INTERNATIONAL LITERACY ASSOCIATION

Updating Practice Recommendations: Taking Stock of 12 Years of Adolescent Literacy Research

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The demand for evidence to support instructional practices in education is surging: teachers, curriculum leaders, and districts are expected to regularly consult research evidence for instructional decisions. This is in part due to the 2015 Every Students Succeeds Act (ESSA), which established guidelines for evidence quality, and also simply because of the commitment of educators to improving literacy achievement. However, translating research findings to instructional practice is daunting.

To meet that challenge, many adolescent literacy teachers, administrators, and curriculum specialists use the Institute of Education Sciences (IES) Practice Guide for Adolescent Literacy (Kamil et al., 2008). In a recent informal poll of district and regional literacy curriculum specialists in my state, 96% acknowledged consulting this guide, and it is written into the appendix of our state literacy plan. According to Google Scholar, the guide has been cited over 600 times, including dozens of times in 2020, in articles written for teachers and researchers alike. Assembled by literacy experts and backed by extensive review of the best experimental research literature at the time, its popularity should come as no surprise.

Yet, it is also true that adolescent literacy research has exploded in the 12 years since the IES Guide's publication. A recent review of experimental evidence (the method demanded by ESSA and the IES Guide) about effective reading programs for secondary students with stringent inclusion criteria searched over 15,000 documents and found 69 high-quality studies—but only *two* published before 2010 (Baye et al., 2019). These figures suggest that the quantity and quality of experimental evidence about adolescent literacy have changed dramatically in the last decade. In addition, the IES/ESSA insistence on experimental evidence excludes much qualitative research with a focus on equity, antiracism, and social justice—topics at the forefront of much current discussion in the literacy community. Understanding new experimental and qualitative research could help literacy educators and leaders design instruction aimed at improving literacy outcomes and delivering equitable literacy instruction.

The purpose of this article is to discuss the implications of this new research in order to assist literacy leaders in constructing up-to-date literacy initiatives as well as to help teachers navigate themes in the new research as they craft instruction. First, I lay out how adolescent literacy research has expanded beyond the evidence base presented by the IES Guide's authors in 2008. Then, I explain instructional implications suggested by new research and present an example unit to illustrate what those changes would like for a teacher. Finally, I call for literacy organizations to help translate new research into instructional practice guides.

The 2008 Practice Guide (and its Limitations)

An important factor in understanding the IES Practice guide is that its 2008 publication preceded the widespread adoption of the Common Core State Standards (CCSS) in literacy in 2010. The CCSS represented a substantial shift. For example, the CCSS introduced Anchor Standard 10 focusing on text complexity, and included standards specific to literacy in social studies

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and STEM fields—topics covered less frequently in pre-CCSS state standards. As these topics were not part of the experimental research in 2008, the IES Guide says little about them.

Perhaps equally importantly, literacy technologies have shifted dramatically in the 12 years since the IES Guide's publication. In 2008, social media use was in its relative infancy compared to today, and smartphone ownership has gone from under 35% of Americans in 2011 to over 80% today (and that figure is 96% for those aged 18–24; Pew Research Center, 2021). Substantial research into digital literacy has taken place in the past decade (e.g., Coiro, 2020). The explosion of these technologies and the literacy implications are far-reaching—and literacy educators relying heavily on the IES Practice Guide will be unaware of these implications.

Finally, the Guide was also limited by the research available to the authors in 2008. Elsewhere, I show that the Guide deemed 34 studies as "rigorous" evidence (see Reynolds, 2020 for a fuller investigation of the methodology and the findings explained in this paragraph). To determine the relevance of the Guide's recommendations for grades 4–12 students today, I tracked down those 34 studies. I found that these studies:

- Skewed young: Nearly half (44%) were conducted in grades (4–5).
- Skewed to special education: Nearly half (44%) were conducted in special education settings
- Excluded linguistic diversity: the authors intentionally excluded studies of students whose first language was not English (Kamil et al., 2008, p. 5)
- Underrepresented high school: only one of the 34 studies was conducted in a general education high school classroom
- Relied on small samples: the average sample size was 91 students. For comparison, the average sample size in the studies synthesized by Baye et al. (2019) was 2059 students, 22 times as large as the IES Guide.

The student samples in these underlying studies are inconsistent with the population of older and more linguistically diverse students served by US middle and high schools, whose teachers and leaders are ostensibly the primary audience for the Guide. Therefore, educators who rely heavily on that Guide may be missing important opportunities to improve instruction. While my earlier report (Reynolds, 2020) more thoroughly documented the limitations of the Guide, this article presents instructional examples of how educators can incorporate new findings into their instruction, and focuses on how organizations like the International Literacy Association (ILA) and National Council of Teachers of English (NCTE) can leverage their expertise to deliver regular advice to educators.

Expanding on the Guide's Five Recommendations

How, then, has research of the last decade taken up the shortcomings of the IES Guide? Although the following survey of recent adolescent literacy research is hardly comprehensive and readers may already be familiar with some of the research, I show how numerous studies in the last 12 years have substantially expanded the field's ability to inform literacy instruction.

For this survey and in order to capture broad and current summaries of adolescent literacy research, I consulted both primary research and summary documents published in the last decade. These include literature reviews by Baye et al. (2019), Edmonds et al. (2009), Herrera et al. (2016), and Vaughn & Wanzek (2014). I also consulted the practice guide commissioned by the UK's Education Endowment Foundation (EEF, 2019), which builds on the IES Guide's recommendations but also includes new ideas, and three other IES guides published since 2008: Teaching Academic Content and Literacy to English Learners in Elementary and Middle School (Baker et al., 2014), Strategies for Postsecondary Students in Developmental Education (Bailey et al., 2016), and Teaching Secondary Students to Write Effectively (Graham et al., 2016).

Table 1 lists each of the five recommendations from the 2008 IES Practice Guide, more recent research expanding on those recommendations, and corresponding possible instructional practices. As the Guide was grounded in literacy constructs still relevant today (i.e., vocabulary, comprehension, discussion, motivation, and intervention), they remain useful anchors for literacy educators looking to employ evidence-based practices. The last decade of research has, however, expanded our understandings of all five.

For example, "Provide explicit vocabulary instruction" was the first of the Guide's recommendations. This recommendation, however, includes little attention to word consciousness, morphology, or academic language, which have all received significant attention in the literacy research of the past decade (e.g., Jones et al., 2019), nor does it address possibilities of leveraging ELs' existing vocabulary knowledge for instruction (e.g., Crosson et al., 2019). Similarly, for recommendation 4,

Table 1
Expanding on the IES Guide's Recommendations

	IES Guide Recommendation	Examples of new research in the last decade that expands on this recommendation	Potential instructional implications not addressed in the IES Practice Guide
1	Provide explicit vocabulary instruction	McKeown et al. (2018) Jones et al. (2019) Crosson et al. (2019)	Word consciousness, academic language, morphology can be worthy dimensions of vocabulary instruction.
2	Provide direct and explicit comprehension strategy instruction	Reisman (2012) Goldman et al. (2019)	Discipline-specific reading strategies and practices can be beneficial for both disciplinary content and general reading comprehension.
3	Provide opportunities for extended discussion of text meaning and interpretation	Murphy et al. (2018) Social studies: Reisman (2017) Science: Windschitl (2019) Math: Candela et al. (2020)	Expanded ideas for how teachers can press for evidence, encourage elaboration. Support content-area teachers as discussion leaders.
4	Increase student motivation and engagement in literacy learning	Ivey & Johnston (2013) Kim et al. (2017) Barber & Klauda (2020)	Create socially engaged literacy environments Incorporate YA literature Structuring student choice reading consistent with motivational theories
5	Make available intensive and individualized interventions for struggling readers that can be provided by trained specialists	O'Reilly et al. (2014) Vaughn & Wanzek (2014), Bresina et al. (2018), Kim et al. (2017)	New computer-adaptive assessments can quickly and precisely identify adolescents' areas of need Interventions can include all of the above recommendations.

the IES Guide recommends offering students choice of reading materials to develop autonomy and motivation. More recently, Barber & Klauda (2020) go further and offer specific recommendations on how teachers can structure their students' choice readings and consider how choice intersects with other literacy goals. It is clear that educators relying only on the IES Guide's vision would be unaware of the exciting findings of the last decade.

Going Beyond the Guide's Recommendations

Expanding Literacy Constructs

The Guide was careful not to issue recommendations about literacy instructional practices that were insufficiently backed by experimental evidence at the time. For example, the authors noted that research on disciplinary literacy and the use of technology were not developed enough to merit instructional recommendations. In the intervening decade, both new experimental evidence have supported certain practices (e.g., disciplinary literacy) and new topics have been included in the CCSS (e.g., text complexity). Table 2 lists additional topics uncovered by the IES Guide but relevant to current research and practice.

Take text complexity, for example. Thrust into prominence in 2010 by its inclusion as CCSS Reading Anchor Standard 10, text complexity is now better understood. The three-part text complexity framework of the CCSS (quantitative, qualitative, and reader/task) has been widely used but also critiqued as monolithic (e.g., Newhouse, 2017). In addition, recent research such

as Lupo et al. (2018) offers guidance on how to create text sets across disciplines that offer opportunities to build knowledge, hook students' engagement, and build toward worthy complex target texts. Contemporary literacy educators should be well versed in understanding new research on the various factors that influence text complexity and how instruction can scaffold students toward sophisticated readings of complex texts.

Technology was a difficult topic for the 2008 Guide. Its authors wrote that "Despite great interest in and increasing use of software for reading instruction in middle and high schools, there is little experimental or quasi-experimental research demonstrating the effectiveness of that work" (Kamil et al., 2008, p. 5). That has since changed: Baye et al. (2019) found 23 of their 69 programs included a significant technological component (although few specifically tested the effects of technology). They found, however, that programs using technology did not have a significantly different effect size outcome from those that did not. They concluded that technology can be part of effective instruction, but that it carries no inherent benefit.

That research, however, focused only on effect sizes, and did not take into account the complexity of research on adolescents' digital literacy practices. Research has documented the differences between reading on paper and reading in online environments and proposed models to teach for the hidden differences (e.g., Coiro, 2011). Navigating complex digital media environments, detecting fake or biased news sources, and evaluating across multiple sources are all crucial skills for today's adolescents—but research on these topics was in its infancy12 years ago. Along with these challenges, today's digital literacies offer possibilities for social connection and publication which were unknown 12 years ago.

New studies also show simple differences between two more basic modalities of reading: static texts (e.g., PDFs) presented on screens and those printed on paper. Research comparing static texts presented on screen versus on paper suggests profound differences in both reading behavior (e.g., Goodwin et al., 2019) and reading comprehension outcomes, with meta-analyses suggesting the superiority of paper comprehension (e.g., Clinton, 2019; Delgado et al., 2018). With many teachers planning for remote or hybrid learning environments for the fall due to the COVID-19 pandemic, teachers must be aware of the affordances and constraints of both paper and digital literacies.

Beyond technology, disciplinary literacy research has also exploded in the last decade. Reisman (2012) documented the success of the Read Like a Historian curriculum at improving not just historical content knowledge but also generalized reading comprehension. Examples of high-quality social studies disciplinary literacy instruction are now numerous (e.g., Kucan et al., 2019). In science, Goldman et al. (2019) demonstrated

Table 2
Topics Not Covered by the IES Guide

Topic	New research in the last decade	Potential instructional implications
Text selection and text complexity	Text sets: Lupo et al. (2018) Text complexity: Lupo et al. (2019)	Complex texts are worthy goals and multiple-source text sets can be designed to scaffold such reading. Lexile-based complexity differentiation may not be as helpful
Digital literacy	Clinton (2019) Coiro (2020) Smith et al. (2020) Goodwin et al. (2019)	Digital literacy on the web requires different comprehension processes and thus different scaffolding Multimodal composition has unique affordances for adolescent composers/writers Screen-based reading is different from paper-based reading (even with static texts)
Disciplinary literacy	Greenleaf et al. (2011) Social studies: Reisman (2012) Science: Goldman (2019) Literature: Levine, Hall, Goldman, & Lee (2019)	Disciplines such as science, social studies, and literary study have distinct literacy practices which should be explicitly taught
Writing	Graham & Hebert (2011) Graham et al. (2018)	Reading and writing are intertwined processes and can be productively taught together

the efficacy of the Project READi approach at improving 9th graders' science reading comprehension. For classroom examples, Windschitl (2019) demonstrates powerful classroom instructional possibilities for science literacy and discussions. These are just a few examples of the disciplinary literacy research of the last decade that should inform classroom practice.

While the IES published a separate guide to adolescent writing (Graham et al., 2016), recent research has also highlighted the efficacy of teaching reading and writing concurrently (Graham et al., 2018). This suggests that educators focusing on adolescent reading should also consider reading–writing integration. Ultimately, the four topics in Table 2 represent necessary topics for future IES practice guides.

Expanding Understandings of Adolescents

English Learners. The IES Guide's authors deliberately chose to exclude studies of students whose first language was not English. This is at striking odds with the current US student population. Recent data show that the population of ELs in the US has grown by 18% between 2000 and 2018 (US National Center for Education Statistics, 2019), and that 22% of US residents over 5 years old speak a language other than English at home (US Census Bureau, 2018). Practice guides cannot simply ignore these children.

Newer research, though, includes many more studies conducted with linguistically diverse students. Baye et al.'s 69 studies included 14 that taught a student population of at least 20% English Learners (ELs). For a quantitative example, the Pathway Project (Olson et al., 2016) has shown consistently positive effects for writing and reading outcomes for all students in mainstream classes in grades 6–11, including substantial proportions of English Learners. For a qualitative example, new research about concepts like translanguaging (e.g., Seltzer & de los Ríos, 2021) demonstrate how new lenses on teaching ELs can reframe multilinguality as the norm, rather than the exception. These projects show the promise of new research that could powerfully reshape instruction for adolescent ELs.

Students with Disabilities and Reading Difficulties. On the other hand, the IES Guide's authors deliberately chose to include many studies conducted in special education settings. In contrast, Baye et al. (2019) included only studies conducted in mainstream classes. Their 69-study corpus, though, included 12 studies that featured at least 20% students with disabilities. Few of the IES Guide's studies were conducted in general education classrooms that also included substantial proportions of students with disabilities. New research can likely offer new advice for teachers of inclusive adolescent literacy classrooms.

That research is complemented by research focusing directly on special education settings. For example, the IES guide's recommendations were based on only a single rigorous study of an intervention in a high school special education setting (Peverly & Wood, 2001). Since 2008, a more robust base of empirically tested interventions can offer more precise recommendations. For example, Vaughn et al. (2015) report successful efforts to improve reading comprehension among high school students with disabilities, which included advanced word study and content-area reading.

To accompany intervention research, researchers have been developing assessments that can help middle and high schools design interventions for students with disabilities—and their non-identified peers who need extra literacy support. Computer-adaptive assessments such as ReadReady (formerly RISE; O'Reilly et al., 2014) and Monster, PI (Goodwin et al., 2020) are better able to target adolescents' precise literacy needs in areas such as decoding, morphology, or vocabulary. Better assessment can lead to better intervention.

In addition, for older adolescents, the 2016 IES guide for Postsecondary students (Bailey et al., 2016) recommends compressing and mainstreaming developmental education—the college version of K-12 intervention. Middle and high school leaders might consider how intervention classes might be effectively compressed and mainstreamed. Practitioners might also consider research that examines how adolescents are positioned in intervention reading classes in order to best set them up for success (e.g., Frankel, 2016). These findings on interventions, assessments, and class organization are examples of how recent research has deep instructional implications for

Putting Research to Work: An Example

Table 3 presents an example of how new research builds on the IES Guide's foundations while also offering new possibilities for literacy. While engaging and powerful literature like Lorraine Hansberry's *A Raisin in the Sun* was just as relevant in 2008 as it is in 2021, new evidence offers possibilities to both enrich core practices (i.e., vocabulary) and expand the focus of literacy instruction (i.e., to social studies literacy). The revised instruction

Table 3
Comparison of Instructional Unit Based on IES Guidelines and Same Unit Updated with New Research

Essential Question: How does the history of US residential segregation shape the lives of families?		
Adolescent Literacy Component	**Practices Based on IES Guide Recommendations (see p. 9 of Kamil et al., 2008)**	**Practices Based on New Research and Common Core ELA Standards**
Text selection and text complexity	*A Raisin in the Sun* by Lorraine Hansberry Chosen as an accessible, be engaging and motivating text	Racial Dot Map (engaging visual text) *A Raisin in the Sun* by Lorraine Hansberry (accessible and engaging fictional text) Excerpts from *The Color of Law* by Richard Rothstein (complex informational target text) and primary source texts such as excerpts from the Fair Housing Act of 1968 (RI.11-12.10)
Provide explicit vocabulary instruction	Select words both from *Raisin (exasperated, doggedly, disheveled)* and about the essential question (*residential, segregation*). Expose students to words multiple times with chances to practice in reading and writing. Practice vocabulary strategies.	Similar principles, but add words supplemented with words from *Color of Law* (e.g., *de facto, de jure*), which link to Latin and Greek roots and could support both native English speakers and ELs who also speak Romance languages. Encourage students to use multiple morphological derivations (*desegregation, resegregated, segregate)*. Discuss word nuances and connotations (RL.11-12.5)
Provide direct and explicit comprehension strategy instruction	Choose focal comprehension strategies for *Raisin* such as visualizing the Younger family's apartment and predicting characters' reactions to key plot events such as how each of the Youngers will react when a White neighborhood association offers to pay them to not move there	Supplement with social studies disciplinary literacy strategies such as map reading the Racial dot map, contextualizing the Youngers' experience in Chicago in the 1950s, and comparing *Raisin*'s fictional story with the real-life historical documents presented in *Color of Law* (RH.11-12.7)
Provide opportunities for extended discussion of text meaning and interpretation	Choose stimulating discussion questions like the essential question above. Ask follow-up questions. Follow a discussion protocol. (IES Guide, though, prioritizes strategy instruction over discussion)	Follow similar discussions, but prioritize discussion every class period during the unit (especially helpful for ELs). Consider an oral presentation summative assessment requiring students to use the multimodal literacy of the Racial Dot map and information from *Color of Law* to tell the history of segregation in their city (SL.11-12.2)
Increase student motivation and engagement in literacy learning	Select *Raisin* as an engaging text and ask meaningful essential questions and ongoing discussion questions and inquiry to build to that. Connect experiences in *Raisin* to their neighborhoods. Encourage students to set learning goals.	Use *Raisin* and the Racial Dot Map and *Color of Law* to not just connect to their lives, but supply evidence for their arguments about residential segregation in their city. (RL&RI.11-12.1) Supplement oral presentations with letters written to their county's housing board. (W.11-12.1)

(continued)

Table 3
Comparison of Instructional Unit Based on IES Guidelines and Same Unit Updated with New Research (*continued*)

Essential Question: How does the history of US residential segregation shape the lives of families?

Adolescent Literacy Component	Practices Based on IES Guide Recommendations (see p. 9 of Kamil et al., 2008)	Practices Based on New Research and Common Core ELA Standards
Make available intensive and individualized interventions for struggling readers	Use assessments to determine instructional focus and intensity of supplemental intervention	Use specific assessment to target students needing support, for example, with word identification, vocabulary/morphology, or comprehension.
Technology	Not covered in IES Guide for Improving Adolescent Literacy	Using Racial Dot Map to explore multimodal disciplinary literacy in reading, writing, discussion, and presentation. Consider also teaching research skills to help students evaluate sources about the degree of residential segregation in their own community (RI11-12.7, 8 and 9; W11-12.7, 8, & 9)
Disciplinary literacy	Not covered in IES Guide for Improving Adolescent Literacy	Integrating primary sources like the Fair Housing Act of 1968 excerpts with secondary source informational texts such as *Color of Law* and different kinds of artifacts (e.g., Racial Dot Map), with corresponding comprehension strategies. (RH standards strand)
Writing	Not covered in IES Guide (though covered in separate IES Guide for Writing)	Keep ongoing double-entry journal where students repeatedly log evidence and compare the different sources' perspectives on the essential question (especially helpful for ELs; WHST.11-12.10). Engage in Socratic seminar and oral presentation to facilitate perspective-taking before writing final letters to board of housing. (WHST.11-12.8)

Note: the IES Guide does not present an actual unit plan. I have designed the middle column practices of this unit based on the checklists included in the IES guide

also aligns with a broader selection of Common Core ELA standards, including both literary and informational texts, speaking and listening opportunities, language and vocabulary development, and writing assignments both formal and informal.

The revised unit also presents new possibilities for ELs. Unlike the IES Guide, which excluded ELs, the revised unit prioritizes regular discussion to develop oral language (Baker et al., 2014), incorporates morphological analysis of Latin words such as *de facto* and *de jure,* use multiple morphological derivations of high-utility academic words like *segregation* (Crosson et al., 2019), and scaffolds students' writing through regular journaling and a final letter to their county board of housing (Baker et al., 2014; Graham et al., 2016). In addition, this pedagogy offers potential for linguistically diverse adolescents to be positioned as agents of social justice in their communities (de los Ríos et al., 2016).

New Models for Translating Research to Practice

While the 2008 Practice Guide has likely helped many literacy leaders establish a foundational approach to evidence-based literacy instruction, it is clear that as a field, we need to go well beyond its recommendations. First, the IES should consider updating the Guide for adolescent literacy. A regularly updated Guide from an authoritative source like the IES would be a great asset to literacy educators. An updated Guide must also revise its inclusion criteria to specifically welcome studies of racially and linguistically diverse students, and ensure that students with disabilities are represented both in mainstream classes and dedicated special education settings. Finally, the authors of a revised guide should consider broadening its methodological scope to include studies aimed at equitable instruction and studies which show quality portraits of implementation (Reynolds, 2020).

Yet, as a field, we must not only rely on the IES to issue practice guides. The IRA (now ILA) position statement on adolescent literacy, published in 2012, stated that "Never before have we had so much knowledge about adolescent literacy" (p. 3). Eight years later, that statement is even more true—but that knowledge has to be translated from research studies to instructional practices.

What would that look like? We could look to medicine for an example. The American Academy of Pediatrics (AAP), for example, maintains dozens of standing committees on various topics related to children's health. These include both medical specializations (e.g., dermatology) but also topics on overall health and development (e.g., adolescence). These committees issue regular commentaries and guidance for health care organizations, practicing doctors, and parents. While medical models do not directly translate to education, adolescent literacy research is expanding at a rate sufficient to emulate the regularity and specificity with which the AAP communicates to diverse stakeholders interested in child welfare.

Historically, organizations like the ILA and NCTE have periodically issued position statements on literacy topics—although their websites do not make clear what prompts releases on some topics and not others. Encouragingly, the ILA released a revised position statement focused on adolescent literacy in 2012 (updating its 1999 version), and another on engagement and adolescent literacy in 2019 (see https://literacyworldwide.org/get-resources/position-statements to read these statements). These are a step forward, and the infrastructure for delivering more regular research updates may already be in place. The ILA's Adolescent Literacy Interest Group (https://www.adolescentliteracyinterestgroup.org) certainly has the history, community, and expertise to offer meaningful insights.

Beyond ILA, the NCTE's Squire Office for Research (https://ncte.org/research/) also has powerful history, community, and expertise to deliver regular briefs. However, the last brief focused on adolescent literacy policy dates to 2007. Reports from the Office, newly relocated at the Center for Literacy Education at the University of Notre Dame, are forthcoming about topics such as translanguaging (Seltzer & de los Ríos, 2021) and using popular culture texts in the classroom. Both are among many topics that could inform a broader report on adolescent literacy instructional practices.

Ultimately, both the NCTE and ILA can use their platforms to inform public stakeholders such as teachers, principals, and parents about emerging literacy research. These organizations' members bring research expertise that draws on more diverse theoretical traditions than the IES guides, which rely exclusively on experimental evidence and which may exclude other important kinds of research. For example, Pressley and colleagues (2006) note that qualitative studies can offer portraits of implementation that help teachers determine how to implement research findings in the complex worlds of their classrooms. If the IES, ILA, and NCTE all produced regular guidance, practitioners and policymakers could adapt their literacy instruction to states', districts' and schools' specific local goals such as increasing achievement, adopting

anti-racist pedagogies, or supporting ELs and students with disabilities.

Literacy researchers have been hard at work in the last 12 years to better understand how adolescents develop the literacy skills needed for full citizenship in the 21st century. Organizations of researchers and practitioners alike must streamline the research-to-practice pipeline and update practice recommendations so we can deliver the excellent adolescent literacy instruction all our students deserve.

Conflict of Interest

None

REFERENCES

Bailey, T., Bashford, J., Boatman, A., Squires, J., Weiss, M., Doyle, W., … Young, S.H. (2016). Strategies for postsecondary students in developmental education: A practice guide for college and university administrators, advisors, and faculty. NCEE 2017-4011. What Works Clearinghouse.

Baker, S., Lesaux, N., Jayanthi, M., Dimino, J., Proctor, C.P., Morris, J., … Newman-Gonchar, R. (2014). Teaching academic content and literacy to English learners in elementary and middle school. IES Practice Guide. NCEE 2014-4012. What Works Clearinghouse.

Barber, A.T., & Klauda, S.L. (2020). How reading motivation and engagement enable reading achievement: Policy implications. *Policy Insights from the Behavioral and Brain Sciences*, *7*(1), 27–34. https://doi.org/10.1177/2372732219893385

Baye, A., Inns, A., Lake, C., & Slavin, R.E. (2019). A synthesis of quantitative research on reading programs for secondary students. *Reading Research Quarterly*, *54*(2), 133–166. https://doi.org/10.1002/rrq.229

Bresina, B.C., Baker, K., Donegan, R., & Whaley, V.M. (2018). Intensive Intervention Practice Guide: Applying Response to Intervention for Secondary Students Who Struggle with Reading Comprehension. Office of Special Education Programs, US Department of Education. Retrieved from https://eric.ed.gov/?id=ED591072

Candela, A.G., Boston, M.D., & Dixon, J.K. (2020). Discourse actions to promote student access. *Mathematics Teacher: Learning and Teaching PK-12*, *113*(4), 266–277. https://doi.org/10.5951/MTLT.2019.0009

Clinton, V. (2019). Reading from paper compared to screens: A systematic review and meta-analysis. *Journal of Research in Reading*, *42*(2), 2. https://doi.org/10.1111/1467-9817.12269

Coiro, J. (2011). Talking about reading as thinking: Modeling the hidden complexities of online reading comprehension. *Theory Into Practice*, *50*(2), 107–115. https://doi.org/10.1080/00405841.2011.558435

Coiro, J. (2020). Toward a multifaceted heuristic of digital reading to inform assessment, research, practice, and policy. *Reading Research Quarterly*. https://doi.org/10.1002/rrq.302

Crosson, A.C., McKeown, M.G., Robbins, K.P., & Brown, K.J. (2019). Key elements of robust vocabulary instruction for emergent bilingual adolescents. *Language, Speech, and Hearing Services in Schools*, *50*(4), 493–505. https://doi.org/10.1044/2019_LSHSS-VOIA-18-0127

de los Ríos C.V., López, J., Morrell, E. (2016) Critical ethnic studies in high school classrooms: Academic achievement via social action. In P. Noguera, J. Pierce, & R. Ahram (Eds.), *Race, Equity, and Education*. Cham: Springer. https://doi.org/10.1007/978-3-319-23772-5_9

Delgado, P., Vargas, C., Ackerman, R., & Salmerón, L. (2018). Don't throw away your printed books: A meta-analysis on the effects of reading media on reading comprehension. *Educational Research Review*, *25*, 23–38. https://doi.org/10.1016/j.edurev.2018.09.003

Edmonds, M.S., Vaughn, S., Wexler, J., Reutebuch, C., Cable, A., Tackett, K.K., & Schnakenberg, J.W. (2009). A synthesis of reading interventions and effects on reading comprehension outcomes for older struggling readers. *Review of Educational Research*, *79*(1), 262–300. https://doi.org/10.3102/0034654308325998

Education Endowment Foundation (2019). Improving literacy in secondary schools: Guidance Report. Retrieved from https://educationendowmentfoundation.org.uk/tools/guidance-reports/improving-literacy-in-secondary-schools/

Frankel, K.K. (2016). The intersection of reading and identity in high school literacy intervention classes. *Research in the Teaching of English*, 37–59 https://www.jstor.org/stable/24889933

Goldman, S.R., Greenleaf, C., Yukhymenko-Lescroart, M., Brown, W., Mon-Lin, M., Emig, J.M., & Britt, M.A. (2019). Explanatory modeling in science through text-based investigation: Testing the efficacy of the project READI intervention approach. *American Educational Research Journal*, *56*(4), 1148–1216. https://doi.org/10.3102/0002831219831041

Goodwin, A.P., Cho, S.J., Reynolds, D., Brady, K., & Salas, J. (2019). Digital versus paper reading processes and links to comprehension for middle school students. *American Educational Research Journal*. https://doi.org/10.3102/0002831219890300

Goodwin, A.P., Petscher, Y., Jones, S., McFadden, S., Reynolds, D., & Lantos, T. (2020). The monster in the classroom: Assessing language to inform instruction. *The Reading Teacher*, *73*(5), 603–616. https://doi.org/10.1002/trtr.1870

Graham, S., Bruch, J., Fitzgerald, J., Friedrich, L. D., Furgeson, J., Greene, K., & Smither Wulsin, C. (2016). Teaching secondary students to write effectively. Educator's Practice Guide. What Works Clearinghouse.™ NCEE 2017-4002. What Works Clearinghouse.

Graham, S., & Hebert, M. (2011). Writing to read: A meta-analysis of the impact of writing and writing instruction on reading. *Harvard Educational Review*, *81*(4), 710–744. https://doi.org/10.17763/haer.81.4.t2k0m13756113566

Graham, S., Liu, X., Aitken, A., Ng, C., Bartlett, B., Harris, K.R., & Holzapfel, J. (2018). Effectiveness of literacy programs balancing reading and writing instruction: A meta-analysis. *Reading Research Quarterly*, *53*(3), 279–304. https://doi.org/10.1002/rrq.194

Greenleaf, C.L., Litman, C., Hanson, T.L., Rosen, R., Boscardin, C.K., Herman, J., & Jones, B. (2011). Integrating literacy and science in biology: Teaching and learning impacts of reading apprenticeship professional development. *American Educational Research Journal*, *48*(3), 647–717. https://doi.org/10.3102/0002831210384839

Herrera, S., Truckenmiller, A.J., & Foorman, B.R. (2016). *Summary of 20 years of research on the effectiveness of adolescent literacy programs and practices*. Tallahassee, FL: Regional Educational Laboratory Southeast. Retrieved from https://

ies.ed.gov/ncee/edlabs/regions/southeast/pdf/REL_20161 78.pdf
Ivey, G., & Johnston, P.H. (2013). Engagement with young adult literature: Outcomes and processes. *Reading Research Quarterly*, *48*(3), 255–275. https://doi.org/10.1002/rrq.46
Jones, S.M., LaRusso, M., Kim, J., Yeon Kim, H., Selman, R., Uccelli, P., & Snow, C. (2019). Experimental effects of Word Generation on vocabulary, academic language, perspective taking, and reading comprehension in high-poverty schools. *Journal of Research on Educational Effectiveness*, *12*(3), 448–483. https://doi.org/10.1080/19345747.2019.1615155
Kamil, M.L., Borman, G.D., Dole, J., Kral, C.C., Salinger, T., & Torgesen, J. (2008). Improving adolescent literacy: Effective classroom and intervention practices. IES Practice Guide. NCEE 2008-4027. National Center for Education Evaluation and Regional Assistance.
Kim, J.S., Hemphill, L., Troyer, M., Thomson, J.M., Jones, S.M., LaRusso, M.D., & Donovan, S. (2017). Engaging struggling adolescent readers to improve reading skills. *Reading Research Quarterly*, *52*(3), 357–382. https://doi.org/10.1002/rrq.171
Kucan, L., Rainey, E., & Cho, B.Y. (2019). Engaging middle school students in disciplinary literacy through culturally relevant historical inquiry. *Journal of Adolescent & Adult Literacy*, *63*(1), 15–27. https://doi.org/10.1002/jaal.940
Levine, S., Hall, A.H., Goldman, S.R., & Lee, C.D. (2019). A design architecture for engaging middle and high school students in epistemic practices of literary interpretation. In M. Nachowitz & K. Wilcox (Eds.), *High literacy in secondary English language arts: Bridging the gap to college and career* (pp. 105–132). Lexington Books.
Lupo, S.M., Strong, J.Z., Lewis, W., Walpole, S., & McKenna, M.C. (2018). Building background knowledge through reading: Rethinking text sets. *Journal of Adolescent & Adult Literacy*, *61*(4), 433–444. https://doi.org/10.1002/jaal.701
Lupo, S.M., Tortorelli, L., Invernizzi, M., Ryoo, J.H., & Strong, J.Z. (2019). An exploration of text difficulty and knowledge support on adolescents' comprehension. *Reading Research Quarterly*, *54*(4), 457–479. https://doi.org/10.1002/rrq.247
McKeown, M.G., Crosson, A.C., Moore, D.W., & Beck, I.L. (2018). Word knowledge and comprehension effects of an academic vocabulary intervention for middle school students. *American Educational Research Journal*, *55*(3), 572–616. https://doi.org/10.3102/0002831217744181
Murphy, P.K., Greene, J.A., Firetto, C.M., Hendrick, B.D., Li, M., Montalbano, C., & Wei, L. (2018). Quality talk: Developing students' discourse to promote high-level comprehension. *American Educational Research Journal*, *55*(5), 1113–1160. https://doi.org/10.3102/0002831218771303
Newhouse, E.H. (2017). Revealing the naturalization of language and literacy: The common sense of text complexity. *Journal of Adolescent & Adult Literacy*, *60*(5), 547–556. https://doi.org/10.1002/jaal.570
O'Reilly, T., Weeks, J., Sabatini, J., Halderman, L., & Steinberg, J. (2014). Designing reading comprehension assessments for reading interventions: How a theoretically motivated assessment can serve as an outcome measure. *Educational Psychology Review*, *26*(3), 403–424. https://doi.org/10.1007/s10648-014-9269-z
Olson, C.B., Matuchniak, T., Chung, H.Q., Stumpf, R., & Farkas, G. (2016). Reducing achievement gaps in academic writing for Latinos and English learners in grades 7–12. *Journal of Educational Psychology*, *109*(1), 7–12. https://doi.org/10.1037/edu0000095
Peverly, S.T., & Wood, R. (2001). The effects of adjunct questions and feedback on improving the reading comprehension skills of learning-disabled adolescents. *Contemporary Educational Psychology*, *26*(1), 25–43.
Pew Research Center. (2021). Demographics of mobile device ownership and adoption in the United States. Retrieved from https://www.pewresearch.org/internet/fact-sheet/mobile/
Pressley, M., Graham, S., & Harris, K. (2006). The state of educational intervention research as viewed through the lens of literacy intervention. *British Journal of Educational Psychology*, *76*(1), 1–19. https://doi.org/10.1037/edu0000095
Reisman, A. (2012). Reading like a historian: A document-based history curriculum intervention in urban high schools. *Cognition and Instruction*, *30*(1), 86–112.
Reisman, A. (2017). How to facilitate discussions in history. *Educational Leadership*, *74*, 30–34. https://doi.org/10.1080/07370008.2011.634081
Reynolds, D. (2020). Of research reviews and practice guides: Translating rapidly growing research on adolescent literacy into updated practice recommendations. *Reading Research Quarterly*. https://doi.org/10.1002/rrq.314
Seltzer, K., & de los Ríos, C.V. (2021). Understanding translanguaging in U.S. literacy classrooms: Reframing bi/multilingualism as the norm. A research policy brief produced for The James R. Squire Office of Policy Research, National Council of Teachers of English.
Smith, B.E., Pacheco, M.B., & Khorosheva, M. (2020). Emergent bilingual students and digital multimodal composition: A systematic review of research in secondary classrooms. *Reading Research Quarterly*. https://doi.org/10.1002/rrq.298
US Census Bureau (2018). American Community Survey 1-Year Estimates. Retrieved from http://data.census.gov
US National Center for Education Statistics (2019) English language learners in public schools. Retrieved from https://nces.ed.gov/programs/coe/indicator_cgf.asp
Vaughn, S., Roberts, G., Schnakenberg, J.B., Fall, A.M., Vaughn, M.G., & Wexler, J. (2015). Improving reading comprehension for high school students with disabilities: Effects for comprehension and school retention. *Exceptional Children*, *82*(1), 117–131. https://doi.org/10.1177/0014402915585478
Vaughn, S., & Wanzek, J. (2014). Intensive interventions in reading for students with reading disabilities: Meaningful impacts. *Learning Disabilities Research & Practice*, *29*(2), 46–53. https://doi.org/10.1111/ldrp.12031
Windschitl, M. (2019). Disciplinary literacy versus doing school. *Journal of Adolescent & Adult Literacy*, *63*(1), 7–13. https://doi.org/10.1002/jaal.964