

EC Podcast #5 Jeanne Wanzek, “English Learner and Non-English Learner Students With Disabilities: Content Acquisition and Comprehension,” *Exceptional Children*, 82, pp. 428–442.

Lorraine Sobson: Welcome to this Exceptional Children podcast. I'm Lorraine Sobson, Publications Manager for the Council for Exceptional Children. Today I'm speaking with Jeanne Wanzek, an associate professor at Peabody College, Vanderbilt University. Jeanne—along with Elizabeth Swanson, Sharon Vaughn, Greg Roberts, and Anna-Maria Fall—recently published an article in *Exceptional Children* entitled "English Learner and Non-English Learner Students With Disabilities: Content Acquisition and Comprehension." Welcome, Jeanne. Thanks for joining me today.

Jeanne Wanzek: Thank you. It's great to be here.

Lorraine Sobson: We don't have a lot of information about how English learners with disabilities are doing in general education settings. Can you tell us a little about what we know, and what we still need to learn?

Jeanne Wanzek: Well, the English learner population is growing; however, many ELs are not achieving at the same levels as their peers who speak English as a first language. Most ELs with disabilities have a learning disability, and most of these struggle with reading. Many teachers lack the training, though, on second-language acquisition or literacy development in a second language, and so we are in need of research that examines literacy interventions and instruction that's designed specifically for ELs with disabilities.

Lorraine Sobson: We're talking about ELs that are part of diverse classrooms. Can you recap what are some of the more important features of instruction for a diverse classroom, and then what additional elements are needed to attend to the needs of English learners in these settings?

Jeanne Wanzek: Sure. Students with disabilities can benefit significantly from instruction that includes clear identification of instructional objectives, high levels of student engagement and practice or application of that material, concrete and meaningful learning opportunities, opportunities for active thinking, reading comprehension strategy instruction—vocabulary development is very important—and content enhancement such as graphic organizers or mnemonics. Students with disabilities who are ELs require additional attention to their language needs, such as background knowledge, academic language, vocabulary, and discourse skills as well.

Lorraine Sobson: The study that you reported on investigated the effectiveness of PACT, which stands for Promoting Adolescent Comprehension Through Text. Can you tell us a little bit about the components of this approach?

Jeanne Wanzek: Yes. PACT is a set of instructional practices that are intended to be integrated into middle and high school general education social studies instruction. PACT is comprised of six components that focus on improving understanding of concepts while reading text, providing opportunities for students to engage in learning, and applying the newly learned content through written text and oral instruction and activities. We help students, through these activities, connect their new learning to prior learning.

I'll take a minute to describe each of the components. The first component of PACT is the Comprehension Canopy. Each of these components is implemented within a social studies instructional unit. The Comprehension Canopy introduces each unit by engaging students in the upcoming content, building background knowledge, and providing a purpose for learning the new content. There's a brief unit introduction video that's provided, followed by peer and class discussion of the video content. Teachers then present a unit-level comprehension question that can be revisited throughout the unit and addressed throughout the unit as students learn the content.

The second component of PACT is what we call Essential Words. These are words that are essential to the unit topic and are connected to multiple social studies topics. They're introduced on the first day of the unit, and then there's review throughout the unit. The purpose of the Essential Words component is to teach the meaning of concepts that are tightly connected with the content and support new learning in the unit. Teachers provide a student-friendly definition, a visual representation, related words, several examples and non-examples of the word's meaning and use, and a related discussion question for students to address with a partner. Essential words are then incorporated in each of the other components of PACT as well, in order to provide students many opportunities to review and apply the essential words.

Related to that, the third component is a warm-up, and the essential words are reviewed throughout the unit via short questioning and problem-solving activities that require students to apply the word meaning. The students complete the activities individually at the beginning of class, and then they share their thoughts and responses during a brief class discussion of the activity that's facilitated by the teacher.

The fourth component is Critical Reading, and during the critical reading routine, students read primary or secondary source text with support. Teachers introduce the reading to provide context and reinforce the essential words that the students will encounter, as well as connect the reading to the comprehension question from the Comprehension Canopy for the unit. Students then read the text in a variety of formats during class, and teachers facilitate understanding at stopping points throughout the text. Students answer questions verbally and in writing throughout the text at these stopping points.

The final two components are related to team-based learning, which is incorporated into each unit with these two components. One is Comprehension Checks, which examine student understanding of the content taught. There's a multiple-choice quiz provided, and each student takes the quiz individually first, and then, following the individual quiz, students get into heterogeneous teams that were formed by the teacher. The teams take the quiz again, together, using class resources such as readings, notes, or handouts, and they must come to consensus on the answer for each question, citing the evidence that they had for that answer. Each team receives immediate feedback on their answer by using a scratch-off card that's keyed to the quiz. If students select an incorrect answer, they discuss the question and the evidence further in order to determine the answer. Teachers use the information from both the individual and the team quizzes to then provide targeted re-teaching and address any misunderstandings.

The team-based learning also comes into play in the final component of PACT, which is the [team-based learning] Knowledge Application. This provides a culminating activity for the unit content. Students again work in their teams to engage in discussion of the unit content, addressing an application task, recording the content and text evidence that they find to support their responses. Team responses are then presented to the class. The teacher facilitates team discussion, use of evidence, and connection of the responses across the team, including providing feedback to the students and the team. Finally, the teacher assists students in synthesizing key information from the unit to address the unit comprehension question. Those six components are then repeated with a new unit of social studies instruction.

Lorraine Sobson: Well, that's very helpful, to give our listeners a background and ... overview of the components of PACT. One thing I want to mention is that yours isn't the only study of PACT. What did the other studies find, and what did you hope to add with the current study?

Jeanne Wanzek: There's been several studies, as you mentioned, that have examined the impact of the PACT practices on the content knowledge acquisition and reading comprehension of students in the participating classes. PACT has consistently made a statistically significant impact on students' content knowledge, and we have found these difference sustained four and eight weeks after the conclusion of the instruction. The students are still doing better than their peers who received typical instruction, typical social studies instruction, even weeks after the unit has ended. The effects have occurred when both the PACT and the typical practice classes were taught by the same teachers and covering the same content, such that we can isolate that the differences were solely attributable to the use of the PACT instructional practices.

We've also studied PACT in classrooms and schools with large English learner populations, and we found differential effects in favor of the treatment group, the students receiving PACT, on measure of content knowledge acquisition and content reading comprehension. In addition, the proportion of English learners in the class

mediated student outcomes on content knowledge acquisition, such that decreases in content knowledge occurred in classes that had higher proportions of ELs, with the ELs actually the most negatively affected. We've also examined PACT's effects on students with disabilities overall, who are included in general education social studies classes. Students in the treatment condition again scored statistically higher than students in the comparison condition on content knowledge acquisition and on content reading comprehension.

Overall, PACT has demonstrated consistent small effects for significantly increasing content knowledge across general populations, EL populations, and students with disabilities. In several studies, small significant effects for content reading comprehension have also been noted. In the current study, we sought to inform the effects of PACT for EL and non-EL students with disabilities, which we hadn't previously looked at, who are provided instruction in general-education social studies classrooms, and we wanted to examine any differential effects for the EL versus the non-EL students with disabilities.

Lorraine Sobson: Okay, so can you tell us a little bit now about the participants in this study and the particular settings?

Jeanne Wanzek: Yes. There were 160 students with disabilities that were included. Students' special-education identification included learning disabilities, intellectual disabilities, autism, and speech or language impairments, but the majority of the students were identified with a learning disability—about three-quarters of them. All students participated in general education social studies classes with the general education teacher providing the instruction, and 52 (or about a third) of these students with disabilities were also identified by their schools as either current ELs or had held an EL status within the previous two years.

Lorraine Sobson: You've said that the instruction is delivered by general education social studies teachers. How much training did the teachers receive beforehand, before you implemented PACT?

Jeanne Wanzek: Well, we had all of the teachers attend a one-day workshop prior to the start of the school year. The units that they implemented were pretty early in the school year, so it was important that they felt comfortable before the school year started. The workshop covered the PACT implementation, relevant research in content and reading comprehension, supported lesson planning for planning the units with the PACT components, lesson design features that were specific for English learners, and study design features including how to maintain the PACT implementation in some of their classes and their typical instruction in their other classes.

Teachers received semi-scripted lesson plans and student materials to implement the PACT components, and then we also did a booster workshop after the first unit; a second booster that was a little shorter, for questions mostly, was held after the second unit to provide additional practice in the PACT components where we saw

low fidelity. This also allowed teachers to discuss challenges and successes with their PACT implementation. In addition to the workshops, each teacher also received follow-up support from one research team member during their implementation. Support included modeling of PACT components, that largely occurred in the first unit, co-teaching, assistance with planning, or observation and feedback. Follow-up support was provided as part of the research study a minimum of five times in Unit 1, four times in Unit 2, and three times in Unit 3, and then additional support was provided based on teacher need after that.

Lorraine Sobson: You just mentioned fidelity of implementation. In your article, you mention there's 18 participating teachers. How did you measure fidelity of implementation, and what were the results of the fidelity measure?

Jeanne Wanzek: Well, for each teacher, ... one of their PACT implementation classes and one of their typical-practice classes were randomly selected for us to look at the instruction. These class periods were audio recorded each day of the instruction, and recordings for two units of instruction were then coded for each of those class periods, their typical instruction and their PACT implementation. The fidelity measure used to code the audio recordings was aligned with the components of PACT that I described earlier. For each component, coders rated the extent to which the required elements were implemented on a scale from 1 to 4, ranging from "not implemented," which was low, that's a 1, to "completing all of the expected aspects of the component," which was a 4 and was high implementation.

The PACT implementation in the treatment classes was at a mid-high level, about a mean of a 3, a little over a 3, and it ranged from 2.77 to 3.62, so it was a pretty tight range as well. Critical reading was the only component that we saw with lower implementation; that was the one that was at 2.77. Teachers did not consistently implement all the elements of this component, which included making connections to essential words, prompting students to write connections to essential words, and facilitating note-taking in response to the stopping point questions. Otherwise, we saw a pretty high implementation.

Lorraine Sobson: What assessments did you use to measure the results of the PACT instruction and practices, and who performed them?

Jeanne Wanzek: We have administered across our studies a set of three measures. One is the knowledge acquisition in social studies. We call it the Assessment of Social Studies Knowledge, and it covers the content taught in the units, to see the extent to which they've learned that content. The second measure is a content reading comprehension measure, the Modified Assessment of Social Studies Knowledge, Reading Comprehension, which presents novel passages within social studies, followed by comprehension questions that students answer about the passage. The third measure is a broad reading comprehension measure, the Gates-MacGinitie Reading Comprehension. All three of these measures were given by trained research personnel who were uninformed of the study condition, whether it was a

PACT class or a typical instruction class. Their group administered assessments, and they were assigned to administer all of those assessments.

Lorraine Sobson: Okay, thank you for setting the stage. Now we get to the good part. What were the overall results of the study?

Jeanne Wanzek: Well, we found that the eighth-grade students with disabilities who were in the PACT classrooms scored significantly higher than students with disabilities who were in the typical-instruction classrooms on the measure of social studies content knowledge, and it was about a half of a standard deviation higher in their knowledge acquisition. The students with disabilities in both study groups scored similarly on measures of content reading comprehension and general reading comprehension, so PACT did not accelerate learning in those areas, it was on the content knowledge where their learning was accelerated, for the students with disabilities. Again, we see the consistent effects of PACT to improve students' content knowledge acquisition.

Lorraine Sobson: How did the EL status of the students affect outcomes?

Jeanne Wanzek: The effective treatment did not differ between English-learner and non-English-learner students with disabilities, though this supports the use of the instructional practices for improving content acquisition in general-education social studies classes for both English learners and non-English-learner students with disabilities.

Lorraine Sobson: That is an important point for that. What recommendations do you have for further research now, particularly ways to support students with disabilities in social studies, and to support English learners?

Jeanne Wanzek: Well, overall, the findings support that general education teachers implementing PACT instructional practices yielded significant benefits in content acquisition for students with disabilities in those settings, with no differences in outcomes for students who were also identified as EL. Although the students with disabilities maintained their level of content learning with their non-disabled peers, the gap in overall scores between EL and non-EL students with disabilities and previous research that we have on their peers without disability suggests that additional supports, perhaps beyond the general education classroom, for example specialized reading supports, are needed to assist students with disabilities in meeting grade-level expectation. Although we can certainly accelerate learning in these gen ed social studies content area classes, it's clear that students need additional support with their reading, based on their post-test scores, in comparison to their grade-level peers. Continued research on the supports EL and non-EL students with disabilities require to succeed in their inclusion placements could provide valuable information for educators.

Lorraine Sobson: Well, thank you for talking with me today, Jeanne.

Jeanne Wanzek: You're welcome.

Lorraine Sobson: Jeanne's article, "English Learner and Non-English Learner Students with Disabilities: Content Acquisition and Comprehension," is published in Volume 82 of *Exceptional Children*. *Exceptional Children* is a publication of the Council for Exceptional Children. To learn more about CEC, visit cec.sped.org.