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Systematic Review

Reading Interventions to Support English Learners with Disabilities in High School: A Systematic Review

Lisa Bowman-Perrott [1], Richard T. Boon [2,*], Kathy B. Ewoldt [2], Mack D. Burke [3], Zohreh Eslami [1] and Azizullah Mirzaei [3,4]

[1] Department of Educational Psychology, College of Education and Human Development, Texas A&M University, 4225 TAMU, College Station, TX 77843, USA; lbperrott@tamu.edu (L.B.-P.); zeslami@tamu.edu (Z.E.)
[2] Department of Interdisciplinary Learning and Teaching, College of Education and Human Development, The University of Texas at San Antonio, One UTSA Circle, San Antonio, TX 78249, USA; kathy.ewoldt@utsa.edu
[3] Department of Educational Psychology, School of Education, Baylor University, Waco, TX 76798, USA; mack_burke@baylor.edu (M.D.B.); azizullah_mirzaei1@baylor.edu (A.M.)
[4] English Department, School of Letters & Humanities, Shahrekord University, Shahrekord 64165478, Iran
* Correspondence: richard.boon@utsa.edu

Abstract: This systematic review summarizes the reading intervention literature for English learners (ELs) with disabilities in high school. A robust and exhaustive electronic search of ERIC, PsycINFO, Education Source Ultimate, and Academic Search Ultimate databases using keywords such as "reading interventions", "English learners", "disabilities", and "high school" was performed for the period from 1975 to July 2024. To be included in this review, participants had to be an EL with an identified disability enrolled in high school and receiving a reading intervention, while studies that included participants with reading difficulties were excluded. A total of 110 documents were retrieved, including 105 from the initial electronic database search, and an additional five more were found using Google Scholar. After reviewing all of the documents using a four-step process, seven studies met our inclusion criteria and are included in this systematic review. Across the reading intervention studies, key study variables were coded into two categories: (a) participant characteristics and (b) study and intervention characteristics. The findings indicated that all studies reported largely positive effects on improving students' reading outcomes. Reading interventions included semantic mapping, repeated readings with systematic error correction and performance feedback, summarization strategies (e.g., RAP Paraphrasing Strategy, Modified GIST Strategy), and multi-component instructional packages (e.g., Clue Word Strategy, CLUES strategy, Reading Intervention for Adolescents [RIA]). It is difficult to draw a firm conclusion about effective reading interventions for high school ELs with disabilities because of the limited number of studies, small sample sizes of ELs with disabilities, few disability categories represented, and lack of stand-alone reading interventions. The Discussion section summarizes the key findings, limitations to consider, implications for classroom practice, and directions for future research.

Keywords: reading interventions; English learners; disabilities; high school; systematic review

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1. Introduction

Increasing student diversity is perhaps the most notable hallmark of schools throughout the U. S. today. In particular, there has been significant growth in the number of learners acquiring English as a second language in elementary and secondary classrooms, often

referred to as English learners (ELs; U.S. Department of Education, 2017). In 2021, 10.6% of students in kindergarten through 12th grade in the U.S. (roughly 5.3 million children and youth) were ELs (U.S. Department of Education, 2024). It is also important to note that the distribution of ELs varies across the country. For example, there are fewer than 1% of ELs in West Virginia and more than 20% in Texas (U.S. Department of Education, 2024). ELs represent a range of diverse ethnic and linguistic groups. While the main language among ELs is Spanish, other languages such as Arabic, Chinese, Vietnamese, Portuguese, Russian, Hattian, Hmong, and Urdu are also well represented among ELs in U.S. schools (U.S. Department of Education, 2024). There is also diversity amongst this group that includes their amount of prior education, experience with uninterrupted schooling, and native language proficiency.

With the increasing numbers of ELs in districts throughout the U.S., there is a corresponding need to identify reading interventions for this group of students, as this is a foundational skill area in which many ELs experience difficulty (Boon & Spencer, 2023; Hall et al., 2019; Rhinehart et al., 2024). According to the National Assessment of Educational Progress (NAEP), 79% of 12th grade ELs scored *below* the NAEP 'Basic' level of reading in 2019 (U.S. Department of Education, 2022). Kangas et al. (2023) echoed these findings in a subsequent secondary data analysis of the NAEP where they examined outcomes for ELs on the NAEP from 2009 to 2019. They highlighted that ELs with disabilities consistently perform lower in reading than their peers without disabilities, and lower than non-ELs with disabilities. The results suggest that this population is doubly challenged because of the intersection of language learning needs and disabilities.

1.1. ELs with Disabilities

National data continue to show that ELs are most likely to be identified with specific learning disabilities (SLDs), herein referred to as learning disabilities (LDs), among the 13 disability categories under the Individuals with Disabilities Education Act (IDEA, 2004; U.S. Department of Education, 2021). For example, based on data from the 2018–2019 school year, the U.S. Department of Education's Office of English Language Acquisition (OELA) reported that 48% of ELs receiving special education services were identified with an LD (compared to 35.7% of their peers who were not ELs). Statewide data have reflected a similar trend. For example, Rhinehart et al. (2024) found that roughly 71% of their sample of 560 long-term ELs (students with an EL designation for more than six years) were identified with an LD. The IDEA requires that students receiving special education services (e.g., for LD) be provided with individualized and specially designed instruction (Hallahan et al., 2023). In the case of ELs with an LD in reading, instruction tailored to meet their language and literacy needs is essential.

1.2. Academic Achievement

ELs with disabilities often have to navigate learning a new language and mastering academic content simultaneously (Bowman et al., 2010). One foundational academic skill area in which ELs too often experience difficulty is reading (Boon & Barbetta, 2017). Reading is an essential skill for students' success in school and in life. In fact, literacy is a requirement for economic stability, upward mobility, and human flourishing (Boon et al., 2020). As such, identifying effective interventions to support ELs' reading is critical. This is especially true for high-school-aged ELs, as they are expected to acquire/master academic vocabulary that is content-specific. For example, the *Krebs Cycle* or *photosynthesis* in science, or the *Pythagorean theorem* or *commutative property* in mathematics. Much of the reading research is understandably focused on elementary-aged students, as this is the time when children begin learning to read and when reading difficulties are often first identified.

However, there is a need to examine evidence-based and evidence-supported strategies that meet the needs of older ELs experiencing reading difficulties.

1.3. High School

There are a number of published studies in which high-school-aged ELs are participants. However, many of the target reading interventions and strategies focus on ELs with reading difficulties—those who are often referred to as being at-risk because of reading challenges. For example, Richards-Tutor et al. (2016) investigated reading interventions for ELs with disabilities and those who were at-risk in a review of seven studies; ELs were in kindergarten through eighth grade. A key finding was that interventions for ELs were often the same as those provided to native English-speaking students. Additionally, Solari et al. (2022) examined reading interventions for ELs with word-level reading disabilities in a meta-analysis of both group and single-case research design studies. The ELs across the 17 studies were students in kindergarten through fifth grade. Positive effects were found for EL participants' reading outcomes in group design studies; results were reported as more variable in the single-case studies. We found a review that included ELs with reading difficulties that focused on adolescent ELs, but only one study was conducted at the high school level (Huddle et al., 2017). To our knowledge, this is the first systematic review to specifically summarize reading interventions for ELs with disabilities at the high school level.

1.4. Purpose

The purpose of this systematic review is to summarize the following for ELs with disabilities in high school: (a) characteristics of ELs, (b) characteristics of reading interventions for ELs, and (c) ELs' reading outcomes. The following research questions guided our review process:

1. What are the *characteristics of ELs with disabilities* in high school across the reading intervention studies?
2. What are the *characteristics of the reading interventions* for ELs with disabilities in high school?
3. What are the *reading outcomes* for ELs with disabilities in high school?

2. Method

2.1. Literature Search and Inclusion/Exclusion Criteria

Our search procedure process was four-fold. First, we ran an electronic database search. Second, we conducted an electronic hand search of relevant journals from OnlineFirst (in press) and all issues and volumes for publications in 2024. Third, we carried out an ancestral search by reviewing all references from the studies that met our inclusion criteria. Fourth, we included a search using Google Scholar.

The first and second authors carried out an electronic database search using ERIC, PsycINFO, Education Source Ultimate, and Academic Search Ultimate databases. Published articles and studies conducted as dissertation research were sought for inclusion. The thesaurus of each database was thoroughly searched with a research review librarian to capture as many relevant search results as possible (see Appendix A). Word or phrase strings represented four areas: reading interventions, English learners, disabilities, and high school. Search terms included the following: *reading strateg* OR reading program* OR reading instruction* combined with terms such as *English language learner* OR second language learn* OR emergent bilingual** combined with (disab*) and *high school* OR *grade 9 OR grade 10 OR grade 11 OR grade 12*. A total of 105 articles were obtained from the database search. Results from the electronic database search went through a two-step screening process. We

first applied the inclusion criteria described in the next section to titles and abstracts. Then, we applied the same criteria to screen the full text of articles that appeared to meet the inclusion criteria.

The third author conducted an electronic hand search of the following relevant journals: *Behavioral Disorders*, *Bilingual Research Journal*, *Education and Training in Autism and Developmental Disabilities*, *Exceptional Children*, *Exceptionality: A Special Education Journal*, *Focus on Autism and Other Developmental Disabilities*, *International Journal for Research in Learning Disabilities*, *Journal of Adolescent & Adult Literacy*, *Journal of Educational Psychology*, *Journal of International Special Needs Education*, *Journal of Learning Disabilities*, *Journal of Literacy Research*, *Journal of Special Education Technology*, *Learning Disabilities: A Contemporary Journal*, *Learning Disabilities: A Multidisciplinary Journal*, *Learning Disabilities Research & Practice*, *Learning Disability Quarterly*, *Multiple Voices: Disability, Race, and Language Intersections in Special Education*, *NABE Journal of Research and Practice (NJRP)*, *Reading Research Quarterly*, *Reading & Writing Quarterly: Overcoming Learning Difficulties*, *Remedial and Special Education*, *Scientific Studies of Reading*, *The High School Journal*, *The Journal of Special Education*, and *Topics in Language Disorders*. No articles were gleaned from the hand searches.

No additional studies were found from our ancestral search, but five were found from our Google Scholar search. The Google Scholar search included terms such as "Reading Interventions", "English Learners with Disabilities", and "High School." In sum, a total of seven studies met our inclusion criteria and are included in this review. Figure 1 depicts our literature search procedure as illustrated on the PRISMA diagram.

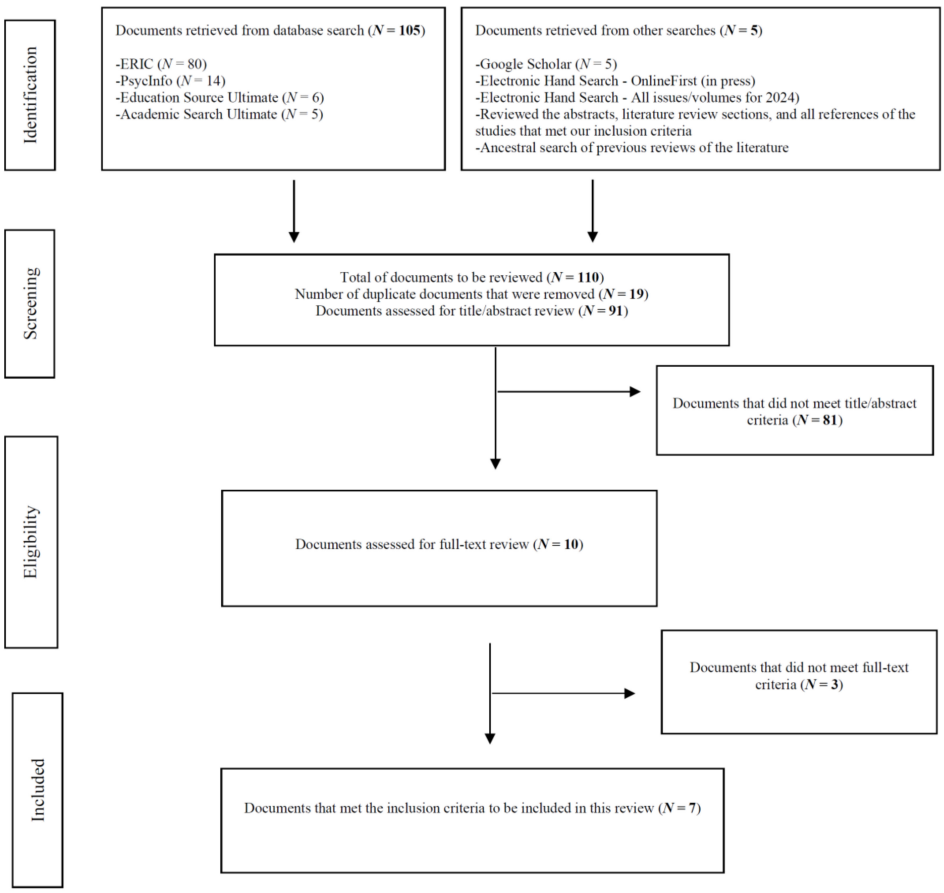


Figure 1. PRISMA Diagram.

2.2. Inclusion Criteria

A study had to meet five criteria to be included in this review. Our inclusion criteria were as follows: (1) studies were published in peer-reviewed journals or conducted as part

of dissertation research from 1975 to 2024, (2) articles were published in English, (3) participants included students identified as ELs with a documented disability, (4) participants were enrolled in high school (grades 9–12), and (5) studies focused on reading interventions implemented in schools in the U.S.

2.3. Exclusion Criteria

Articles were excluded if they (1) included ELs with reading difficulties but did not have an identified disability category under the IDEA (2004); (2) included ELs with disabilities but did not report data for reading intervention outcomes; (3) did not disaggregate data for ELs with disabilities; or (4) were reviews of the literature (e.g., systematic reviews, meta-analyses).

2.4. Interrater Reliability

We independently calculated interrater reliability (IRR) for applying our inclusion criteria to title and abstract screening (98%), full-text screening (100%), and coding of the articles (94%). Specifically, the first and second authors independently screened titles and abstracts and then full texts. The first and third authors independently coded each article. Discrepancies were discussed by revisiting the articles. IRR was calculated for 100% of titles and abstracts, full texts, and article coding. The formula used for all IRR calculations was: total of agreements/total number of agreements + disagreements $\times$ 100 (House et al., 1981).

2.5. Coding

Our coding procedure involved three steps. First, our inclusion criteria were applied to titles and abstracts. Second, the same criteria were applied to the full text of articles. Third, articles were coded across two broad categories that reflected our research questions: participant characteristics, and study and intervention characteristics. Excel spreadsheets were used for all coding; codes are described as follows.

2.6. Participant Characteristics

Eight variables were coded to extract participant data. They were: disability, age or grade level, gender, ethnicity, native language, native language proficiency, English language proficiency (beginning, intermediate, or advanced), and reading level (see Table 1). If any of this information was not reported, 'NR' was coded.

Table 1. Participant Characteristics.

Study	Disability	Age (yrs/mo)	Grade	Gender	Ethnicity	Native Language	Native Language Proficiency	English Language Proficiency Assessment and Score	Reading Assessment and Level
Halterman (2013)	LD (*n* = 11)	NR	9	NR	NR	Spanish	NR	IPT-II Early Intermediate (*n* = 8) Intermediate (*n* = 1) Early Advanced (*n* = 2)	Gates–MacGinitie 4–8 yrs below grade level (1st through 5th grade)
Helman et al. (2015)	LD (*n* = 3)	14 yrs 3 mo to 16 yrs 2 mo	9 and 10	M (*n* = 2) F (*n* = 1)	Hispanic (*n* = 3)	Spanish	NR	Pre-LAS (English) Beginning (*n* = 4)	Read 180 SRI Lexile 808 Lexile (*n* = 1; 6th grade) 640 Lexile (*n* = 1; 4th grade) 785 Lexile (*n* = 1; mid-5th grade)
Helman et al. (2022)	LD (*n* = 4)	16 yrs 1 mo to 16 yrs 9 mo	10	M (*n* = 1) F (*n* = 3)	Hispanic (*n* = 4)	Spanish	NR	WIDA Beginning (*n* = 4)	Read 180 SRI Lexile 632 (*n* =1; 4th grade) 615 (*n* =1; 4th grade) 601 (*n* =1; 4th grade) 600 (*n* =1; 4th grade)
Horton et al. (2023)	LD and SL (*n* = 2) SL (*n* = 1)	15 yrs 1 mo to 17 yrs 5 mo	9 and 11	M (*n* = 2) F (*n* = 1)	Hispanic (*n* = 2) Afghani (*n* = 1)	Spanish (*n* = 2) Persian (*n* = 1)	NR	NR Level 3 (*n* = 2) Level 4 (*n* = 1)	NR
Jozwik et al. (2021)	LD (*n* = 1)	NR	9	NR	Guatemalan (*n* = 1)	Spanish	NR	ACCESS Emerging 2.0 (*n* = 1)	NR
Morisoli (2010)	LD (*n* = 3)	15 yrs to 17 yrs	9–11	M (*n* = 3)	Hispanic (*n* = 3)	Spanish	NR	AZELLA Intermediate (*n* = 1) Proficient (*n* = 2)	TOWRE [1] WJ-III ACH [1] GORT-4 [1] 3rd grade (*n* = 1) 4th grade (*n* = 2)

Table 1. *Cont.*

Study	Disability	Age (yrs/mo)	Grade	Gender	Ethnicity	Native Language	Native Language Proficiency	English Language Proficiency Assessment and Score	Reading Assessment and Level
Williams and Vaughn (2020)	LD (*n* = 71)	NR	9	U	U	NR	NR	NR U	NR

Note. **Disability:** LD = Learning Disability, SL = Speech/Language. **Age:** Yrs = Years, Mo = Months. **Gender:** F = Female, M = Male. **Assessments:** ACCESS = Assessing Comprehension and Communication in English State-to-State for English Language Learners 2.0, AZELLA = Arizona English Language Learner Assessment, GORT-4 = Gray Oral Reading Test-4, IPT-II = Individualized Developmental English Activities Oral Language Proficiency Test – II, Pre-LAS = Preschool Language Assessment Survey, SRI = Scholastic Reading Inventory, TOWRE = Test of Word Reading Efficiency, WIDA = World-Class Instructional Design and Assessment Consortium's Language Composite Score, WJ-III ACH = Woodcock-Johnson III Tests of Achievement reading fluency subtest. **Other:** NR = Not Reported for ELs, U = Unclear. [1] Emergent bilingual students had to read below the 16th percentile on all assessments to be included in the study.

2.7. Study and Intervention Characteristics

This category consisted of 13 codes. They were: the number of EL participants; intervention and intervention agent(s); research design; reading skills; dependent variables (outcome measures); setting and format; reading intervention duration, intensity, and number of sessions; treatment fidelity; social validity; inter-observer agreement (IOA); and effect sizes. If the information was not reported, or was not clearly reported for ELs, 'NR' was coded.

3. Results

A summary of findings across the seven studies we reviewed is presented in the following section. Studies were published between 2010 and 2023. The findings are organized according to our three research questions.

3.1. Characteristics of ELs with Disabilities in High School

This section provides information to answer Research Question #1: What are the characteristics of ELs with disabilities in high school across the reading intervention studies? Participants' demographic characteristics are reported in Table 1.

3.2. Disability

ELs with disabilities across the seven studies represent two disability groups: LD (n = 103) and SL (n = 3). SL was a primary diagnosis for ELs in all seven studies, and a secondary disability for two ELs in Horton et al. (2023). While ELs with several disability diagnoses were reported as participants in Williams and Vaughn (2020), the authors noted that the 71 ELs with LD in this study were part of a larger study. The authors noted that the purpose of this paper was to disaggregate data for the ELs with LD, as this was not part of the larger study analyses. The ELs in each study were identified as having an LD.

3.3. Age/Grade Level

A total of 110 ELs in 9th through 11th grade were reported as participants in the reading interventions across the seven studies. The average age of participants was 15 years in the four studies reporting this information, and the average grade level was 9th (range 9th–11th grade). Participants' age or grade level were not specifically reported for the ELs in the remaining three studies (Halterman, 2013; Jozwik et al., 2021; Williams & Vaughn, 2020).

3.4. Gender

The gender of ELs with disabilities was reported in five of the seven studies. The majority were male (n = 68); 30 were females. In Halterman (2013), gender was reported for the entire sample of 18 students and was not disaggregated for the ELs with disabilities; the majority were male.

3.5. Ethnicity

Participants' ethnicity is listed as reported in six studies (Helman et al., 2015, 2022; Horton et al., 2023; Jozwik et al., 2021; Morisoli, 2010; Williams & Vaughn, 2020). They were: Hispanic (n = 12), Guatemalan (n = 1), Afghani (n = 1), American Indian/Alaska Native (n = 49), and White (n = 45). Ethnicity was reported in all but one study (Halterman, 2013). In another study, while participants' ethnicity was reported, the ELs with disabilities and their ethnicities were not disaggregated (Williams & Vaughn, 2020).

3.6. Native Language and Native Language Proficiency

Spanish was the native language for ELs with disabilities in six of the studies (Halterman, 2013; Helman et al., 2015, 2022; Horton et al., 2023; Jozwik et al., 2021; Morisoli,

2010). Persian was the heritage language in Horton et al. (2023), as well as Spanish. These data were not reported in one study (Williams & Vaughn, 2020). Students' native language proficiency was not reported in any of the studies. As a note, students were identified as ELs through various means. They included: school-based designation of Limited English Proficiency or students' receipt of English Speaker of Other Languages services in the previous five years, a Home Language Survey, scores on a standardized English language assessment, a district-developed language assessment, and/or a state-wide English language test.

3.7. English Language Proficiency

Students' English proficiency was described differently across various language assessment tools. To summarize the findings for this variable, we categorized proficiency as Beginner (newcomer with no English proficiency), Emergent/Intermediate (some English proficiency), and Advanced/Proficient (proficient in English in reading, writing, and speaking). ELs with disabilities were reported as being in the Beginner category in four studies, as Emergent/Intermediate in three studies, and as Advanced/Proficient in two studies. In one study (Horton et al., 2023), students' English proficiency level was reported, but the language assessment used was not reported. As such, we are unsure which proficiency levels corresponded with the levels reported. The majority of ELs across the studies were identified as being at the beginning stages of English language acquisition (n = 102).

Several assessment tools were reported across the seven studies to assess students' English proficiency. They were: the Idea Proficiency Test II (IPT–II; Halterman, 2013), the Preschool Language Assessment Survey (Pre-LAS English; Helman et al., 2015), the World-Class Instructional Design and Assessment Consortium (WIDA; Helman et al., 2022), Assessing Comprehension and Communication in English State-to-State for English Language Learners 2.0 (ACCESS; Jozwik et al., 2021), and the Arizona English Language Learner Assessment (AZELLA; Morisoli, 2010). This information was not reported in two studies (Horton et al., 2023; Williams & Vaughn, 2020).

3.8. Reading Levels

Several standardized assessment tools were used to assess the reading levels of ELs with disabilities. The following reading assessments were reported in four of the seven studies: the Gates–MacGinitie test was used in Halterman (2013), Read 180 *Scholastic Reading Inventory* (SRI) and the *Test of Reading Comprehension–Fourth Edition* (TORC-4) were used in Helman et al. (2015, 2022), and the Test of Word Reading Efficiency Fluency (TOWRE), the Woodcock-Johnson III Tests of Achievement (WJ-III ACH) reading fluency subtest, and the Gray Oral Reading Test-4 (GORT-4) were used in Morisoli (2010). Across these studies, students' reading levels ranged from first through sixth grade (M = fourth grade; see Table 1). This information was not reported in the remaining three studies (Horton et al., 2023; Jozwik et al., 2021; Williams & Vaughn, 2020).

3.9. Characteristics of Reading Interventions for ELs with Disabilities in High School

Research Question #2 will be addressed in this section: What are the characteristics of the reading interventions for ELs with disabilities in high school? A summary of the intervention characteristics can be found in Table 2.

Table 2. Study and Intervention Characteristics.

Study	Number of ELs	Intervention and Intervention Agents	Research Design	Reading Skills	Dependent Measures	Setting and Format	Treatment Duration, Intensity, and Sessions	Treatment Fidelity Method (Percentage)	Social Validity Instrument	IOA [1] (Percentage)
Halterman (2013)	*n* = 11	C_1: Traditional, RAP Paraphrasing Strategy, and Semantic Map Strategy C_2: Traditional, Strategy Semantic Map Strategy, and RAP Paraphrasing Teacher	SCR–repeated measures with ATD	C	Reading comprehension Number of RAP steps recalled Number of semantic map steps recalled	SPED English classroom Whole group	10 weeks T_1 = 9 lessons 540 minutes total T_2 = 9 lessons 540 minutes total	DO (NR)	NR	NR
Helman et al. (2015)	*n* = 3	Clue Word Strategy Researcher (Doctoral Student)	SCR–MBD ABAB reversal across participants	V	Strategy use Strategy knowledge Oral strategy steps	Pull-out 1:1	2 weeks 45 minutes 3 days/week to mastery	Checklists, DO (100%)	CIRP	PP (100%)
Helman et al. (2022)	*n* = 4	CLUES Strategy SPED Teacher	SCR–MBD across participants	V	Strategy use Strategy knowledge Near transfer Far transfer	In-class (ESOL)	3 weeks 4 days a week	Checklists (>95%)	CIRP	AT (30%, 90–100%)
Horton et al. (2023)	*n* = 3	Modified GIST Strategy Researcher (Doctoral Student)	SCR–MPD across participants	C	Expository paragraph summary score	Pull-out 1:1	Tutoring phase: 2 weeks 20–50 minutes each 6 sessions Intervention phase: NR 12–47 minutes each 5 sessions	Checklist (98.76%)	AMRP	Summary statement scores (100%) GIST strategy rubric (95.02%)

Table 2. *Cont.*

Study	Number of ELs	Intervention and Intervention Agents	Research Design	Reading Skills	Dependent Measures	Setting and Format	Treatment Duration, Intensity, and Sessions	Treatment Fidelity Method (Percentage)	Social Validity Instrument	IOA [1] (Percentage)
Jozwik et al. (2021)	*n* = 1	Peer-Assisted Multimedia Vocabulary Instruction ESL Teacher	SCR–MPD across word sets replicated across participants	V	Number of words defined correctly	In-class Dyads	5 days/week 45 minutes/day	DO Self-regulation training (93%) Intervention (98.5%)	Researcher-created questionnaire	PP Accuracy on expressive definition tests (93%)
Morisoli (2010)	*n* = 3	GL Repeated Readings with Systematic Error Correction and Performance Feedback (Story Passages Only) SPED Teacher/ Researcher	SCR–ABAB reversal across participants	F	Words per minute Errors per minute	Pull-out 1:1	12 weeks 15–20 minutes 3–4 days/week	NR (99.87%)	NR	(>90%)
Williams and Vaughn (2020)	*n* = 85	RIA Reading Interventionists	Group with participants randomly assigned to a treatment or a comparison group	F, C, and V	Phonemic Decoding Sight words Vocabulary Reading comprehension	Reading intervention class Groups of 10–15	2 semesters (1 year) 3.74–4.25 hours/week NR	Checklist (2.5–3.3 on a 4.0-point scale)	NR	NR

Note. ABAB = Reversal design with A representing the baseline (non-intervention) condition and B representing the intervention condition, ATD = Alternating Treatments Design, MBD = Multiple Baseline Design, MPD = Multiple Probe Design, CIRP = Child Intervention Rating Profile, AMRP = Adolescent Motivation to Read Profile, GL = Great Leaps Reading Program, GIST = Generating Interaction Between Schemata and Text, NR = Not Reported, RIA = Reading Intervention for Adolescents, SCR = Single-case Research, SPED = Special Education, AT = Audio-Tape, DO = Direct Observation, PP = Permanent Product, C = Comprehension, F = Fluency, V = Vocabulary Acquisition. [1] Percentage of IOA sessions per condition, unless reported otherwise. C_1 = Classroom 1, C_2 = Classroom 2.

3.10. Target Skills, Types of Reading Interventions, and Outcomes

Three reading skills are reflected across the seven studies: reading fluency, reading comprehension, and vocabulary development. Reading fluency outcomes were studied in two studies (Morisoli, 2010; Williams & Vaughn, 2020). Reading comprehension outcomes were evaluated in three studies (Halterman, 2013; Horton et al., 2023; Williams & Vaughn, 2020). Finally, vocabulary development was assessed in four studies (Helman et al., 2015, 2022; Jozwik et al., 2021; Williams & Vaughn, 2020).

Reading Fluency. Morisoli (2010) examined the effectiveness of repeated reading with three ninth through eleventh grade Hispanic ELs with LD to bolster their reading fluency skills. Repeated reading instruction was not the sole intervention, but was also paired with performance feedback and systematic error correction. The results showed that ELs with LD were able to read more words correctly and made less mistakes in their reading of the passages. Williams and Vaughn (2020) implemented the Reading Intervention for Adolescents (RIA) program with 85 ninth grade ELs with LD. The RIA included instruction across two phases from the REWARDS Secondary program, Collaborative Strategic Reading (CSR), the "Clink and Clunk" strategy, "Gists", and a six-step vocabulary procedure developed by the Vaughn Gross Center for Reading and Language Arts. They reported that RIA did not significantly impact students' reading fluency.

Reading Comprehension. Halterman (2013) investigated the use of semantic mapping, the RAP paraphrasing strategy, and a business-as-usual condition with 11 ninth grade ELs with LD to strengthen students' reading comprehension skills. Specifically, the students were identified by the district (based on State guidelines) as limited English proficient (LEP)—referred to as ELs with LD—or fluent English proficient (FEP)—referred to as FEPs with LD. Semantic mapping involved structuring information graphically and included an acronym (RICOS: Read, Identify, Circle, Order, and Show Links), which allowed students to visually "chunk" information to aid comprehension. Similarly, the three-step RAP paraphrasing strategy, which stands for Read, Ask, and Paraphrase, provided students with assistance to remember information better as they read a passage of text. Findings revealed that although not statistically significant, ELs with LD and FEPs with LD made gains on reading comprehension from pre- to post-test measures; the RAP paraphrasing strategy was slightly more effective.

Horton et al. (2023) studied the effects of a summarization strategy known as GIST (Generating Interaction between Schemata and Text) with three ninth and eleventh grade Spanish- and Persian-speaking ELs with LD and/or SL disorders. Findings indicated that all ELs with LD and/or SL experienced improvements in reading comprehension (summarizing expository text) as a result of using the GIST strategy. Williams and Vaughn (2020) found small but non-statistically significant effects for reading comprehension. However, they reported that improvement gains were shown for sentence-level comprehension.

Vocabulary Development. Helman et al. (2015) examined the efficacy of the Clue Word Strategy (CWS), an eight-step instructional procedure that includes reading and writing a target vocabulary word in a sentence and using context clues to understand it. The goal is to help students understand the meaning of newly introduced vocabulary words within a graphic organizer. The study involved three ninth and o tenth grade Spanish-speaking ELs with LD. The authors aimed to improve students' acquisition of new science vocabulary words. The results showed that ELs with LD were able to remember more unknown science vocabulary words from baseline to intervention phases, and two of the three students maintained gains two months after conclusion of the study.

Helman et al. (2022) studied the use of the CLUES strategy, a five-step instructional procedure that includes finding the meaning of a word and word parts imbedded within a graphic organizer. The study involved four tenth grade Spanish-speaking ELs with

LD and aimed to enhance their learning of new vocabulary words in biology. Similar to the previous study by Helman et al. (2015), ELs with LD made significant gains in their understanding of acquiring new vocabulary words from baseline to intervention phases. In both of Helman's studies, the interventions focused on "combining contextual and morphemic analysis strategies to help either ELs or students with [reading disabilities] acquire vocabulary" (Helman et al., 2015, p. 41). The researchers also noted that cognate knowledge was included in their latter study (see Helman et al., 2022).

Jozwik et al. (2021) investigated the effectiveness of a multi-component instructional intervention designed for high-school-age ELs with or at-risk of reading disabilities. The intervention components included reciprocal peer tutoring, explicit instruction, multimedia presentations, self-goal setting, and self-evaluation. Their participants were six ninth grade Spanish- and Chuj-speaking ELs with or at-risk LD, one of whom was identified as an EL with LD; they focused on learning new vocabulary words and their definitions in a language arts classroom. Similarly, as mentioned in the two previous studies, Helman et al. (2015, 2022), the authors infused a graphic organizer to provide additional organizational supports and assist with learning the new science vocabulary words and their definitions. The findings indicated that all students, including the one EL with LD, showed marked gains in learning new vocabulary words and their definitions. The authors noted that "...it is not possible to determine which features of the multimedia presentations (e.g., pairing text with images and audio narration; repetition of keywords within definitions; or the use of example and nonexample sentences) were most effective and why" (p. 96). Williams and Vaughn (2020) reported a statistically significant effect for their proximal vocabulary measure. They defined this measure as "...a researcher-created proximal vocabulary measure that assessed students' knowledge of words explicitly taught in the intervention. It consisted of 12 items where students had to match the word to the definition" (Williams & Vaughn, 2020, p. 160).

3.11. Intervention Agents

Authors reported the following as the individuals implementing the reading interventions. Teachers (Halterman, 2013), special education teachers (Helman et al., 2022; Morisoli, 2010), an ESL teacher (Jozwik et al., 2021), researchers (Helman et al., 2015; Horton et al., 2023; Morisoli, 2010), doctoral students (Helman et al., 2015; Horton et al., 2023), and reading interventionists (Williams & Vaughn, 2020). As a note, other school personnel were reported in addition to interventionists. Jozwik et al. (2021) included a bilingual special education teacher/researcher who helped provide IOA, and an English as a Second Language (ESL) teacher paired students in dyads, administered pre-tests, and led probe sessions. A field expert (curriculum and instruction specialist) helped with scoring audio samples in Morisoli (2010).

3.12. Research Designs

Single-case research (SCR) designs were used in six of the seven studies; the seventh used a group design. Two of the six SCR studies involved a multiple-baseline design (Helman et al., 2015, 2022), and two reflected a multiple-probe design (Horton et al., 2023; Jozwik et al., 2021). A repeated measures design with alternating treatments was used in one study (Halterman, 2013), and a reversal (ABAB) design was used in a single study (Morisoli, 2010). A group research design was used in Williams and Vaughn (2020)—participants were randomly assigned to treatment and control groups (see Table 2).

3.13. Dependent Measures

Specific dependent measures assessed across the studies varied. They included the number of RAP steps and the number of semantic maps steps recalled (Halterman, 2013),

strategy use, strategy knowledge, and oral strategy recall (Helman et al., 2015), strategy use, strategy knowledge, and near and far transfer (Helman et al., 2022), the number of words defined correctly (Jozwik et al., 2021), the number of words and errors per minute (Morisoli, 2010), and phonemic decoding and sight words (Williams & Vaughn, 2020).

3.14. Setting and Format

The setting for each of the studies was classroom-based. A reading intervention class was the setting for one study (Williams & Vaughn, 2020), a special education classroom with instruction in English was the setting in another (Halterman, 2013), a pull-out setting was reported in three studies (Helman et al., 2015; Horton et al., 2023; Morisoli, 2010), an English for Speakers of Other Languages (ESOL) classroom was the setting for one study (Helman et al., 2022), and in class was simply reported in one study (Jozwik et al., 2021).

Reading instruction format was reported in six studies. Authors of three studies reported 1:1 instruction (Helman et al., 2015; Horton et al., 2023; Morisoli, 2010), whole-group instruction was reported in one study (Halterman, 2013), dyads were reported in one study (Jozwik et al., 2021), and instruction in groups of 10–15 was reported in one study (Williams & Vaughn, 2020).

3.15. Duration and Intensity

The length of the reading interventions varied across the studies. This information was reported in six of the studies (see Table 2). Interventions ranged from 2 weeks (Helman et al., 2015; Horton et al., 2023) to 2 semesters (Williams & Vaughn, 2020); the average was 9 weeks. Similarly, the intensity (e.g., the number of sessions, number of minutes per session, number of days per week) was not consistently reported. Authors of six studies reported the number of minutes or hours students engaged in reading interventions. They ranged from 12–17 minutes per session (in the intervention phase; Horton et al., 2023) to 45 min per session (Helman et al., 2015; Jozwik et al., 2021). Halterman (2013) reported the total number of minutes as 540. Williams and Vaughn (2020) reported 3.74–4.25 hours per reading intervention. The number of days per week that students participated in these interventions was provided in three studies. Helman et al. (2015) reported 3 days per week, Helman et al. (2022) reported 4 days per week, and Morisoli (2010) reported 3–4 days per week. The average across these three studies is 3 days per week.

3.16. Treatment Fidelity

Treatment (implementation) fidelity data were reported in all seven studies. The method for collecting these data was reported in five studies; they included direct observation (n = 3) and/or checklists (n = 4). Halterman (2013) reported 24–100% fidelity for 8 of 32 sessions (lessons). Williams and Vaughn (2020) calculated treatment fidelity for 40% of observations across three waves of data; training was conducted until at least 90% reliability was attained. Word study had a mean fidelity score of 3.30, vocabulary had a score of 3.20, comprehension had a score of 3.00, discussion and interpretation of text had a score of 2.60, and motivation had a 2.70 rating. Fidelity was scored on a 4-point scale.

3.17. Social Validity

Social validity, or consumer satisfaction, was reported in five studies (Halterman, 2013; Helman et al., 2015, 2022; Horton et al., 2023; Jozwik et al., 2021). The instrument used to collect these data was the Child Intervention Rating Profile (CIRP; Helman et al., 2015, 2022). Horton et al. (2023) conducted semi-structured interviews with each participant at the end of the study to "evaluate [their] experience and their overall perception of the study" (p. 447). The Adolescent Motivation to Read Profile (AMPR) was also provided in the Horton et al. (2023) study to, in part, assess students' motivation for reading and the value

they attributed to reading. The findings included positive feelings about the intervention on the part of all participants. However, they reported varied levels of motivation toward reading. Jozwik et al. (2021) gave a research-created questionnaire to students to receive feedback on items such as whether they learned new vocabulary words and whether they liked serving as a tutor. Halterman (2013) provided students with a survey. Participants indicated that the semantic mapping intervention helped them learn, and that they enjoyed using the strategy.

3.18. Inter-Observer Agreement

Inter-observer agreement (IOA) was reported in five of the seven studies. Helman et al. (2015) reported IOA for Clue Word Strategy (CWS) training, instruction, and the administration of the CWS probes. IOA was assessed for 35% of observations; the IOA was 100% for each of these three areas. The agreement was 98% for 35% of all other assessments. Helman et al. (2022) calculated IOA for 30% of the *C*onnect *L*abel *U*se *E*xplain and *S*ee (CLUES) strategy; the average IOA was 93%. Additionally, the IOA was 98% for CLUES probes, generalization measures, and as pre- and post-tests. Horton et al. (2023) reported randomly selecting between 30% and 50% of GIST probes across baseline, intervention, and maintenance phases; the average IOA was 95.02%. Jozwik et al. (2021) reported an average IOA of 93% for self-regulation training and 98.5% for peer-assisted multimedia vocabulary instruction. The authors included 40% of intervention sessions for each of these reliability percentages.

3.19. Data Collection Methods

Direct observation was used in four studies to collect data on ELs' reading outcomes (Halterman, 2013; Helman et al., 2015; Jozwik et al., 2021; Morisoli, 2010). Direct observation was used to record treatment fidelity data (e.g., Helman et al., 2015; Jozwik et al., 2021; Morisoli, 2010) and observations of reading lessons (Halterman, 2013). Checklists were used in four studies (Helman et al., 2015, 2022; Horton et al., 2023; Williams & Vaughn, 2020). Checklists were used for audio and/or videotaped recordings in each of these studies. Permanent products were reported in two studies (Helman et al., 2015; Jozwik et al., 2021). Pre- and post-tests in Helman et al. (2015) involved students writing the correct morphemes, morpheme definitions, and science definitions. Tests were also used in Jozwik et al. for language arts vocabulary words.

3.20. Reading Outcomes for ELs with Disabilities in High School

The findings are summarized in this section by reading outcome—reading fluency, reading comprehension, and vocabulary development—to address *Research Question #3: What are the reading outcomes for ELs with disabilities in high school?* Effect sizes are provided for studies in which they were calculated (see Table 3).

Table 3. Reading Outcomes for ELs with Disabilities.

Study	Outcome	Effect Size	Maintenance
Halterman (2013)	Gains in reading comprehension Gains in semantic mapping Gains in written factual recall	Semantic mapping $d = 1.95$	Text recall was "relatively stable" (p. 45)
	Gains in multiple-choice factual recall Gains in multiple-choice far transfer	RAP paraphrasing strategy $d = 1.13$	Gains maintained in factual recall and far transfer for all but one student after 2 weeks
Helman et al. (2015)	Improved proficiency in analyzing science vocabulary with the Clue Word Strategy	----	Gains in analyzing science vocabulary were maintained after 2 months

Table 3. *Cont.*

Study	Outcome	Effect Size	Maintenance
Helman et al. (2022)	Students needed graphic organizers to remind them of CLUES steps Students were able to produce most of the root words learned, but produced very few prefixes and suffixes	----	Gains in strategy use (correctly writing morphemes, morpheme meanings, and science term meanings) after 2 weeks and 4 weeks Better on near- than far-transfer generalization, but they were able to arrive at the meaning of new science vocabulary with context clues and by analyzing morphemes
Horton et al. (2023)	Improvements in reading comprehension	Text summarization (Alphonzo) NAP = 1.00, $p < 0.01$ Tau-U = 1.00, $p < 0.01$ Text summarization (Bryan) NAP = 1.00, $p < 0.01$ Tau-U = 1.00, $p < 0.01$ Text summarization (Corrine) NAP = 1.00, $p < 0.01$ Tau-U = 1.00, $p < 0.01$	Gains maintained after 2 weeks
Jozwik et al. (2021)	Improved number of accurate expressive definitions Increase in self-reporting of higher levels of word knowledge	PND = 91%	Students maintained subject-specific vocabulary definitions on two subject-specific word sets after 1[1] to 3 weeks, respectively
Morisoli (2010)	More words read correctly Fewer mistakes made reading passages	----	
Williams and Vaughn (2020)	No significant improvements in reading fluency Non-statistically significant effects for reading comprehension (overall) Improvements in sentence-level comprehension	Proximal vocabulary measure $g = 0.41$ [2] Word reading $g = 0.08–0.18$ [3] Sentence-level comprehension $g = 0.14$ [4]	----

Note. [1] All but one student maintained gains on the first word set. [2] Statistically significant (approaching a medium effect). [3] Not statistically significant (small effects). [4] To account for nested data, the authors used intra-class correlations "to determine whether there was dependance in the data" (p. 157).

Reading Fluency and Reading Comprehension. Morisoli (2010) found that ELs with an LD were able to read more words correctly and made less mistakes in their reading of the passages. Williams and Vaughn (2020) reported that the RIA did not significantly impact students' reading fluency. Halterman (2013) noted that although not statistically significant, ELs with an LD and FEPs with an LD made gains in reading comprehension from pre- to post-test measures; the RAP paraphrasing strategy was slightly more effective. The author calculated Cohen's d for paired t-tests. The values were $d = 1.95$ for ELs with an LD using semantic mapping and $d = 1.13$ for those using the RAP paraphrasing strategy. The findings by Horton et al. (2023) indicated that all ELs with an LD and/or SL experienced improvements in reading comprehension (summarizing expository text) as a result of using the GIST strategy. Williams and Vaughn (2020) found small but non-statistically significant effects for reading comprehension. However, they reported that improvement gains were shown for sentence-level comprehension. The author team used two non-parametric effect sizes. Tau-U (Parker et al., 2011) and Nonoverlap of All Pairs (NAP; Parker & Vannest, 2009) were calculated, in addition to the authors' visual analysis of the data. The authors reported that the values for each participant on both effect size indices reflected improvements for all three ELs on summary probes and strategy instruction. They also noted that the use of before-, during-, and after-reading strategies along with "the use of engaging articles that represent diversity are likely responsible for the improved scores" and an "individualized delivery method" contributed to participants' gains (p. 450).

Vocabulary Development. Helman et al.'s (2015) study results showed that ELs with an LD were able to remember more unknown science vocabulary words from baseline to intervention phases, and two of the three students maintained gains two months after conclusion of the study. Helman et al. (2022) found that ELs with an LD made significant gains in their understanding of acquiring new vocabulary words from baseline to intervention phases. Jozwik et al. (2021) reported that all students, including the one EL with an LD, showed marked gains in learning new vocabulary words and their definitions. They reported using the Percentage of Nonoverlapping Data (PND; Scruggs & Mastropieri, 1998) for "improvements in oral expressive definitions over time" (p. 94); the PND was 91%. Williams and Vaughn (2020) reported a statistically significant effect for their proximal vocabulary measure. They calculated Hedges' g for a proximal vocabulary measure (g = 0.41), word reading (g = 0.08–0.18), and sentence-level comprehension (g = 0.14). They found that among the reading measures assessed, the RIA significantly impacted only the proximal vocabulary measure they examined. None of the reported effect sizes were accompanied by corresponding standard error values or confidence intervals.

4. Discussion

The purpose of this systematic review was to examine reading interventions and outcomes for ELs with disabilities in high school. After a robust search of the research literature, we found only seven studies that met our inclusion criteria.

4.1. Key Findings

We gleaned several key takeaways from this review of the literature. They are as follows. First, we found few reading intervention studies focused on high-school-aged ELs with disabilities. Of the studies we identified, sample sizes were small. Our search yielded only five peer-reviewed studies and two doctoral dissertations over the past 49 years, from 1975 to the present. This clearly highlights the need for more research in this area. Also, the sample size of ELs with disabilities across the studies was relatively small, ranging from 3 to 19 participants per study. The exception was the study conducted by Williams and Vaughn (2020), which included 85 ELs with an LD.

Second, a number of participant characteristics were not reported or were not well represented in the literature. For example, there was no diversity in terms of students' disability identification. Of the students identified with a documented disability, an LD and an SL were the only ones reported among the studies. As such, studies examining the efficacy of reading interventions for ELs with disabilities such as autism and emotional disturbance are much needed. This gap in the literature makes it difficult to understand the effectiveness of reading interventions across disability categories—including students who have co-morbid disorders. Also, not all high-school grade levels were represented. Most of the studies were conducted with participants in the nineth grade; none included twelvth graders. As such, the effectiveness of these reading interventions in the upper secondary levels is less well known (e.g., for eleventh graders) or unknown (viz., for 12th graders). Regarding participants' reported demographic characteristics, the majority were males. Additionally, we found that most of the students' ethnicity was Hispanic, except in one study (Williams & Vaughn, 2020), and the students' native language was Spanish. ELs' native language proficiency was not reported in any of the studies. This is important information to capture and report in future studies because of the connection between students' native language (L1) and their second language (L2; U.S. Department of Education, 2021). Another gap in the literature is that the benefits of reading interventions for a wider range of ELs with disabilities who come from diverse ethnic backgrounds *and* speak other native languages (e.g., Pashto, Farsi, Swahili) are also unknown. This is problematic as

many school districts serve students with a multitude of different native languages (U.S. Department of Education, 2024). For example, in the state of Texas, ELs representing over 120 languages are served in classrooms (Texas Education Agency, 2023–2024).

Third, the types of reading interventions varied across the studies. Interestingly, no studies focused on one sole reading intervention (e.g., graphic organizer). The included studies consisted of either a combination of strategies (e.g., repeated reading with error correction and performance feedback in (Morisoli, 2010)), or a multi-component instructional package (e.g., CLUES Strategy in (Helman et al., 2015, 2022); RIA in (Williams & Vaughn, 2020)). Thus, we are unable to make any clear determinations or offer recommendations for teachers and educators in practice about which specific reading intervention works best to improve reading performance among ELs with disabilities in high-school content area classrooms. Additionally, few studies mentioned how the reading interventions were modified and/or adapted to meet the diverse learning needs of ELs with disabilities in the classroom. Lastly, only one study included the use of technology to support students' reading development (Jozwik et al., 2021).

Fourth, in terms of research design, six of the seven studies involved SCR designs, while only one study was conducted using a pre–post-test group design. We acknowledge that SCR designs are often used in special education research (Horner et al., 2005)—we just wanted to note this as one of our takeaways from this review. Further research should investigate the efficacy of these reading interventions with additional high-quality SCR studies and group research design studies with larger sample sizes focused on ELs with disabilities in inclusive classroom settings. This will enable researchers to generalize findings, as well as provide practical suggestions and reading strategies for teachers.

Fifth, quality standards were incorporated in only one study. Williams and Vaughn (2020) used What Works Clearinghouse (WWC; Institute of Education Sciences, 2017) guidance, in part, for calculating attrition and in the calculation of Hedges' g effect sizes. Although not specifically reported, authors of five studies (Helman et al., 2015, 2022; Horton et al., 2023; Jozwik et al., 2021; Morisoli, 2010) had elements of WWC guidance reflected in some of their methodology, such as including more than 20% of observations in their IOA calculations.

4.2. Limitations

The primary limitation of this systematic review is the paucity of studies available to be summarized. While we conducted a thorough search of the literature, there remain few studies focused on reading supports for high-school-aged ELs with disabilities. There were also few participants across the seven studies meeting our inclusion criteria. The combined sample of 110 high-school EL participants with disabilities limits our ability to make any generalizations from our findings or provide substantial guidance for practitioners supporting the development reading skills among this group of students. Additionally, no reading interventions were implemented as stand-alone classroom-based strategies to support high-school-age ELs with disabilities. As such, we are unable to provide solid recommendations for teachers. Regarding the quality of the seven included studies, we did not apply quality standards or examine the risk of bias—this is a limitation of our review. To remedy this, we intend to assess study quality in a separate article.

4.3. Implications for Research

More research is needed on reading interventions that support older (viz., high school) ELs who are learning a new language and learning content area material at the same time. This will allow for a meta-analysis to be conducted, which will enable us to examine which reading interventions work for this group of students—and under what conditions. For

example, intervention duration may need to fit within high-school course schedules (e.g., block scheduling). Examining the impact of longer versus shorter reading intervention lengths would be a beneficial area of study. Similarly, the intensity of the intervention (e.g., the number of minutes per day and days per week) can be investigated to determine what is optimal for older ELs with disabilities. It is necessary that researchers conducting this work in the future clearly describe EL participants (e.g., ethnicity, English proficiency). This will aid in the generalizability of results to other ELs with disabilities in this age group. Similarly, high-school ELs with a range of disabilities should be included in reading intervention studies. This will also help with generalizing findings. Examining similarities and differences across high-school grade levels (e.g., 9th grade vs. 12th grade) can inform which supports are most effective for ELs of varying age/grade levels. Finally, students representing multiple native languages should intentionally be included in upcoming studies. This would allow researchers to address research questions related to reading intervention characteristics that are effective for languages with different typologies (e.g., morphology and phonology).

4.4. Implications for Practice

We offer some recommendations for practice with a note of caution, as there are so few studies from which to glean a comprehensive set of suggestions. Based on the seven studies we summarized, reading interventions for 9th, 10th, and 11th grade ELs with an LD or an SL can be implemented with ELs at the beginning, intermediate, and advanced levels of English proficiency. General, special, and bilingual education teachers can use semantic maps to assist ELs with disabilities to organize and learn new content area information. Teachers may also consider having ELs with disabilities work in pairs or triads using a peer tutoring format (i.e., tutor and tutee) to increase student interaction with their peers without disabilities and engagement with the content area material. In addition, these reading interventions can be employed across grade levels, instructional settings, disability categories, and content areas at the secondary level. Furthermore, teachers should consider how to adapt (and translate) these reading interventions to meet the diverse language and literacy needs of ELs with disabilities in their classrooms. The infusion of technology-based applications should also be considered to enhance academic learning and student motivation. Lastly, integrating these reading interventions within a teacher's lesson plan may prove to be effective to boost reading outcomes for *all* learners in the inclusive secondary content area classroom.

5. Conclusions

The research conducted on reading interventions to support high-school-age ELs with disabilities suggests that paired strategies and multi-component interventions *may* be helpful for this group of students. However, it is unclear which individual reading interventions are most effective for ELs with disabilities in strengthening their reading outcomes in high-school content area classes. Research is also needed with a focus on ELs across disability categories, as LDs and SLs are the only identified disabilities reflected in the included studies. Future work is needed to understand how to support ELs with disabilities in this area.

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Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Electronic Database Search Strategies for Reading Interventions for English Learners with Disabilities in High School

ERIC (EBSCO)

SU (Reading strategies OR reading programs OR reading instruction) OR TI (Reading N4 (Intervention* OR instruction OR program* OR "teaching method*" OR strateg* OR practice*) OR "Reading intervention*" OR "reading strategies") OR AB (Reading N4 (Intervention* OR instruction OR program* OR "teaching method*" OR strateg* OR practice*) OR "Reading intervention*" OR "reading strategies")

AND

SU (English language learner OR bilingualism OR english (second language) OR limited english speaking OR second language learning) OR TI ("English language learner*" OR "english learner*" OR bilingual* OR "english (second language)" OR "english as a second language" OR "limited english speak*" OR "limited english proficien*" OR "second language learn*" OR "emergent bilingual*" OR "dual language learner*") OR AB ("English language learner*" OR "english learner*" OR bilingual* OR "english (second language)" OR "english as a second language" OR "limited english speak*" OR "limited english proficien*" OR "second language learn*" OR "emergent bilingual*" OR "dual language learner*")

AND

SU disabilities OR TI disab* OR AB disab*

AND

SU (High schools OR high school students OR grade 9 OR grade 10 OR grade 11 OR grade 12) OR TI ("High school*" OR "high school student*" OR "grade 9" OR "grade 10" OR "grade 11" OR "grade 12" OR "9th grade" OR "10th grade" OR "11th grade" OR "12th grade" OR "ninth grade" OR "tenth grade" OR "eleventh grade" OR "twelfth grade") OR AB ("High school*" OR "high school student*" OR "grade 9" OR "grade 10" OR "grade 11" OR "grade 12" OR "9th grade" OR "10th grade" OR "11th grade" OR "12th grade" OR "ninth grade" OR "tenth grade" OR "eleventh grade" OR "twelfth grade")

Education Source Ultimate (EBSCO)

SU (Reading strategies OR reading instruction OR reading intervention) OR TI (Reading N4 (Intervention* OR instruction OR program* OR "teaching method*" OR strateg* OR practice*) OR "Reading intervention*" OR "reading strategies") OR AB (Reading N4 (Intervention* OR instruction OR program* OR "teaching method*" OR strateg* OR practice*) OR "Reading intervention*" OR "reading strategies")

AND

SU (Limited english-proficient students OR bilingualism OR second language acquisition) OR TI ("English language learner*" OR "english learner*" OR bilingual* OR "english (second language)" OR "english as a second language" OR "limited english speak*" OR

"limited english proficien*" OR "second language learn*" OR "emergent bilingual*" OR "dual language learner*") OR AB ("English language learner*" OR "english learner*" OR bilingual* OR "english (second language)" OR "english as a second language" OR "limited english speak*" OR "limited english proficien*" OR "second language learn*" OR "emergent bilingual*" OR "dual language learner*")

AND

SU disabilities OR TI disab* OR AB disab*

AND

SU (High schools OR high school students OR ninth grade (education) OR tenth grade (education) OR eleventh grade (education) OR twelfth grade (education) OR TI ("High school*" OR "high school student*" OR "grade 9" OR "grade 10" OR "grade 11" OR "grade 12" OR "9th grade" OR "10th grade" OR "11th grade" OR "12th grade" OR "ninth grade" OR "tenth grade" OR "eleventh grade" OR "twelfth grade") OR AB ("High school*" OR "high school student*" OR "grade 9" OR "grade 10" OR "grade 11" OR "grade 12" OR "9th grade" OR "10th grade" OR "11th grade" OR "12th grade" OR "ninth grade" OR "tenth grade" OR "eleventh grade" OR "twelfth grade")

APA PsycINFO (EBSCO)

TI (Reading N4 (Intervention* OR instruction OR program* OR "teaching method*" OR strateg* OR practice*) OR "Reading intervention*" OR "reading strategies") OR AB (Reading N4 (Intervention* OR instruction OR program* OR "teaching method*" OR strateg* OR practice*) OR "Reading intervention*" OR "reading strategies")

AND

SU (bilingualism OR english as a second language) OR TI ("English language learner*" OR "english learner*" OR bilingual* OR "english (second language)" OR "english as a second language" OR "limited english speak*" OR "limited english proficien*" OR "second language learn*" OR "emergent bilingual*" OR "dual language learner*") OR AB ("English language learner*" OR "english learner*" OR bilingual* OR "english (second language)" OR "english as a second language" OR "limited english speak*" OR "limited english proficien*" OR "second language learn*" OR "emergent bilingual*" OR "dual language learner*")

AND

SU disabilities OR TI disab* OR AB disab*

AND

SU (High schools OR high school students) OR TI ("High school*" OR "high school student*" OR "grade 9" OR "grade 10" OR "grade 11" OR "grade 12" OR "9th grade" OR "10th grade" OR "11th grade" OR "12th grade" OR "ninth grade" OR "tenth grade" OR "eleventh grade" OR "twelfth grade") OR AB ("High school*" OR "high school student*" OR "grade 9" OR "grade 10" OR "grade 11" OR "grade 12" OR "9th grade" OR "10th grade" OR "11th grade" OR "12th grade" OR "ninth grade" OR "tenth grade" OR "eleventh grade" OR "twelfth grade")

Academic Search Ultimate (EBSCO)

SU Reading strategies OR TI (Reading N4 (Intervention* OR instruction OR program* OR "teaching method*" OR strateg* OR practice*) OR "Reading intervention*" OR "reading strategies") OR AB (Reading N4 (Intervention* OR instruction OR program* OR "teaching method*" OR strateg* OR practice*) OR "Reading intervention*" OR "reading strategies")

AND

SU (bilingualism OR limited english-proficient students OR second language acquisition) OR TI ("English language learner*" OR "english learner*" OR bilingual* OR "english (second language)" OR "english as a second language" OR "limited english speak*" OR "limited english proficien*" OR "second language learn*" OR "emergent bilingual*" OR "dual language learner*") OR AB ("English language learner*" OR "english learner*" OR bilingual* OR "english (second language)" OR "english as a second language" OR "limited english speak*" OR "limited english proficien*" OR "second language learn*" OR "emergent bilingual*" OR "dual language learner*")

AND

SU disabilities OR TI disab* OR AB disab*

AND

SU (High schools OR high school students OR ninth grade (education) OR tenth grade (education) OR eleventh grade (education) OR twelfth grade (education) OR TI ("High school*" OR "high school student*" OR "grade 9" OR "grade 10" OR "grade 11" OR "grade 12" OR "9th grade" OR "10th grade" OR "11th grade" OR "12th grade" OR "ninth grade" OR "tenth grade" OR "eleventh grade" OR "twelfth grade") OR AB ("High school*" OR "high school student*" OR "grade 9" OR "grade 10" OR "grade 11" OR "grade 12" OR "9th grade" OR "10th grade" OR "11th grade" OR "12th grade" OR "ninth grade" OR "tenth grade" OR "eleventh grade" OR "twelfth grade")

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