. As early as 1996, Dunn recommended empirical validation of "best practices" in transition through evidentiary support. Substantiated practices identified by Dunn were vocational training, parent involvement, and interagency collaboration. Practices with some evidentiary support

were social skills training, paid work experience, and individual transition plans and planning. Dunn (1996) recommended additional validation of each practice, specific to the needs of individuals with SLD. Similarly, King et al. (2005) identified six groups of transition strategies, each with specific skilled targets which have been used to enhance students' knowledge, skills, support, and direct involvement in social, productivity, and leisure roles (p. 203). Empirical validation may move those practices that were known as "best" since 1996 to evidence-based in 2020, assuming the empirical validation meets criteria.

While there is certainly a benefit to deeper narrative investigations and descriptive reviews/policy papers, the Institute of Education Sciences, Council for Exceptional Children, and other organizations utilize primarily quantitative measures to determine evidence-based practices (Cook et al., 2009). Quantitative research is the gold standard used for establishing evidence-based practices (Cook et al., 2009). Empirical studies could contribute to findings about causality and evidence-based practice.

Recommendations for Future Research and Practice

First, when examining publications on the transition experiences and recommendations for students with SLD from the 1990s to today, many earlier recommendations remain relevant. There continues to be limited research on the postsecondary transition of students with SLD; specifically, there is not enough empirical research. Since the reauthorization of the Higher Education Act in 2008, research, specifically into postsecondary experiences, has increased. However, most of that research has been qualitative and has not met the criteria to establish specific evidence-based practices or supports (Cook et al., 2009). Research is needed, specific to the transition experiences and needs of students with SLD, to help educators and families understand what works and what does not work for this population. Of the 18 quantitative studies identified in this review, most would benefit the field through replication. Evidence-based strategies are an important part of our educational world since the passing of the No Child Left Behind in 2001 (Cook et al., 2009). With the reauthorization of the Every Student Succeeds Act of 2015, evidence-based practices continue to be critical to education. This is no different for transition. While Cobb and colleagues (2013) have identified specific practices supported by evidence, those practices should be studied through their implementation with students with SLD. Many of the studies reviewed in the course of this analysis demonstrated that students with SLD had unique needs (Connor, 2012; Hogansen et al. 2008; Janus, 2009). It is critical to ensure that the identified practices have evidence to support their implementation with students with SLD.

Funded model-demonstration projects are needed in order to allow educational and adult agency systems to develop and evaluate essential steps in supporting the transition of students with SLD. This research team did not find any models specific to this population. While generic models may be effective, focused study should confirm or disprove if those generic models work equally well for this population. Many of the models existing are predicated on the needs of individuals with Intellectual Disabilities (i.e., Project Search, Dual Enrollment TPSIDs). As demonstrated through the literature reviewed here, needs of students with SLD may. Further study should be conducted creating a tailored transition process designed to consider the specific needs of this population. Additionally, Blalock's (1996) teaming models offer the opportunity to explore supports within individual transition planning, community, regional, and statewide transition supports. Exploration should be conducted to identify where these teams are in operation and how effectively they are meeting their described function. Based on that data, new models stemming from advocacy agencies or other outside education groups may be beneficial to put in place to support transition resources and structures in schools.

Social skills in the form of friendships, work colleagues, and romantic relationships were mentioned in several studies and were discussed in key components (Connor, 2012; Hogansen et al., 2008; Janus, 2009; Rojeweski, 1992). In reality, both relationships and social skills transcend work, home, and recreational life. However, no studies were identified that directly evaluated social skills in the areas of developing and maintaining those specific types of relationships for students with SLD. Efforts should be made to promote the study and development of key strategies supporting transition to adulthood in these areas.

A similar recommendation is made for access and participation in community settings or with community resources. Informal family supports were mentioned in this area (Carter et al., 2009; Lee et al., 2015; Morningstar, et al., 1995; Smith et al., 2002), but no formal supports were discussed. Participation in the community and the ability to access resources within the community is a critical transition skill. However, no research was identified directly addressing the needs of individuals with SLD as they transition into the community. Direct research is needed to identify necessary planning and supports specific to this population.

The role of student variability requiring individualization has been identified as a critical area in transition planning (Posthill & Roffman, 1991).

Furthermore, differences existed across gender, race, and ethnicity. Studies demonstrated the need for educators to become more culturally competent in understanding how transition goals may vary based on culturally informed preferences. While teacher training in this area is important, additional research is needed to better inform what types of cultural education and training would be useful to inform the transition process. Family involvement continues to be identified as a key factor. Investigating how families from culturally diverse backgrounds participate in and support their student's background would be beneficial in preparing teachers to better support students from culturally diverse backgrounds.

No articles were found that discussed a specific sequence of steps in creating a transition plan. This finding, in and of itself, is critical. No research demonstrations of effective transition planning guides for individuals and families with SLD were identified in peer-reviewed literature. Generalized how-to guides were found in textbooks and websites; however, few studies exist focused specifically on the essential and sequential steps of transition planning for individuals with SLD and their families. Additional studies testing the use of sequential planning steps in the planning of transition activities for individuals with SLD and their families are needed.

Finally, researchers noted that literature seemed to align with policy cylces and the focus of that legislation. The review included articles beginning with the year 1990, the year transition was added into IDEA. Fifteen articles were identified during the 1990s. Beginning in 2001, a second phase of literature was noted, concurrent with the writing of No Child Left Behind (NCLB) in 2001 and its signature into law in January, 2002. NCLB maintained a focus on graduation, prioritizing academic achievement and school accountability for that achievement over other types of educational experiences. Fourteen articles were published from 2002-2008. Finally, reauthorization of the Higher Education Act in 2008 focused on increasing participation in higher education by individuals with disabilities. While the Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID) were not programs focused on students with SLD, they had a broad impact on supporting transition, self-advocacy, and resources for any student with a disability transitioning to postsecondary environments. Twenty six articles were identified from 2009-forward. These groupings of literature may demonstrate a connection between policy and research. Although not the purpose of this review, a broad exploration might establish a link between policy and publication trends, thereby emphasizing the need for prioritizing transition in policy.

Limitations

This study has several limitations to report. First, this study is predicated on questions specifically about students with SLD and their transitions. This was not intended to imply that the larger body of transition research does not also apply to students to SLD, rather it was to look specifically at the transition work focused on students with SLD. A larger body of general transition literature may have included richer and more current literature to enhance the literature provided here. Second, this study is focused on transition practices and measurement within the U.S. Broadening to international work may have included more or different practices specifically used with students with SLD in other areas. Finally, disserations were not included in this work. A close examination of dissertations may have yielded additional, informative results.

Conclusion

The purpose of this analysis was to systematically review research specific to the transition of students with SLD in the U.S. and report identified key components of that process and identifiable gaps within the larger topic of transition in order to offer information useful for practitioners, families, and others that may be supporting those students with SLD during transition. Overall, 54 studies were analyzed, with publication years ranging from 1990-present day (spanning just under 30 years). Within these three decades, few findings provide certainty about the transition process for this population of students. In fact, the key components provided by Rojewski (1992) are still valid today. In 1996, Blalock and Patton summed up critical themes in transition planning as follows: a) student participation is crucial, b) efforts should be made to get families involved in the transition process, c) transition efforts should start early, d) transition planning must be sensitive to cultural factors, and e) transition planning must be comprehensive. Blalock's critical themes could be written as current findings from this literature analysis. We must make specific plans of actions to address recommended needs so that in 2051 we are not repeating these same findings and recommendations again Educators, and families can utilize the findings of this analysis to support successful transition planning experiences that meet the unique needs of students with SLD.

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K. Alisa Lowrey, Leonard Troughton, Ryan Nation, Samantha Papp, and L. Denise Williams are in the School of Education at the University of Southern Mississippi.

Please send author correspondence to K. Alisa Lowrey, alisa.lowrey@usm.edu

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Response to Intervention as a Structuring Benchmark for Organizing Services for Students at Risk and With Learning Difficulties in Reading: A Multiple Case Study in Three Elementary Schools

Élisabeth Boily, Chantal Ouellet, and Pascale Thériault

Although Response to Intervention (RTI) is viewed as a promising model for preventing learning difficulties in reading, several authors have highlighted the challenges associated with its implementation in educational settings (Barrio et al., 2015; Fuchs & Vaughn, 2012; Mitchell et al., 2012). After a decade of implementing this model in the United States, researchers insist on the need for more studies on the practical issues related to the implementation of this model (Barrio et al., 2015; Simonsen et al., 2010). The purpose of this article is to present the results of a multi-case study on the roles of teachers and remedial teachers in the context of the implementation of the RTI in reading in three elementary schools. It focuses more specifically on the organization of services based on the different evaluation and intervention procedures associated with the RTI. The results indicate the presence or emergence of a data culture in the three sites studied. It was possible to observe that RTI evaluation and intervention procedures are viewed as structuring benchmarks for organizing and planning services throughout the school year for first and second Grade students at-risk and those already struggling with reading difficulties.

Keywords: *Response to intervention, special education, general education, teaching reading, service delivery model, learning disabilities*

Introduction

For several decades, the right of every child to free education in the least restrictive environment has increasingly been recognized in Quebec (Education Act, RLRQ, 1997). Most recently, the vision of inclusive education has been integrated in the policy on educational success (Ministère de l'éducation et de l'enseignement supérieur [MEES], 2017a). In this context of inclusion, the services offered to students with learning difficulties by special educators in the school setting are called upon to change (Dubé et al., 2021; Rousseau et al., 2017) and it becomes essential to better define these services. In recent years, several challenges have been identified with respect to the services for students with learning difficulties offered by special educators. A recent study conducted with 134 special educators in Quebec revealed that 75% of them were dissatisfied with the organization of services (Granger et al., 2021). In the next paragraphs, some of these challenges will be presented.

A first challenge concerns the frequency and the quality of interventions deployed. Brodeur et al. (2008) have drawn a portrait of special educators' practices and they note that intensive interventions are often focused on reviewing what was already received in instruction; these interventions are therefore not intensive nor preventive in nature. In addition, the number of students with learning difficulties encountered by a special educator is often excessive, making it difficult to devote enough time to each student (Brodeur et al., 2008). Over the past 2 years, major challenges have been added with the growing number of students requiring special education services combined with the significant staff shortage (Turcotte et al., 2021). The current situation therefore makes the organization

and planning of the special educator's work even more complex.

The second criticism concerns the service model advocated by most special educators. At the moment, while there are different models for organizing services, most intensive interventions take place outside the classroom (Gaudreau, 2010; Tremblay, 2012). Pull out services have some benefits according to Klingner et al. (1998), because they include individualized or small group attention to students with learning disabilities, thus increasing academic success. The small ratio allows the special educator to adapt their teaching to the needs of their student, to maximize the attention of the latter and to ensure that content is mastered before continuing with the next (Dion et al., 2008). Despite the fact that this type of intervention is essential for many students with special needs (Tremblay, 2012), this service model is subject to several limitations, including: (a) it can have a stigmatizing effect on these students, (b) the students lose instructional time in class, (c) there is little transfer of skills learned outside the classroom, and (d) the lack of collaboration between the general educator and the special educator means that the interventions are not consistent with each other (Saint-Laurent et al., 1998). Tremblay (2015) adds that this service model can result in a loss of class time for students, as the general educator must manage absences by scheduling catch-up periods. Giasson (2004) raises another issue relating to this service model, specifically in reading. She observes that meetings with special educators often take place during the reading period in class, which deprives students struggling in reading of valuable instructional time. And yet, these students need to devote more time to reading than other students to perfect their learning (Allington, 2009; Giasson, 2004; Shanahan, 2021).

The third concern is the role of the special educator. It is apparent that the role of this school actor varies greatly from one school to another (Association des Orthopédagogues du Québec [ADOQ], 2018; Granger, 2021; Office des professions du Québec [OPQ], 2014). The results from the study by Granger et al. (2021) show that the profession of special educator is still poorly defined. This lack of understanding of the role and functions of special educators has a significant impact on the optimization of the services offered (Granger et al., 2021). It is possible to assume that this variation between schools sometimes causes inequities or access difficulties for students for whom these services are essential to their success. In this context, it becomes important to address the issue of organizing special education services. According to Dion et al. (2008), this aspect has been neglected by the scientific community. Indeed, these authors note that scientific knowledge on the content to be taught to prevent learning difficulties is developing rapidly, but this is less the case regarding the question of the organization of services. Dion et al. assert that these questions must nevertheless be resolved: "Otherwise, breakthroughs in research will not translate into more effective practices and prevention may remain wishful thinking" (Dion et al., 2008, p. 155).

In an inclusive context, ministerial educational policies emphasize the importance of early, rapid, and continuous interventions (MEES, 2017). Response to Intervention (RTI) represents a "systems approach to the delivery of educational services that aims to prevent learning difficulties and provide, as quickly as possible, each student with the support they need to reach their potential in school" (Desrochers, 2021). Several authors therefore insist on the importance of redefining the role of special educators in the context of the implementation of RTI (Mitchell et al., 2012; Swanson et al., 2012). RTI sheds light on how services are provided to students with difficulties at each tier of intervention (Brodeur et al., 2008).

It appears as a reference framework in ministerial documents in Quebec about literacy instruction and behavior interventions and support (Ministère de l'éducation et du sport [MELS], 2011, 2012; MEES, 2017b) and it is establishing itself in a growing number of school boards (MEES and RÉCIT, 2020). To date, RTI has been mainly associated with reading instruction at the elementary level (Desrochers, 2021). Although this model has the potential to structure special education services, studies are needed to better identify how it can be operationalized in practice and in what ways it can contribute to optimizing service delivery.

Reference Framework

RTI

RTI is a model for organizing services and interventions that aims to meet the needs of all students in an inclusive manner, while paying particular attention to those who are experiencing difficulties (Conseil supérieur de l'éducation [CSÉ], 2017). The National Center on Response to Intervention (NCTRI) has defined RTI as follows:

Response to intervention integrates assessment and intervention within a multi-level prevention system to maximize student achievement and to reduce behavioral problems. With RTI, schools use data to identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the intensity and nature of those interventions depending on a student's responsiveness, and identify students with learning disabilities or other disabilities (NCRTI, 2010, p.5).

The assessment and intervention processes are therefore at the heart of the model. Assessment processes include two forms of measurement: universal screening and progress monitoring. Universal screening measures are performed with all students in the class or school (Justice, 2006; NCTRI, 2010; Vaughn & Klinger, 2007). They are taken at three different times during the school year (i.e., early fall, early winter, and late spring; Desrochers et al., 2016; Vaughn & Klinger, 2007). Hintze and Marcotte (2010) report that these screening measures first provide an overall assessment of the quality of the teaching in the regular classroom. These measures would also help identify students for whom this teaching is not sufficient to ensure learning progress (Hintze & Marcotte, 2010). Progress monitoring measures assess student performance in order to quantify improvement in RTI (Hintze & Marcotte, 2010; NCTRI, 2010). At the same time, they make it possible to assess the effectiveness of the intervention (Dion et al., 2011; Fuchs & Fuchs, 2007; NCTRI, 2010). Fuchs and Fuchs (2007) explain that student performance is assessed on a weekly basis, which identifies "non-responding" students and allows special educators to more effectively individualize their interventions to better help students overcome their difficulties (Dion et al., 2011; Hintze & Marcotte, 2010). From a RTI perspective, the school actors base their decisions on the data resulting from the universal screening and the progress monitoring measures at each tier of intervention (NCTRI, 2010). Data from these assessments can quickly determine whether students are responding to or need another type of intervention. They also make it possible to regulate teaching and guide differentiated instruction (Desrochers, 2016).

Intervention procedures are structured around a multi-level prevention system. Tier 1 is associated with universal instruction offered to all students in the class and is performed through high-quality teaching based on research knowledge (Desrochers et al., 2016; McIntosh et al., 2011; Vaughn & Klinger, 2007). According to Laplante et al. (2010), this instruction must provide explicit and systematic teaching, and focus on skills highly associated with success. Tier 2 corresponds to additional interventions aimed at the 20 to 30% of students for whom universal interventions have not been sufficient (Vaughn & Klinger, 2007). The interventions are more systematic and are performed in small homogeneous groups of four or five students (Desrochers et al., 2012; Laplante et al., 2010; Vaughn & Klinger, 2007). Tier 3 concerns students who did not respond to the additional interventions. Interventions are intensive and adapted to individual needs (Fuchs et al., 2012; Laplante et al., 2010). They are done in small groups or individually (Desrochers et al., 2012).

The Roles of General and Special Educators in RTI

There is a growing body of research examining how RTI is implemented in schools, including examinations of the roles of general and special educators (Alahmari, 2019; Bester & Conway, 2021; Gomez-Najarro, 2020; Haager & Mahdavi, 2007; Meyer & Behar-Horenstein, 2015; Mitchell et al., 2012; Richard, 2020; Silva et al., 2020) and these roles have an impact on how the services are organised. One of the elements that emerges from these studies is the fact that the division of roles between the general educator and the special educator has not been clearly established (Haager & Mahdavi, 2007; Bineham et al., 2014). The lack of clear linkages of general and special education can undermine the efficacy of this approach (Bineham et al., 2014). Other studies highlighted that substantial changes are being made, particularly related to the connection with teaching and assessment practices, as well as with the organization of services, which generates training and support needs, especially for the general educators (Bester & Conway, 2021; Bineham et al., 2014; Haager & Mahdavi, 2007; Meyer & Behar-Horenstein, 2015; Richard, 2020). Regarding the role of the special educator, there seem to be elements to clarify. Within Tier 1, the special educator could intervene as a consultant with general educators to implement universal supports. However, the special educators can feel ineffective in this work since most have not received training to exercise this type of function (DeVore et al., 2011; Saint-Laurent et al., 1995). In addition, the support offered in class can lead to discomfort, or even anxiety among general educators, particularly due to fear of judgment and fear of feeling observed (Rousseau & Thibodeau, 2011; Rousseau et al., 2014). Additionally, the work of the special educator is also often not clear within Tier 2 and Tier 3 interventions. The results of a study of Mitchell et al. (2012) indicate a very small difference between teaching methods used by special educators at Tier 2 and Tier 3 levels. In this context, the distinctions between these two levels of interventions deserve to be well defined in order to better guide the work of the special educator.

Purpose

This research was designed to provide answers to the following question: When implementing the RTI in reading in elementary schools, how do the roles of general educators and special educators interact? More specifically, the research objective of this study is to define the roles of the general educators and the special educators in the context of implementing the RTI in reading at the elementary level. This article will focus on the assessment and intervention procedures used to organize services for at-risk and struggling students in reading.

Methodology

The Participants

The multi-case study was targeted as the research method to conduct this research. Cases were selected using a purposive sampling procedure. Each case consisted of a dyad, which included a general educator and a special educator. The three dyads (D1, D2, and D3) were selected using four recruitment criteria: (a) The dyads must work in the same elementary school implementing RTI in reading (for this criterion, consultation was made with researchers experienced in accompanying school boards in RTI implementation), (b) They must collaborate during a regularly-scheduled weekly basis, (c) They must work together on the teaching and learning of reading with first or second grade students, and (d) They must come from three different school boards.

The first dyad (D1) has been working together at the same school for 10 years. Their school, which has 156 students, is located in an urban and multi-ethnic environment. The general educator has been teaching in first grade classrooms for several years. She teaches in a general education setting, but she did her initial training in special education. The special educator has 23 years of experience. She works 3 days a week at the school and offers special education services at all grade levels. In their school board, RTI is implemented in the vast majority of schools.

The second dyad (D2) has been working together at the same school for 2 years. Their school, which has 270 students, is located in an urban and multi-ethnic environment. The general educator has been teaching first grade at this school for two years. She is starting out in the profession. The special educator has worked at this same school for several years. She works five days a week at the school and provides special education services at all grade levels. RTI is implemented in a progressive and structured manner throughout the school day.

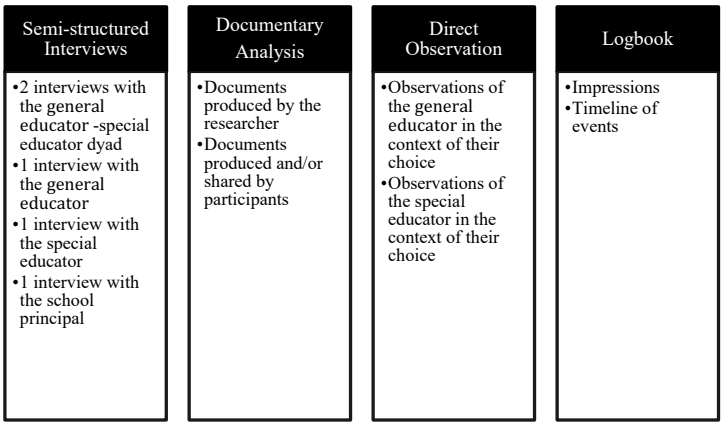
The third dyad (D3) has been working together, at the same school, for 8 years. Their school, which has 155 students, is located in a rural area. The general educator has been teaching in second grade for eight years. His class consists of eleven students. The special educator has several years of experience and has been working in this same school for 13 years. She works 5 days a week at the school and offers special education services for preschool and the first cycle of elementary school (first and second grades). RTI is an integral part of the school board documents about the special education services but it is not implemented in a formal and systematic way.

Instrumentation

Data were collected from a variety of sources (see Figure 1). The use of multiple and varied sources of information to collect data is one of the main quality criteria of a case study (Albarello, 2011; Gagnon, 2012; Roy, 2009).

Figure 1

Data Sources



Semi-structured interviews were conducted with general educator and special educator. The interviews aim to obtain a description of the responsibilities, tasks performed by general educators and special educators in the context of the implementation of RTI in reading, as well as the organization of services favored by the school environment. They also aim to learn more about the collaborative practices adopted by the dyad. The documentary analysis was based on recording grids generated by the researcher to better identify the participants' practices between the data collection meetings. The participants use this tool to record their tasks related to RTI in reading from a list of tasks divided into four key roles (interventionist, collaborator, diagnostician and manager) and it was adapted from the existing "Role observation instrument" developed by Mitchell et al. (2012). The participants also shared documents that they considered relevant (e.g., teaching materials, tools designed by school actors, reference frameworks, etc.). Direct observation sessions were aimed at studying the practices of general educators and special educators. These direct observation sessions are analyzed using the same conceptual aspects as the recording grids (interventionist, collaborator, diagnostician and manager), to ensure triangulation. Impressions, feelings, as well as events deemed important by the researcher were also noted inside a logbook.

Data Collection and Analysis

Data collection was conducted during one school year, between December and May. During this period, the

researcher visited each of the sites three times to conduct the interviews and observation sessions. Data were also collected in the absence of the researcher through the recording grids. A corpus integrating the collected data from all sources (i.e., verbatim, observation grids, recording grids, logbook) was compiled using NVivo software to facilitate coding and analysis (Roy, 2009). A mixed coding method was chosen to build on the concepts inherent in the study, while allowing space for emerging codes (Gendron & Brunelle, 2010). A thematic tree was drawn up based on the main themes addressed in the interviews and observations. Emerging subtopics were added throughout the coding process. An in-depth analysis of each case was performed, followed by a cross-case analysis to identify trends, similarities, and differences (Albarello, 2011; Merriam, 1998).

Results

In this section, results will be presented in two parts. First, the results related to the assessment procedures will be provided and results related to intervention procedures will follow.

Results Related to the Assessment Procedures

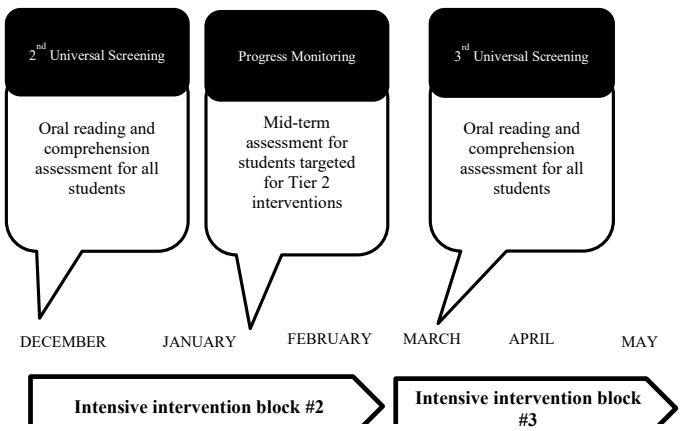
The results about the assessment procedures will be presented for each dyad. These data came from a from a variety of sources (observation, recording grid, interview, documentary analysis), which allowed triangulation.

Dyad 1 (D1)

In D1, assessment procedures that are part of RTI (universal screening and progress monitoring) were used through out the school year, such as illustrated in Figure 2. These assessment procedures give a structure to the services provided to students at risk and with learning difficulties in reading.

Figure 2

Temporal Structure in Relation to Evaluation Processes (D1)



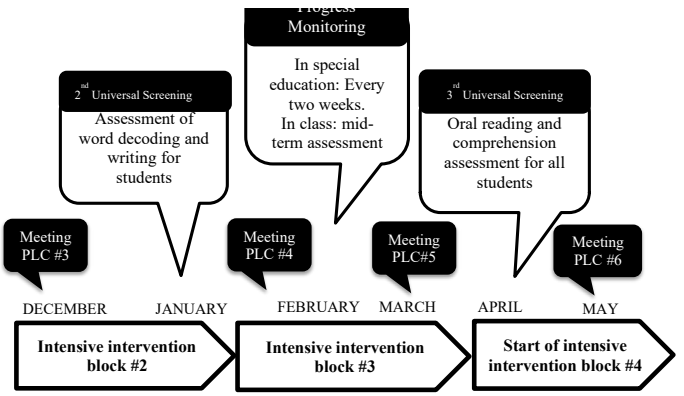
D1 structures the services deployed during the school year based on blocks of intervention. A block of intensive interventions consists of approximately eight weeks and begins following the analysis of the results from the universal screening. The first universal screening operation took place in September. The second was performed in mid-December, and the last was done in mid-March. The data from the universal screening measures allow the general educator and special educator to make decisions about interventions for students at risk and with learning difficulties in reading. The benchmarks established in the universal screening tests are used to guide decision-making. Specifically, they use this data to form the intervention subgroups. A subgroup of students with the greatest learning difficulties is seen by the special educator during the intensive intervention blocks. Another sub-group made up of students at risk is seen by the general educator. Between the two universal screenings, a mid-term assessment was administered to the students targeted for tier 2 intervention to monitor their progress. This measurement allows both general educators to adjust the formation of the subgroups. During the block of intensive interventions, it may happen that students change groups. To guide them in these decisions, the general educator and the special educator rely on their observations or on the results of the mid-term assessment.

Dyad 2

Figure 3 shows the operationnalization of the assessment processes used in a RTI perspective for D2.

Figure 3

Temporal Structure in Relation to Assessment Processes (D2)



The school year is structured around blocks of intensive interventions delineated by universal screening operation. Following each universal screening test, decisions regarding students at risk and struggling with reading are made in

Professional Learning Communities (PLC)[1]. The PLCs are composed of the principal, the three first-grade general educators, the special educator, and school professionals. Six meetings are planned during the school year. In these meetings, team members discuss the screening tools and the results, as well as the interventions in the classroom and in special education for students at risk and those with learning difficulties in reading. The benchmarks established in the screening tests are used to guide decision-making. At-risk students are those who have not reached the grade-level expectations but are approaching it. They are targeted for the Tier 2 interventions in class. Students with learning difficulties in reading are even further from the grade-level expectations and they receive Tier 2 interventions in special education. During the intensive intervention blocks for students in Tier 2 interventions, a clear procedure is established to assess student response to these interventions. For at-risk students, the general educator performs progress monitoring only once halfway through the intervention block. For students with learning difficulties, progress monitoring is conducted every two weeks using tools developed in a co-development group with other special educators.

Dyad 3

In the D3 school, students are not systematically evaluated through an assessment process such as universal screening or progress monitoring. However, the general educator and the special educator monitor each student in the class at three specific times during the school year. This exercise is called "class profile," and it provides a snapshot of the strengths, needs, and difficulties of the students in the class. It is an evolving document, developed by the educational consultants, on which we find the image of the pyramid frequently associated with the RTI. Each student is categorized in an intervention tier according to their ability level for learning and behaviour based on general educators' observations. It is reference tool for planning assessment, instruction and special education services. The class profile is then presented and discussed with the school management. Apart from this procedure, no measure is implemented to assess all students on specific skills, as proposed in the RTI.

Results Related to Intervention Procedures

The results about intervention procedures will be presented for each dyad. These data came from a from a variety of sources (e.g., observation, recording grid, interview, documentary analysis), which allowed triangulation.

Dyad 1

As mentioned previously, the school year is structured around intervention blocks for D1. Each of these blocks is designed according to the different tiers of intervention. Table 1 lists the intervention procedures used at the different tiers.

During the intervention block, universal interventions (Tier 1) are intended for all students in the class. The general educator uses the program Apprendre à lire à deux (Dion, Borri-Anadon, Vanier, Potvin, and Roux, 2005), a French adaptation of First-Grade Reading Peer-Assisted Learning Strategies (Fuchs, Fuchs, Svenson et al., 2001), which is a word-recognition teaching program structured around tutoring activities by peers. The program allows students to practice identifying letters and words, and reading short texts with immediate and individualized feedback. The sessions take place three to four times a week for the duration of 10 minutes. Students also work on word identification and comprehension through learning centers that integrates play-based learning and multiple means of action, three to four periods of 45 minutes per week. The general educator also uses a workbook for her reading instruction periods.

At Tier 2 of intervention, intervention sessions are offered to three subgroups of students with difficulties three times a week, in addition to Tier 1 interventions. The periods are split into two 30-minute sessions, allowing the special educator to see two subgroups of 3 students. The service is provided outside the classroom. During this time, the general educator works with another subgroup. Leveled material is used by both general educators. However, the special educator tends to add manipulative materials with students with greater learning disabilities. The third tier of intervention has not been added, as the special educator states that she does not make a clear distinction between Tier 2 and Tier 3 interventions. In addition, she specifies that this type of intervention is deployed very rarely in their school.

Dyad 2

The school year is also structured around the intervention blocks for D3. Table 2 describes in detail the content of these different intensive intervention blocks.

At Tier 1, the general educators' interventions aim at solidifying word identification processes in the first months of the year. Code instruction is taking less and less

[1]The professional learning community is defined as a mode of operation schools that relies on the collaboration of all stakeholders and encourages staff to collectively undertake activities and reflections to continuously improve their knowledge, their skills, in order to obtain better academic results among students (Leclerc and Labelle, 2013).

Table 1
Description of Intervention Procedures According to Tiers (D1)

Tier	2nd and 3rd block of intensive interventions
First tier of intervention ***For all students***	• Learning center to work on understanding and identifying words (3 periods of 45 minutes per week). • Peer tutoring program (3–4 periods of 10 minutes per week). • Teaching Letter-Sound Correspondences (LSC); • Use of a workbook.
Second tier of intervention (in class) ***For students at risk***	• A subgroup of 3 students is participated for 30-minute sessions, 3 times a week. • Skills worked: phonological awareness, word identification and fluency. • Leveled material based on a reading training program developed by the school service centre.
Second tier of intervention (in special intervention) ***For students with learning difficulties***	• Two subgroups are participated in special education outside the classroom (period split into two 30-minute sessions). • Skills worked: phonological awareness, word identification and fluency. • Leveled material based on a reading training program developed by the school service centre. • Handling material.

space as the school year progresses. The comprehension instruction is based on reading strategies. The general educator and her colleagues in the same grade work with 12 strategies to be taught explicitly in a flexible grouping project in collaboration with the special educator. Teaching comprehension also focuses on story recall and the use of children's literature albums. At the second tier of intervention, the general educator plans her intervention sessions when the other students in the group are in learning center. The general educator works with a subgroup of three at-risk students, two to three times a week. Tier 2 interventions provided multiple means of action and integrated play-based learning to gain motivation. She also uses a variety of materials such as magnetic letters, erasable boards, alphabet books, etc.

The Tier 2 interventions, conducted by the special educator, targets three subgroups of three students struggling in reading and focuses exclusively on phonemic awareness and the mechanisms of identification and production of written words, and it was in addition to Tier 1 interventions. The service is provided outside the classroom. During the intervention sessions, short activities are sequenced and repeated from one session to the next. As the students complete various tasks, the special educator provides prompt, individualized feedback to each student. She uses different materials such as magnetic letters, erasable boards, visual aids, etc. Students also have a small notebook in which they write words and syllables.

Dyad 3

In the D3 school, the school year is divided into intensive intervention blocks of approximately 6 to 8 weeks each. Table 3 provides a brief description of the interventions performed at each tier of intervention.

At the first intervention tier, especially at the beginning of the year, the general educator sees LSCs that were not seen in the first grade. Starting in January, she pairs teaching the sound of the week with spelling regularity. Comprehension teaching is linked to reading strategies. The general educator also works on comprehension and vocabulary through enriched stories from the Cap sur la prévention project (Lefebvre & Fortier, 2012). Before the winter break, she did an intensive 10-week block of enriched interactive reading.

Table 2
Description of the Intervention Procedures According to the Tiers (D2)

Tier	2nd intensive intervention block	3rd intensive intervention block	4th intensive intervention block
First tier of intervention ***For all students***	- Explicit teaching LSCs and reading strategies (flexible grouping project with other classes and the special educator). - Use of a workbook. - Story reading and teaching recall. - More time is given to writing in the 4th block.		
Second tier of intervention (in class) ***For students at risk***	- 2–3sessions of 60 minutes per week, in learning centers. - The skills worked on are sound fusion and segmentation and knowledge of LSCs.	- 2–3sessions of 60 minutes per week, in learning centers. - The skills worked on are knowing the LSCs, and the reading and writing of little words.	- 1 session of 60 minutes per week, in learning centers. - The skills worked on are knowing the LSCs and the reading and writing of little words.
Second and third tiers of intervention (in special education) ***For students with learning difficulties***	- 3 sessions of 30 minutes per week. - The skills worked on are sound fusion and segmentation and knowledge of LSCs.	- 8 to 9 sessions of 30 minutes per week. - The skills worked on are sound fusion and segmentation and knowledge of LSCs.	- 8 to 9 sessions of 30 minutes per week. - The skills targeted are reading words, reading sentences, and writing two-syllable words.

In this dyad, the general educator does not undertake Tier 2 interventions in a formal and systematic way. That said, she provides additional, even individualized, interventions to students experiencing difficulties learning to read in her classroom. To facilitate these interventions in small groups, the general educator must make sure that her other students work independently. To do this, she draws inspiration from the Daily 5 program (Boushey & Moser, 2015). Indeed, the program proposes that the students complete five different activities simultaneously in a learning centers (e.g., read to self, read to someone, word work, listen to reading and work on writing) while the general educator works with a subgroup of struggling students. As the school year progresses, the students become more independent, making it easier to deploy additional interventions.

Regarding the interventions at the higher tiers, it is worth mentioning that interventions conducted by the special educator in a subgroup are at Tier 2. When she is questioned about Tier 3, the special educator states that

Table 3
Description of the Intervention Procedures According to the Tiers

Tier	2nd intensive intervention block	3rd intensive intervention block	4th intensive intervention block
First tier of intervention ***For all students***	- Teaching LSCs and comprehension strategies. - Enriched interactive reading program for 10 weeks, 2–3 times a week.	- Teaching LSCs and spelling regularity every day. - Teaching comprehension strategies. - Reading in small groups.	- Teaching sentence comprehension strategies (creating a mental image). - Daily 5. - Literary backpack.
Second tier of intervention (in special education) ***For students at risk and with learning difficulties***	Interventions aimed at identifying words with a subgroup of 5 students.	Interventions aimed at word identification and fluency with a subgroup of 5 students	Interventions aimed at sentence understanding with a subgroup of 5 students.

it is very rare for this type of intervention to be offered. The service is mostly provided outside the classroom. The content targeted during these interventions varies during the school year. In the first months of the school year, the goal was above all to develop word identification strategies. Fluency and understanding were added during the school year. During the intensive intervention's sessions, it was possible to observe that the special educator was using material from various sources. She uses short, colourful, engaging texts. She also integrates technology into her interventions through various applications on tablets or the interactive board.

Discussion

Assessment Processes from an RTI Perspective

The results of this research shed light on the organization of services for at-risk and struggling students in reading from the perspective of the assessment and intervention processes that are central to RTI. In terms of assessment processes, the results reveal the presence or emergence of a data culture in the three sites studied. The use of various assessment procedures, such as universal screening and progress monitoring, testifies to this. It has been possible to observe that these data collection methods become structuring benchmarks for organizing and planning services intended for students at risk and with learning difficulties in reading throughout the school year. They encourage the dyads to take time for formal and concerted regulation which guides decision-making for the block of interventions to come.

It was also possible to observe that the establishment of this data culture is supported by collaborative practices, including the professional learning community. More specifically, in one site, PLC helps support teams in the data-based decision-making process. Although the RTI and the PLCs are two distinct approaches based on different theoretical foundations, they are very easily associated in this school setting and are perceived by practitioners as being inseparable. The question of the linkage between the RTI and PLCs is also one of the concerns of certain researchers. Helman and Rosheim (2016) suggest that schools should integrate and even unify these two approaches into one cohesive school-wide plan. Otherwise, the effort, time, material resources and professional energy expended to achieve these separate initiatives reduce

the effectiveness of both (Helman & Rosheim, 2016). In terms of the organization of special education services, this method of collaboration facilitates the deployment of indirect service since it allows the special educator to see several general educators at the same grade at the same time.

The results also show the presence of significant variation in the use of assessment procedures. Even if the three dyads claimed to work in an environment implementing RTI, it was possible to note discrepancies in the use of the assessment procedures. For instance, universal screening, which represents another essential component of the RTI, was part of the practices in two sites. Progress monitoring, which is an essential component of the RTI, was formally and systematically implemented in only one site. In another site, there was a mid-term assessment for students targeted for Tier 2 interventions. However, progress monitoring is supposed to assess student performance on a weekly basis (Fuchs & Fuchs, 2007). This variation in special education practices has also been reported in other writings (OPQ, 2014; ADOQ, 2018; Granger et al., 2021). These data corroborate with the study of Silva (2020) who surveyed school psychologists to evaluate the extent to which RtI and data-driven practices are implemented. The results show that most participants reported that their schools do not regularly engage in best practices for progress monitoring. This situation can also be explained by the lack of professional development opportunities, leadership support, and tangible resources noted in some studies about RTI implementation (Bester & Conway, 2021; Meyer & Behar-Horenstein, 2015).

Intervention Processes from an RTI Perspective

The results of this study clearly show that the tiers of intervention associated with RTI become a structuring benchmark for organizing services for all students. Interventions are planned according to the different tiers of intervention, which makes it possible to organize services in a preventive and proactive manner for all students in the class, while providing for intensification for those at risk and in difficulties in reading. One observed change relates to intensive block operation. Rather than intervening with the same group of students throughout the school year, special educators and general educators intervene for a limited number of weeks (e.g., 8 weeks) on a targeted skill. As a result, the composition of the groups changes over the course of the school year. The special educators meet with subgroups of students three times a week. This result reveals an improvement in the provision of special education services in these three sites compared to the portrait painted by Brodeur and collaborators in 2008. This way of organizing services brings a more inclusive vision and puts the general educator at the heart of the process. The results of this research therefore testify to the paradigm shift from an approach based on classifying students and expecting failure, to a proactive and preventive approach for all students (Grosche & Volpe, 2013).

Another important finding from this research is the crucial role of the general educator in the deployment of interventions. The advent of the RTI, and more broadly of the trend for inclusive education, brings new responsibilities for general educators. General educators now have a greater responsibility to provide services to struggling students. In a context of implementing the RTI, this responsibility is operationalized through Tier 2 interventions. In the three sites studied, it is possible to observe this transformation in a concrete way. Indeed, all three general educators work with subgroups of students who are at risk or have learning difficulties. This transformation has a significant impact on the organization of services. In fact, the deployment of Tier 2 classroom interventions led by the general educator makes it possible, among other things, to increase in intensity of services or the number of students served. This practice optimizes teaching time since students do not have to move around. These findings provide insights into how to best use resources to ensure academic success for the greatest number of students. However, general educators who implement these targeted interventions may need the support of the special educator. Haager and Mahdavi (2007) remind us that general educators face many professional challenges when implementing Tier 2 interventions, from classroom heterogeneity to lack of time to plan, organize and deliver more specialized instruction. These authors add that some general educators do not feel equipped to offer such more targeted interventions, which leads us to reflect on the advisory role special educators can play in this regard.

Despite the presence of various methods of organizing services, the results of this research reveal that most services in special education are deployed outside the classroom in the three settings studied. Although this modality has several limitations (Giasson, 2004; Saint-Laurent et al., 1998; Tremblay, 2012), the dyads have found ways to proceed that can reduce the effects of some of these drawbacks. Indeed, in this study, the pull-out special education services are often combined with a differentiation instruction strategy that modifies the learning environment in the classroom, such as flexible grouping, learning centers, small group instruction or daily 5. This modification of the class structure during the pull-out interventions can reduce the risk of stigmatization because all the students move through a station during this period and it ensures that the students targeted for

these services don't lose instructional time. This reaffirms the importance of combining differentiation instruction strategies within RTI implementation (Jones et al., 2012; Whitten et al., 2012).

Finally, the results obtained also indicate a low presence of Tier 3 interventions. First of all, the three special educators state that they rarely reach Tier 3 interventions. This rarity can be partly explained by the fact that there appears to be confusion regarding the understanding of the Tier 3 interventions. This observation is consistent with the results obtained by Mitchell et al. (2012) in a qualitative study on the role of the special educator in the RTI. The results from this study indicate that special educators do not quite understand how Tier 2 and Tier 3 interventions differ. Like the current research, Mitchell et al.'s (2012) study reached this conclusion based on observations and interviews with special educators. Some explanatory hypotheses are put forward. On the one hand, the distinctive characteristics of Tier 3 interventions are numerous and differ, according to the authors, on the theoretical level, which can hinder the construction of a common understanding. On the other hand, the deployment of Tier 3 interventions relies on the successful implementation of the first two tiers of the model. Some recent studies have shown that RTI implementation brings several challenges (Alahmari, 2019; Bester & Conway, 2021; Gomez-Najarro, 2020; Meyer & Behar-Horenstein, 2015; Silva, 2020), so it may be complex to implement this type of intervention.

Two Levels of Planning to Organize Services from an RTI Perspective

Considering the results obtained, it is possible to identify two levels of planning contributing to the organization of services for the three dyads as presented in the Figure 4.

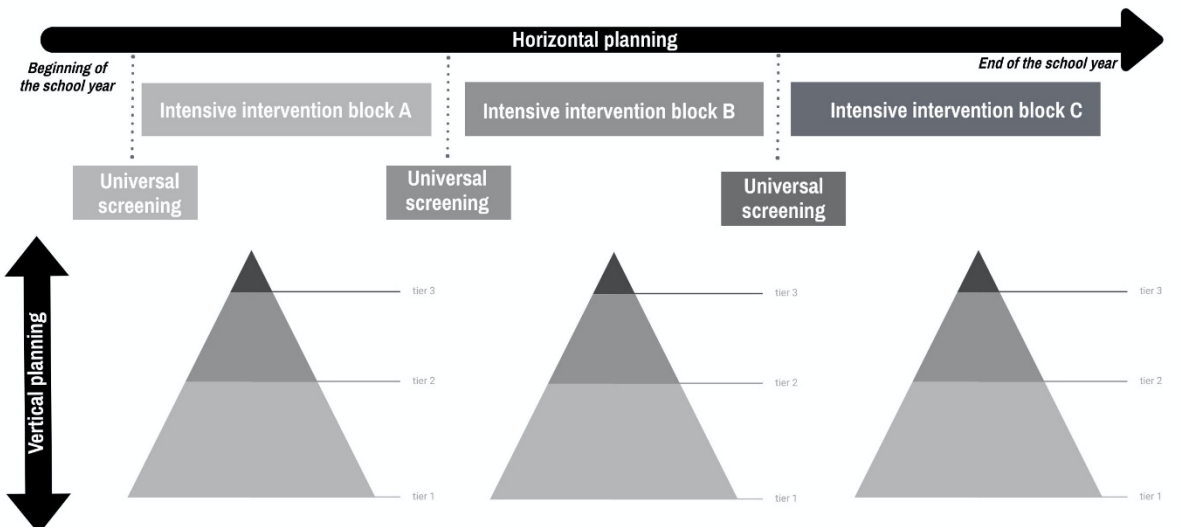
On the one hand, there seems to be a horizontal planning built around a temporal structure based on intensive intervention blocks punctuated by assessment processes allowing a moment of formal and collaborative regulation. These moments of regulation lead the dyads to decision-making concerning the services offered to students at risk and those struggling in reading, based on data in an RTI perspective. On the other hand, there is apparent vertical planning. Rather, this planning is aimed at scaling up interventions from the different tiers associated with RTI. It allows for more detailed planning of universal, targeted, and specific interventions for each of the intervention blocks. These two levels of planning can contribute to building a coherent and rigorous organization of services to meet the diverse needs of students.

Conclusion

Limitations

The main limitation in this study is related to the sampling. Indeed, during data collection, it was possible to observe that a dyad was working in a school setting that was not implementing the RTI with fidelity. It was therefore not possible to check all the components of the model in

Figure 4
Levels of Planning to Organize Services from an RTI Perspective



this school, including universal screening and progress monitoring. The other two dyads worked in schools where the implementation was much more advanced, which provided much richer data, especially in terms of assessment procedures. However, for the advancement of knowledge, it is interesting to note that the understanding of the RTI varies from one setting to another and that this undoubtedly affects the fidelity of the implementation. Another limitation is related to the collection of data. For administrative reasons, it was not possible to start data collection from the beginning of the school year. The first data collection was performed in January. This change in schedule did not affect the quantity, and quality of data collected. However, by starting the collection in September or October, it would have been possible to enrich the documentation of the context. It could have been interesting to study how roles and collaborative practices evolve over the school year.

Implications for Future Research

This study has several interesting findings, particularly regarding the intensification of interventions, which should be further investigated. In this regard, it would be useful to define more clearly Tier 3 interventions to better identify what distinguishes them from Tier 2 interventions. Tier 3 interventions have multiple distinctive characteristics, and their theoretical foundations differ among authors, making it difficult to develop a common understanding. Further research is also needed to study the role of the general educator in the organization of services for students at risk and struggling in reading, as well as in other subjects. In this study, we found that implementing the RTI adds new responsibilities related to Tier 1 deployment, Tier 2 classroom interventions, and universal screening and progress monitoring measures, which adds complexity to general educators' work. In these three dyads, the organization of services is closely shared between the general educator and the special educator, which contributes to the optimization of these services, and the use of differentiation instruction strategies seemed to limit the stigmatization of students with learning difficulties. While several positive outcomes have been observed, it is appropriate to question the best ways of supporting general educators as they undertake these new responsibilities. It is therefore recommended that further studies be conducted on how to support general educators who implement RTI-based evaluations and interventions. In this sense, other ways of organizing services such as co-teaching and collaborative consultation should also be investigated, as proposed by Murawski et Hughes (2009). It would also be wise to examine the role of the special educator within the PLCs to better understand their function and their contribution and to what extent this collaboration modality can contribute to the optimization of the service offer. Finally, as the results show little and varied use of progress monitoring, it could be relevant for research to focus on training and resources about this essential component of RTI to improve data-based decision making and ensure appropriate supports for all students.

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Élisabeth Boily is a Professor in the Department of Education at Université du Québec à Chicoutimi.

Chantal Ouellet is a Professor in the Departement of Special Education and Formation at Université du Québec à Chicoutimi.

Pascale Thériault is a Professor in the Department of Education at Université du Québec à Chicoutimi.

Please send correspodence to Élisabeth Boily, elisabeth2_boily@uqac.ca

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Supportive Environments Providing Social and Emotional Learning Explain Success in People with Learning Disabilities

Amber DeBono
Julia English
Michele Heimbauer
Elizabeth Mendelsohn
Jonathan Cohen

Although students with learning disabilities (SwLD) are at greater risk (compared to typical learners) for dropping out of high school, not attending college, and unemployment, some SwLD lead successful lives (Aro et al., 2019; Mazzotti et al., 2021; Wagner et al., 2005). Little, however, is known as to what factors support this subset of SwLD in defying the odds and achieving success by graduating from college and leading satisfying lives. Alumni from Winston Preparatory School (Winston), a school exclusively for SwLD that has a strong track record for high school graduation and college attendance, were recruited for this study. Results from a previous study on Winston alumni indicated all attended college and most: graduated college, were employed, and had someone who socially supported them. The present study described in this paper built on these findings. Results indicated that when students felt supported by teachers and people at home, they were more likely to report high levels of three social and emotional learning skills which predicted several measures of student success. These results may offer possible explanations for why certain SwLD succeed but more research, possibly longitudinal, is needed to gain a more thorough understanding of the factors involved.

Keywords: *Learning disabilities, social and emotional learning, student success*

Introduction

People with specific learning disabilities[1] (LD) face challenges that their counterparts without LD do not, including psychosocial challenges that create potential disparities in achievement including: academic achievement, employment, and mental health. For example, people with LD have higher rates of unemployment (Siperstein et al., 2013; Shattuck et al., 2012), are less likely to finish college (Cortiella & Horowitz, 2014), have lower college grade point averages or GPAs (Hen & Goroshit, 2012) and have higher rates of depression and suicide (Fuller-Thompson et al., 2018). Furthermore, as compared to people who do not have LD, people with LD experience difficulties in daily living, socially isolate, and have emotional health problems (Gerber, 2012). Nevertheless, there are many people with LD who are achieving success in employment, academic study, and in their overall well-being (Cortiella & Horowitz, 2014). Research suggests that several factors—such as self-advocacy, self-determination, and social support—are predictive of people with LD achieving success in these areas (Wagner et al., 2006; Test et al., 2009; Mazzotti et al., 2016).

[1]Specific learning disabilities, includes disorders "in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations" (IDEA, 2004) and related disorders (Frolov & Schaepper, 2021; Learning Disabilities Association, 2021) such as: dyslexia, dysgraphia, dyscalculia, written expression disorder, and ADHD.

Self-Advocacy

Self-advocacy is defined as a person's ability to communicate their wants and needs to find the support required to fulfill them (Stodden et al., 2003). People with LD often need self-advocacy skills so that they can face the challenges they encounter in college and employment (White et al., 2014). Despite plentiful research that points to the importance of self-advocacy, skills tied to self-advocacy are not typically taught in school, even though these skills may be particularly important for LD student success (Daly-Cano et al., 2015). In one study, when college special services centers were asked how "secondary schools could better prepare students with LD for college" (p. 468), the most popular response was that secondary schools should improve students' self-advocacy skills (suggested by 66.7% of the sample; Janiga & Costenbader, 2002).

Self-advocacy is also predictive of many positive psychosocial outcomes. In one experimental study, students with LD (SwLD) who were assigned to participate in a self-advocacy program had higher basic psychological skills, such as competence, than SwLD who did not participate in the program (Kotzer & Margalit, 2007). In addition to competency, a literature review on self-advocacy in LD populations concluded that self-advocacy could improve: understanding of the self, social connectedness, access to opportunities (e.g., advisory boards), and feelings of control that prompt individuals with LD to advocate for their rights (Tilley et al., 2020). Additional research also indicates that self-advocacy can improve students': awareness about employment and academic support services; understanding of their roles as both individuals and learners with LD; understanding about their LD diagnosis; and awareness of opportunities for their careers and education (Sebag, 2010). More specifically, a case study suggested that a self-advocacy behavior management program was able to support a student with LD transform from a student with failing grades and classroom behavior problems into an "A" student who became a role model to her peers (Sebag, 2010). Indeed, self-advocacy is a strong predictor of achievement as it relates to a student's GPA, a frequently used indicator of student success, for college students with disabilities (Fleming et al., 2017). Clearly, a strong case exists for self-advocacy being critical to student success.

Although most research on self-advocacy focuses on how it impacts post-secondary education, some promising research shows that self-advocacy helps people with LD adjust to their employment (Doren & Kang, 2016). Indeed, self-advocacy skills are predictive of successful employment for individuals with LD (Cheong et al., 2013). This type of research is limited, but critical, because people with LD struggle to find employment, compared to their non-LD counterparts (Siperstein et al., 2013; Shattuck et al., 2012).

Self-Determination

Self-determination is defined as a person's ability to make choices based on an understanding of one's own goals and personal needs, and it includes an individual's ability to accept the consequences of those choices (Martin & Marshall, 1995; Rowe et al., 2015). Self-determination is closely related to self-advocacy, and studies have also shown self-determination to be an underlying factor in several successful outcomes for individuals with LD. This includes results from a longitudinal study on people with learning and cognitive disabilities (Wehmeyer & Palmer, 2003). Findings from this study indicated that when people with LD have high levels of self-determination, they are more likely to live independently, be financially independent, and be employed (including employment with medical and vacation benefits). Other research showed that self-determination is positively and significantly correlated with GPAs, an indicator of student success (Brockelman, 2009). Additional research replicated the finding that self-determination has a positive impact on GPAs and demonstrated that self-determination increases student retention, employment and reduces distress (Jameson, 2007; Solberg et al., 2012). Self-determination may also be an important predictor of success measures that are not directly related to academics and employment. For example, one study found a positive relationship between self-determination and life-satisfaction for people with LD (Arunashree et al., 2016). These studies indicate that self-determination may be a potent predictor of multiple student success measures.

Social Support

Social support for people with LD can come from multiple sources, such as family, teachers, and peers. Feeling socially supported is predictive of life satisfaction (Stack-Cutler et al., 2015), positive self-perceptions (Demaray et al., 2009), successful adjustment to post-secondary education (Murray et al., 2013), mental health (Harandi et al., 2017), employment (Perreault et al., 2017), and college GPA (Dennis et al., 2005). More specifically, research shows a multitude of positive outcomes for students with LD who feel support from their families. Families that provide emotional support (Ginieri-Coccossis et al., 2013) can increase self-esteem (Nalavany et al., 2015), because this type of support acts as a buffer for the negative emotional experiences stemming from LD (Carawan et al., 2016). Consequently, SwLD with more supportive families were found to have higher levels of academic achievement (Heiman & Berger, 2008; Wagner et al., 2006) and were

more likely to achieve their career goals (Lindstrom & Benz, 2002). More specifically, parental involvement (Wagner et al., 2014) and expectations (Mazzotti et al., 2016) for their children to live independently and to be employed may be important predictors for postsecondary outcomes.

This population of students may also benefit from having supportive teachers, who spur persistence in learning (Núñez et al., 2020). SwLD who have supportive teachers also have positive academic (Gatlin & Wilson, 2016; Kiuru et al., 2013; Suldo et al., 2009) and employment outcomes (Fullarton & Duquette, 2015). In one longitudinal study of SwLD, their overall use of support systems was a better predictor of success than other factors, such as IQ and academic achievement (Raskind et al., 1999). Therefore, social support, particularly from teachers and families, may play a key role in determining success for students with LD.

Student Success

While much published work primarily focuses on specific student success measures for SwLD, such as college attendance and employment (Mazzotti et al., 2016), the Higher Learning Commission recently proposed a more inclusive definition of student success as the "attainment of learning outcomes, personal satisfaction and goal/intent attainment, job placement and career advancement, civic and life skills, social and economic well-being, and commitment to lifelong learning" (Higher Learning Commission, 2018, p. 7). Thus, while college attendance and employment remain important to the assessment process, they provide a limited view of success that are not representative of the whole student, particularly students with LD. To provide a more comprehensive metric of student success, researchers have proposed to broaden how researchers measure student success to include satisfaction measures, such as life satisfaction (Trapmann et al., 2007). Indeed, satisfaction measures may better assess an individual's overall happiness with life (Tay et al., 2015). Researchers are making strides to broaden the definition of student success (e.g., Krachman et al., 2016) and, in practice, colleges (e.g., Indiana State University, Nazareth College, Youngstown State University) are moving to a broader definition of student success, one that includes satisfaction and achievement of academic, personal, and employment goals (Cuseo, 2007). In the present study, student success is measured in a broader way through both traditional measures of student success (e.g., college attendance, employment) and by further expanding the definition of student success to include several satisfaction measures that are less commonly used to measure student success, but are more commonly measured in LD populations and other underrepresented groups: employment (Madaus et al., 2008), relationship status (Jackson et al., 2018), post-secondary education (Rabren et al., 2013), and current living situation (Raskind et al., 1999).

Gap in Knowledge

While plentiful research exists on factors that contribute to student success, comparatively fewer studies have investigated factors that predict student success for SwLD (Raskind et al., 1999; Mazzotti et al., 2016; Rowe et al., 2015; Test et al., 2009). Indeed, much research tends to focus on SwLD's susceptibility to unsuccessful outcomes, such as unemployment (Aro et al., 2019) and incarceration (McKenzie et al., 2012). Few studies have investigated a population of SwLD who have found success as well as the factors that have contributed to that success, such as what underlying factors (e.g., supportive teachers and families) may foster these predictors (e.g., self-advocacy). Also, studies have examined more expansive views of student success to include satisfaction with life outcomes (e.g., employment, relationship status). The study reported in this paper will address this knowledge gap.

Study Site: Winston Preparatory School

Winston Preparatory School (Winston) is an independent school in the United States with eight campuses (including an online campus that provides a live, full-day curriculum to students across the nation) nationwide exclusively for K-12+ students with LD, all but one located in the northeast. A large proportion of Winston's students are public school students who receive funding from government sources to attend Winston; Winston campuses range from 11%–49% of students who are publicly funded as Connors cases (in states where this information is reported to Winston). In short, Winston's mission is to "facilitate the independence and meaningful participation of students with specific learning disorders" to develop skill acquisition and become independent learners (Winston Preparatory School, n.d.).

At Winston, teachers provide intense skill remediation and explicitly foster social and emotional learning (e.g., self-advocacy). This educational model has demonstrated some impressive student outcomes: Winston students are over 30% more likely to graduate from high school (Winston: 99.7%, SwLD nationwide: 65.5%) and 25% more likely to attend college (Winston: 79.3%, SwLD nationwide: 54%; Hirano, 2018; Cortiella & Horowitz, 2014; U.S. Department of Education, 2017). Winston developed a research department, the Winston Innovation Lab, which partnered with an outside organization, the National School Climate Center, to develop research studies with the aim of better understanding SwLD and their lives post-graduation. Their first study together demonstrated other

remarkable outcomes for Winston students, including high levels of: job satisfaction, happiness, physical/mental health, and self-reported success (DeBono et al., 2021). They also rated the quality of their relationships highly. This entire sample reported attending college, and most were employed (61.1%). Nearly all participants reported having someone who they could rely on for support (94.4%). The present study was developed to better understand these findings.

Hypotheses

Researchers anticipated that social and emotional learning (i.e., self-advocacy and self-determination), social connections, and social support from family and teachers would predict several student outcomes: overall life satisfaction, employment satisfaction, current relationship status, current living situation, and satisfaction with their post-secondary education. This study also included an exploratory component—researchers wanted to better understand what Winston does well to prepare students for adulthood and how Winston could improve its practices.

Method

Participants

Winston alumni who graduated between 2000-2015 ($N = 515$) were eligible to participate and were recruited via email. Sixty-three alumni (12.2% of eligible alumni) chose to participate and reported that they either graduated from Winston's New York campus ($N = 46$), Connecticut campus ($N = 16$) or the Transitions campus, a campus for SwLD not yet ready to graduate high school and designed to prepare them for life after high school ($N = 1$). Most participants indicated their learning or attention issue was identified in elementary school (63.5%) and relatively fewer in middle school (15.9%) or high school (1.6%). Some participants could not remember when their learning or attention issue was identified (9.5%) and others did not respond to this question (9.5%).

In terms of gender, 20 participants identified as female, 20 as male, one identified as neither gender, and 22 did not respond to the gender question. The racial makeup of the sample was mostly White (60.3%), but also included several other racial groups: Asian (9.5%), Latino/Latina/Hispanic (7.9%), Black/African (4.7%), American Indian/Alaskan Native (3.2%), and Other (1.6%). The remaining participants ($N = 8$) did not respond to the race question.

Regarding their learning and attention challenges (see Table 1), a minority reported difficulties with speaking, listening, reading, and memory. Most participants reported difficulties with math, social and emotional skills, attention, and writing.

Table 1
Participants' Learning and Attention Issues

Learning and Attention Issue	Percentage
Math	68.3%
Social and Emotional	61.9%
Attention	61.9%
Writing	60.3%
Memory	44.4%
Reading	31.7%
Listening	20.6%
Speaking	20.6%

Research Design

Researchers designed this survey study to examine the predictors of student outcomes (e.g., satisfaction with relationships, employment, life). These predictors included: supportive teachers, supportive home life, self-advocacy, self-determination/perseverance, and social connections.

Measures

Demographic Survey

Participants reported their race, gender identity, employment status, relationship status and education history (e.g., which Winston campuses they attended, and the highest level of education completed). To assess learning and attention issues, researchers asked participants to checkmark items from the following list, if they experienced difficulties with any of them: social/emotional, math, attention, organization, writing, memory, speaking, reading, and listening.

National Center for Learning Disabilities (NCLD) Student Voices Survey (2015)

NCLD developed the Student Voices Survey specifically for people with LD to collect information about their transition from high school to adulthood (NCLD, 2015). Researchers selected items from this survey to assess factors (e.g., supportive teachers and home life) that may predict satisfaction with: life, relationships, employment, post-secondary education, and current living situation. Researchers combined several survey items to form subscales and their internal consistency was acceptable: supportive home life in high school (5 items, e.g., I felt my parents/guardians always had high expectations of my success, $\alpha = .81$), high school social connections (12 items, e.g., I had a set of close friends, $\alpha = .81$), high school self-determination/perseverance (9 items, I considered both my strengths and weaknesses when setting goals for

myself, α = .89), high school self-advocacy (7 items, e.g., I knew what my strengths are, α = .88), supportive high school teacher (3 items, e.g., I had a teacher or teachers who made sure I understood things, e.g., α =.90), post-secondary social connections (10 items, e.g., I have a set of close friends, α= .81), post-secondary self-advocacy (10 items, e.g., I can approach and talk to teachers on my own to discuss my needs, α= .76), and self-determination post-secondary (7 items, e.g., I take credit for good decisions in my life, α = .81). Participants rated the items composing these subscales on a 0 (strongly disagree) to 4 (strongly agree) scale. A single item from this survey also assessed how much the participants' LD affected their employment, rated on a 0 (caused no problems) to 3 (causes a lot of problems) scale.

Open-Ended Questions

Participants responded to two open-ended questions: "How did Winston Prep most help you prepare for and/or adjust to life after high school?" and "What could Winston Prep offer to help current students and/or alumni prepare for and/or adjust to life after high school?"

Procedure

Researchers emailed participants a link to an anonymous online survey (see Measures), which did not capture participants' names or other identifying information (although the survey did capture, for data integrity, email addresses to create an approved list of login IDs). Participants could skip questions they did not want to answer. Researchers provided participants with an electronic gift card to thank them for their participation.

Results

Descriptive Statistics

Generally, participants reported that they were several years past their high school graduation (M_{years} = 5.13, SD_{years} = 4.07), and all participants reported that they had at least some post-secondary education. Most participants indicated that they had been employed since attending high school (71.4%), but a minority reported current employment being either full-time (20.6%) or part-time (26.0%). Some participants reported that they took part in internships and apprenticeships (9.5% paid, 6.3% unpaid). When reporting their highest level of education, a minority indicated some college experience (35%) and others responded that they had a two-year college degree/associate's degree (11.1%), four-year college degree/bachelor's degree (27%), or an advanced degree (6%).

This sample of Winston alumni notably indicated their LD caused few problems at work (M = .89, SD = .78) and that they were satisfied with life and employment (see Table 2 for means and standard deviations). These alumni also reported satisfaction with their current living situation, romantic partner, and current relationship status —a minority reported being single (42.9%). However, only one participant reported being married. No one reported being divorced, separated, or widowed. Participants also reported that during high school, they rated highly their: supportive home life, social connections in high school, participation in high school activities, self-determination/perseverance, self-advocacy, and having supportive teachers.

Predictors of Student Success Measures

Pearson correlation analyses revealed several significant relationships between measured variables (i.e., supportive homelife, supportive teachers, self-advocacy, self-determination/perseverance, social connections) and life satisfaction measures (overall life satisfaction, employment satisfaction, satisfaction with current living situation, satisfaction with post-secondary education, and satisfaction with current relationship status) that researchers predicted would correlate (see Table 2). Although having a supportive homelife and teachers did not significantly correlate with life satisfaction measures, these two variables significantly related to three high school characteristics: self-advocacy, self-determination/perseverance, and social connections. These three characteristics, in turn, correlated with self-advocacy, self-determination, and social connections in post-secondary education. Researchers also identified consistent and significant relationships between the five life satisfaction measures and these three post-secondary characteristics. All satisfaction measures were positively correlated and most significantly correlated with one another.

Non-parametric, Spearman correlation analyses were conducted using the above measured variables with employment status and enrollment in a 2 or 4-year college. Several significant correlations emerged; high school self-advocacy and enrollment in a 2-year college were positively and significantly correlated (r = .59, p < .001), but a surprisingly negative correlation for enrollment in a 4-year college (r = -.38, p = .014). Satisfaction with current living situation was significantly and negatively related to enrollment in a 4-year college, r = -.33, p = .026. Employment status was not significantly related to any measured variables, *ps* > .08.

Self-Advocacy

Researchers conducted several regression analyses to assess how well supportive teachers and supportive homelives predicted participants' self-advocacy in high school (see Table 3). Supportive high school teachers and

Table 2
Descriptive Statistics and Correlations for Continuous Variables

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. HS Supportive Homelife	3.35	.75	-											
2. HS Supportive Teachers	3.53	.81	.20	-										
3. HS Self-Advocacy	3.14	.85	.36*	.77**	-									
4. HS Social Connections	2.75	.71	.40**	.37*	.48**	-								
5. HS Self-Determination	2.98	.82	.36*	.69**	.67**	.36*	-							
6. PS Self-Advocacy	2.82	.61	.56**	.01	.31	.31*	.27	-						
7. PS Social Connections	2.70	.75	.39*	.19	.14	.54**	.27	.38*	-					
8. PS Self-Determination	3.32	.57	.31	.24	.34*	.30	.48**	.70**	.46**	-				
9. Life Satisfaction	3.02	.95	.59**	.17	.30*	.49**	.45**	.66**	.64**	.57**	-			
10. PS Education Satisfaction	2.76	1.18	.19	.18	.28	.38*	.34*	.63**	.44**	.55**	.57**	-		
11. Living Situation Satisfaction	2.76	1.20	.43**	.27	.15	.46**	.20	.51**	.47**	.46**	.47**	.27	-	
12. Relationship Status Satisfaction	2.80	1.28	.18	.01	.01	.19	-.02	.34*	.62**	.28	.32*	.17	.25	-
13. Employment Satisfaction	2.55	1.15	.40**	-.06	0.09	0.20	0.14	.47**	.32*	.38*	.60**	.41**	.34*	.09

Note. All items were rated on a 0 to 4 scale. *p < .05, **p < .001

homelives both significantly predicted higher levels of high school self-advocacy. To determine whether having supportive teachers or a supportive home life was a better predictor of high school self-advocacy, both predictors were entered simultaneously in a multiple regression analysis. Results indicated that both remained significant predictors. In turn, high school self-advocacy predicted post-secondary self-advocacy. Post-secondary self-advocacy significantly predicted all satisfaction outcomes: satisfaction with current living situation, satisfaction with employment, satisfaction with post-secondary education, current relationship status satisfaction, and overall life satisfaction.

Table 3
Simple and Simultaneous Regression Analyses

Regression Type	Outcome	Predictor	B	SE	t	p
Simple	High School Self-Advocacy	Supportive High School Teachers	.80	.11	7.60	<.001
		Supportive Homelife	.42	.17	2.47	.018
Simultaneous	High School Self-Advocacy	Supportive High School Teachers	.76	.11	7.26	<.001
		Supportive Homelife	.25	.11	2.19	.034
Simple	Post-Secondary Self-Advocacy	High School Self-Advocacy	2.19	1.09	2.01	.052
Simple	Living Situation Satisfaction	Post-Secondary Self-Advocacy	.09	.02	3.78	<.001
	Employment Satisfaction	Post-Secondary Self-Advocacy	.09	.03	3.33	.002
	Post-Secondary Satisfaction	Post-Secondary Self-Advocacy	.12	.02	5.24	<.001
	Relationship Satisfaction	Post-Secondary Self-Advocacy	.07	.03	2.26	.030
	Life Satisfaction	Post-Secondary Self-Advocacy	.11	.02	5.63	<.001
Simple	High School Self-Determination/ Perseverance	Supportive High School Teachers	.72	.12	6.10	<.001
		Supportive Homelife	.40	.17	2.37	.023
Simultaneous	High School Self-Determination/ Perseverance	Supportive High School Teachers	.68	.11	6.14	<.001
		Supportive Homelife	.29	.12	2.38	.023
Simple	Post-Secondary Self-Determination/ Perseverance	High School Self-Determination/ Perseverance	.34	.10	3.35	.002
Simple	Living Situation Satisfaction	Post-Secondary Self-Determination/ Perseverance	.84	.26	3.30	.002
	Employment Satisfaction		.81	.31	2.62	.012
	Post-Secondary Satisfaction		1.15	.27	4.26	<.001
	Relationship Satisfaction		.60	.33	1.83	.074
	Life Satisfaction		.96	.22	4.41	<.001
Simple	High School Social Connections	Supportive High School Teachers	.32	.13	2.51	.016
		Supportive Homelife	.38	.14	2.75	.009
Simultaneous	High School Social Connections	Supportive High School Teachers	.26	.12	2.12	.041
		Supportive Homelife	.32	.13	2.38	.022
Simple	Post-Secondary Social Connections	High School Social Connections	.56	.14	3.97	<.001
Simple	Living Situation Satisfaction	Post-Secondary Social Connections	.77	.22	3.42	.001
	Employment Satisfaction		.51	.23	2.17	.035
	Post-Secondary Satisfaction		.70	.22	3.24	.002
	Relationship Satisfaction		1.10	.22	5.09	<.001
	Life Satisfaction		.83	.15	5.48	<.001

Self-Determination/Perseverance

Like the self-advocacy analyses, regression analyses were performed with self-determination/perseverance as the predictor. Having supportive high school teachers and a supportive home life both uniquely and significantly predicted self-determination/perseverance for participants in high school. Like the self-advocacy analyses, when researchers simultaneously entered both supportive high school teachers and a supportive home life as predictors of high school self-determination/perseverance, both remained significant predictors. High school self-determination/perseverance significantly predicted post-secondary self-determination/perseverance. Post-secondary self-determination/perseverance had a significant and positive ef-

fect on most satisfaction measures: overall life satisfaction, current living situation, employment, and post-secondary education. Post-secondary self-determination/perseverance predicted satisfaction with current relationship status, but this finding was marginally significant.

Social Connections

Again, researchers performed regression analyses, but used social connections in place of self-advocacy and self-determination. When individually entered, supportive high school teachers and a supportive home life were significant predictors of high school social connections. When researchers simultaneously entered both as predictors, supportive high school teachers and a supportive home life both remained significant predictors of high school social connections. Likewise, high school social connections predicted social connections in post-secondary school. These post-secondary social connections significantly predicted all life satisfaction outcomes: overall life satisfaction, employment satisfaction, current relationship status, current living situation, and satisfaction with their post-secondary education.

Open-Ended Questions

Thirty-five participants responded to the question, "How did Winston Prep most help you prepare for and/or adjust to life after high school?" Four main themes emerged from a thematic analysis of participants' responses. Sixteen participants referenced skills and strategies that they learned while attending Winston, such as social skills and essay writing. For example, one participant stated, "By teaching me social skills. This enabled me to interact with my peers and fashion friendships after Winston." Eight participants stated that Winston helped them develop their confidence, as illustrated by this participant's response: "Gave me confidence in the legitimacy of my intellectual capabilities, even if as a young person I still had many confidence issues that were very complex in nature." Six participants stated that the self-advocacy they learned while attending Winston helped them greatly after high school, as indicated by this participant's statement: "Winston taught me how to self-advocate, and not to be ashamed of my learning difference." Four participants referred to the supportive environment Winston created, such as this alum: "It created an environment for me to effectively learn subjects and ready to take on some college level work."

One fewer participant responded to the next open-ended question ($N = 34$): "What could Winston Prep offer to help current students and/or alumni prepare for and/or adjust to life after high school?" Five main themes emerged from a thematic analysis of the responses to this question. Ten participants wished Winston had done more to prepare them for adulthood. For example, one alum stated, "I would say one of my biggest struggles after graduating high school was keeping good track of my personal budget/spending…", while another alum suggested:

> I would say that it would be much easier if there was a way to prepare students for the sudden rise in responsibility that they will be faced with, because it can be really frightening to think about making a transition to a more independent life.

Six participants wished the curriculum at Winston was tougher on students, as demonstrated by this alum: "I was not academically challenged at Winston, and I feel thus I was not conditioned to put effort into my work. I would offer more challenging courses at Winston." Another six also wished they were more prepared for college, as exemplified by a participant who stated, "A few lecture based classes to seniors on the difference in course load between high school and college." Five participants wanted more interactions with alumni, as indicated in this participant's response: "Bring in alumni to speak to classes and give there (sic) college or work advice to students or parents during open houses." Two participants thought that Winston should maintain the status quo, as indicated by this alum:

> I believe that their system is just fine the way it is. It had (sic) helped hundreds of students become successful, and given them the opportunity to get a higher education rather than allow their disabilities to take hold of their lives.

Discussion

These results provided possible explanations for why Winston and NSCC's first collaborative study revealed that Winston alumni were generally quite satisfied with their lives after attending Winston. Clearly, support from their teachers and families played an important role in their successful outcomes. Notably, both quantitative and qualitative data suggested that learning social skills such as self-advocacy and self-determination, as well as having good social connections, may be outcomes of having these two strong support systems, which may explain why these types of support are predictive of alumni success.

The qualitative findings also indicated what Winston was doing well to prepare their students, which may be helpful to teachers and administrators at other schools serving an LD population. The participants indicated that Winston taught them skills and strategies that were helpful post-graduation. Indeed, social and emotional learning

was a common theme in the student responses. Learning social skills, gaining confidence, and becoming self-advocates were important lessons for this sample of LD alumni. This bolsters the quantitative evidence indicating the importance of social and emotional learning on life outcomes.

These results also highlighted how Winston might improve, which also may be helpful for other schools teaching students with LD. A substantial portion of the respondents suggested that Winston could better prepare them for adulthood. For example, the school could provide lessons to help them learn how to keep a budget. Financial literacy, once commonplace in schools nationwide, is today only required in high school in 15 states (Fox, 2021). This oversight may be particularly detrimental for SwLD, because people with learning disabilities may be at greater risk of being victims of financial fraud or other types of financial abuse (Brown, 1999). While the current findings were limited to Winston alumni, it is quite possible that SwLD at other schools would greatly benefit from having financial literacy and other lessons related to the responsibilities of adulthood in their curriculum.

Notably, most of these skills and types of social support did not predict several student success measures as predicted: employment, attendance at a four-year college, or the highest level of educational attainment. Consequently, these findings add to a broader conversation around the question, "What is student success?" Is student success related to finding happiness and satisfaction in multiple life domains? Or is student success limited to measures such as GPA and graduating college in four years? Indeed, what is the point of these measures if these high-achieving students are unhappy and unsatisfied with life? Future research would likely benefit from a clearer definition of student success, particularly one that addresses LD student success.

Limitations and Future Directions

While these findings fill in a gap in the current knowledge about success for SwLD, this study has several limitations. Although researchers made greater efforts to obtain a larger sample size than their first collaboration with NSCC by expanding eligibility, which nearly doubled the sample size since their first collaborative project, the sample in this study was still not large enough to determine if self-advocacy, self-determination, and social connections mediated the relationship between the two social support measures and the life satisfaction measures. Ideally, future studies should have sufficient power to conduct these types of analyses, and better recruitment strategies should be in place for future research. Another limitation was that several participants did not respond to several questions, particularly the open-ended questions, which limited researchers' ability to generalize about the studies' findings. In particular, future studies should ensure participants do not accidentally skip questions, so that researchers can more fully test the study hypotheses. Additionally, these findings are limited due to to this study focusing solely on Winston alumni, making it difficult to generalize to successful SwLD in other education settings. Nevertheless, this study does indicate that ensuring students feel supported by their teachers and families, as well as students developing strong social and emotional skills, may be strong predictors for LD student success, which is consistent with previous research (e.g., Gatlin & Wilson, 2016; Wehmeyer, & Palmer, 2003).

An oversight from this study was that researchers did not include college GPA, a frequently used measure of student success. Are teacher and home life social support and social skills predictive of college GPA in an LD population? Research certainly exists that indicates that supporting SwLD in college via disability support services (e.g., Abreu et al., 2017; Canto et al., 2005) is predictive of higher GPAs, but is this relationship due to the social support or the academic skills they learn through these support services? The findings from this study suggests that the social support SwLD receive may be at least as important as the academic skills they learn. Clearly, more research is needed to determine exactly what aspects of disability support services precipitates this relationship.

Longitudinal research may provide greater insight into why some SwLD lead successful lives. A 20-year longitudinal study from the Frostig Center found that a composite score based on six "success attributes" (self-awareness, perseverance, proactivity, emotional stability, goal setting, and social support) predicted most of the variance in a success measure based on employment, education, and living arrangements (Raskind et al., 1999). The findings of these two studies align well with this research, but also suggests that these success attributes may extend beyond employment, education, and living arrangements to include satisfaction with these outcomes. Perhaps tracking these students over time may reveal important predictors of these multiple measures of LD student success.

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Amber DeBono is the Director of Research at the Winston Preparatory School's Innovation Lab.

Julia English Julia English was a Teacher at Winston Preparatory School and a Research Assistant for Winston Preparatory School's Innovation Lab. She is currently a Data Analyst for the Massachusetts Department of Elementary and Secondary Education.

Michele Heimbauer is the Associate Director of Winston Preparatory School's Innovation Lab.

Elizabeth Mendelsohn is the Chief Operating Officer and director of Winston Preparatory School's Innovation Lab.

Jonathan Cohen is an Adjunct Professor at Teacher's College, Columbia University and Senior Advisor to Winston Preparatory School's Innovation Lab.

Please send correspondence to Amber DeBono, adebono@winstonprep.edu

LEARNING DISABILITIES
A Multidisciplinary Journal

Joseph Morgan
Interim Editor

Editorial Policy

Learning Disabilities: A Multidisciplinary Journal is an official publication of the Learning Disabilities Association of America (LDA). The journal is a vehicle for disseminating the most current thinking on learning disabilities and to provide information on research, practice, theory, issues, and trends regarding learning disabilities from the perspectives of varied disciplines involved in broadening the understanding of learning disabilities. The disciplines represented in the journal include adults, advocacy, assessment, college programs, cultural differences, early childhood, public and private education, families, higher and adult education, law, mental health, public policy, research, science, social and emotional issues, social work, technology, and vocational and career education.

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Learning Disabilities
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Call for Papers

Special Issue

Breaking Barriers: Advancing Understandings of Learning Disabilities for Justice and Equity through an Intersectional Critical Lens

Editors: Brenda L. Barrio & Catherine Kramarczuk Voulgarides

For this special issue, we seek contributors who will take an interdisciplinary and intersectional approach to discussing issues related to the topic of "Learning Disabilities." We seek papers that consider how ableism, racism, disability justice, and other critical perspectives can lead to new lines of research, practical strategies, and possible solutions that can advance the field. In contributing to the special issue, we ask you to consider the following broad question to guide your manuscript:

- What is necessary to advance understandings of learning disabilities (e.g., practice-based, pedagogy, conceptual and/or theoretical frameworks, etc.) for justice and equity from an interdisciplinary and intersectional critical lens?

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A 500-word abstract should be submitted by **September 11, 2023.** All abstracts should include citations and be emailed to Brenda.Barrio@unt.edu. Invitations to submit a full manuscript will be sent by no later than September 25, 2023.

A final draft of all invited papers will be due January 12, 2024. The final submission will be due April 1, 2024, with expected publication in 2024.