

Vaughn, S., Wanzek, J., Martinez, L. R., Hancock, E. M., Fall, A.-M., Payne, S. B., & Fluhler, S. K. (2025). The efficacy of a content area reading comprehension intervention for students with disabilities. *Remedial and Special Education*. <https://doi.org/10.1177/07419325241310499>

Study Background and Purpose

Secondary students with disabilities (SWDs) face persistent challenges in reading comprehension, which negatively impact school success, access to postsecondary opportunities, and long-term outcomes. Research consistently shows that achievement gaps widen across grades, with high school students demonstrating the least growth in reading performance. Because more than 90% of SWDs receive instruction in general education settings, content area teachers—particularly in social studies—play a critical role in providing effective literacy supports.

Promoting Adolescents' Comprehension of Text (PACT) is a text and discourse-based instructional model previously validated for general education students (Vaughn et al., 2013, 2015, 2017; Wanzek et al., 2015). This study extends that research by examining whether PACT improves social studies content knowledge and reading comprehension for eighth-grade students with disabilities included in general education classes.

The researchers focused on two primary aims:

1. **Efficacy of PACT** at posttest and follow-up for general education students and SWDs.
2. **Differential effects** of PACT based on students' initial knowledge levels.

Description of the Intervention (PACT Components)

The following includes four components of PACT known to support students with learning difficulties:

1. Comprehension Canopy

Introduces the unit through a short, engaging video and an overarching guiding question. Builds background knowledge and sets purpose for learning.

2. Essential Words

Five high-utility, content-relevant vocabulary words are introduced on Day 1 and are revisited daily via warm-up routines that require students to apply definitions and connect meaning to text.

3. Content Text Acquisition

Students read high-quality primary and secondary sources in structured routines. Texts are divided into stopping points that prompt inferential thinking, discussion, and written responses. Teachers facilitate discourse and connections to essential words, the canopy question, and prior learning.

4. Team-Based Learning (TBL)

A collaborative routine that supports deeper reasoning and application of content:

- Individual and team comprehension checks with scratch-off cards for immediate feedback.
- Collaborative discussions requiring use of text evidence.
- Knowledge application tasks requiring problem-solving and justification of claims.

Teachers received professional development and ongoing coaching to implement these routines and to integrate differentiation supports for SWDs.

Design

The study used a within-teacher randomized block design across 20 rural and urban middle schools in two southern U.S. states (2021–2022 school year). Each participating teacher taught both a PACT class and a business-as-usual (BAU) comparison class, controlling for teacher-level variation. The sample included 28 teachers and 893 eighth-grade students, with 58 students with disabilities across the participating classes.

Teachers implemented three PACT units (Colonization, Road to Revolution, American Revolution), each lasting about 15 instructional days. Treatment teachers received professional development, coaching, materials, and differentiation supports. BAU teachers taught the same content using their typical methods without PACT materials.

Measures

Students completed researcher-developed assessments:

- **ASK–MC (Content Knowledge):** Multiple-choice measure of U.S. history content taught in both treatment and control classes. Administered at pretest, posttest, and follow-up.
- **ASK–COMP (Reading Comprehension):** 20-item measure aligned with social studies content, assessing summarizing, identifying main ideas, cause and effect, and vocabulary in context. Administered at posttest.

Results

Overall Sample

Students in PACT classes scored **slightly higher** than BAU peers on measures of content knowledge (ASK–MC) at both posttest and follow-up; however, differences **were not statistically significant**. No significant differences were found on content-area reading comprehension (ASK–COMP).

Students With Disabilities

Although the sample of SWDs was small ($n = 58$), findings were encouraging. SWDs in PACT classes scored **higher** than SWDs in BAU classes. Effect sizes indicate **meaningful positive impact**, consistent with prior PACT research for SWDs.

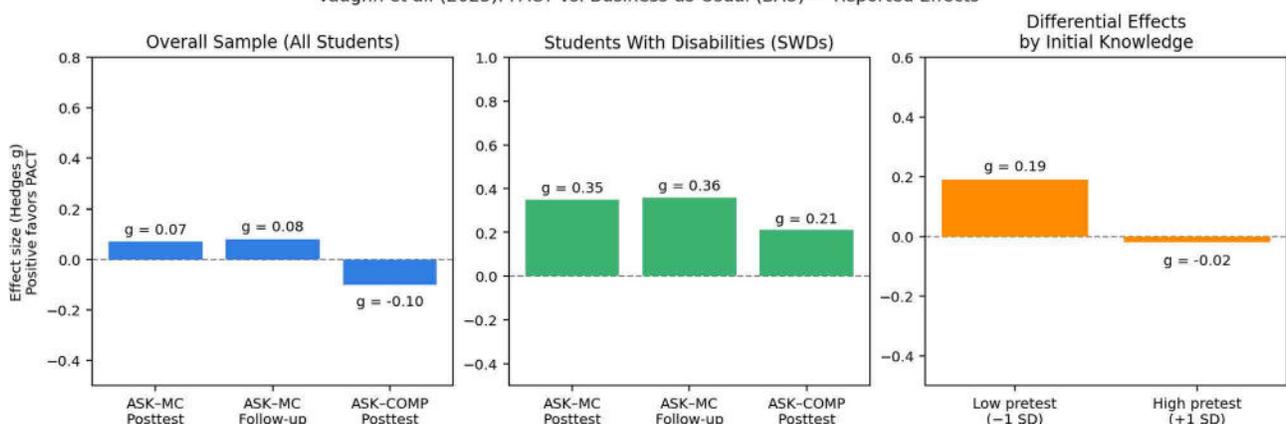
Differential Effects Based on Initial Knowledge

Students with **lower pretest scores** experienced the **largest benefit** from PACT. For students scoring one SD below the class mean on pretest measures, PACT produced significant positive effects. For students above the class mean, effects diminished and were not significant.

Figure 1

Summary of PACT Effects Across Outcome Groups

Vaughn et al. (2025): PACT vs. Business-as-Usual (BAU) — Reported Effects



Implications for Practice

- PACT may be particularly beneficial for **students with disabilities** and for students entering instruction with **lower prior knowledge**.
- The structured vocabulary routines, inferencing questions, team-based learning, and text-based discussions appear especially supportive for SWDs.
- Teachers reported PACT components as helpful for differentiation and noted high student engagement with materials.
- Despite implementation challenges during the COVID-19 pandemic, teachers maintained fidelity and perceived the intervention as valuable.
- Findings support PACT as a **feasible, inclusive instructional model** for general education social studies classrooms aiming to integrate literacy and content learning.

References

- Vaughn, S., Martinez, L. R., Wanzek, J., Roberts, G., Swanson, E., & Fall, A. M. (2017). Improving content knowledge and comprehension for English language learners: Findings from a randomized control trial. *Journal of Educational Psychology, 109*(1), 22–34. <https://doi.org/10.1037/edu0000069>
- Vaughn, S., Roberts, G., Swanson, E. A., Wanzek, J., Fall, A. M., & Stillman-Spisak, S. J. (2015). Improving middle-school students' knowledge and comprehension in social studies: A replication. *Educational Psychology Review, 27*(1), 31–50. <https://doi.org/10.1007/s10648-014-9274-2>
- Vaughn, S., Swanson, E. A., Roberts, G., Wanzek, J., Stillman-Spisak, S. J., Solis, M., & Simmons, D. (2013). Improving reading comprehension and social studies knowledge in middle school. *Reading Research Quarterly, 48*(1), 77–93. <https://doi.org/10.1002/rrq.039>
- Wanzek, J., Swanson, E., Vaughn, S., Roberts, G., & Fall, A. M. (2016). English learner and non-English learner students with disabilities: Content acquisition and comprehension. *Exceptional Children, 82*(4), 428–442. <https://doi.org/10.1177/0014402915619419>

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