
“AND THEN MY CREATIVITY TOOK OVER”

Productivity of Teacher Adaptations to an Adolescent Literacy Curriculum

ABSTRACT

Curriculum designers often assume that teachers implement curricula as written, yet research shows that all teachers adapt curricula. Adaptation is especially important in the context of sustained curriculum implementation, as some level of adaptation may be necessary for teachers to feel ownership over a program. However, whereas some adaptations are productive, others undermine program effectiveness. This study identifies, describes, and evaluates adaptations to a literacy intervention curriculum for struggling adolescent readers. Data were collected through observation and interviews of 2 teachers in a school that had sustained implementation of a literacy curriculum after the conclusion of the intervention study. Six focal adaptations were identified—3 from each teacher—and analyzed for productivity. Of the 6 adaptations, only 2 met criteria for productivity. This suggests that making productive adaptations is difficult and that teachers should be supported in productively adapting curricula through educative curriculum materials and effective professional development.

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THE Institute of Education Sciences (2016; IES) currently funds 22 adolescent literacy intervention studies in the United States, collectively affecting tens of thousands of students at a cost of more than \$250 million. Most IES-funded literacy interventions involve implementing researcher-designed literacy curricula in partner schools and training teachers in specific instructional strategies, typically over the course of 3 to 5 years. The effectiveness of these curricula is usually evaluated based on student outcomes, yet “one cannot say that a curriculum is or is not associated with a learning outcome unless one can be reasonably certain that it was implemented as intended by the curriculum developers” (Stein, Remillard, & Smith, 2007, p. 337). However, curricula are never implemented exactly as written, as research shows that all teachers, regardless of beliefs or experience, adapt curricula (Burkhauser & Lesaux, 2015; Datnow & Castellano, 2000; Leko, Roberts, & Pek, 2015).

Furthermore, after the 3- to 5-year funded period, typically intervention trials conclude, researchers leave partnerships, and implementation supports are withdrawn. Presumably, the goal in designing and funding interventions is not only to affect the limited number of students who participate in the study during a closed time frame but also to better educate larger populations of students long after the research is complete. However, to my knowledge, no research has been conducted into the nature of instruction during sustained implementation of an adolescent reading intervention after the period of the randomized controlled trial (RCT).

This study addresses this gap by taking a detailed look at teachers’ instructional practices while implementing the Strategic Adolescent Reading Intervention (STARI), a yearlong literacy intervention for middle-school students who read at least 2 years below grade level. STARI was introduced between 2011 and 2015 at nine schools in four districts in an RCT. Teachers were supported with a summer training institute before beginning to teach STARI, as well as weekly visits from a STARI coach during the 5 years of the RCT. After the RCT concluded, schools were left with curriculum materials and trained teachers but no further professional development supports. Schools could then choose whether to sustain implementation of STARI. This study examines adaptations made by two teachers in one school that sustained implementation during the 2015–2016 school year.

Conceptual Background

Adolescent Literacy Interventions

Two-thirds of American eighth graders cannot read and comprehend text at a proficient level (National Center for Education, 2015). As a result, many promising interventions have been designed to improve the reading comprehension of adolescents, but when implemented by classroom teachers, the effects of these interventions are often small or nonexistent (e.g., Fogarty et al., 2014; Simmons et al., 2014; Solís, Vaughn, & Scammacca, 2015). Reading remediation in upper grades is challenging for several reasons, (a) reading successfully at this level requires complex and varied literacy skills, (b) the amount of instruction needed for struggling readers to “catch up” increases with each year of schooling, and (c) older struggling readers have often become disengaged from literacy and academics (Biancarosa &

Snow, 2004). Yet STARI has demonstrated a positive impact on the literacy skills of struggling adolescent readers in diverse, high-poverty schools (Kim, Hemphill, et al., 2017). This success may be attributed to three key features that distinguish STARI from other literacy interventions: relevant, accessible texts; an emphasis on student talk; and integration of lower and higher level skills.

STARI's first key feature is its carefully chosen texts. These texts are selected primarily to be accessible to the intervention's target population of below-grade-level readers, as significant research has demonstrated that students' engagement, fluency, and comprehension are optimized when they read texts at their instructional level (e.g., Ehri, Dreyer, Flugman, & Gross, 2007; Fulmer & Tulis, 2013; O'Connor et al., 2002). However, texts are also chosen for "characteristics of cognitive challenge: the degree to which readers must work through plot and character ambiguities, resolve diverse perspectives, and use specific background knowledge to bridge gaps in the text" (Kim, Hemphill, et al., 2017, p. 366). Finally, texts are chosen based on relevance to the target student population; for example, the curriculum is composed mostly of texts featuring low-income protagonists of color (e.g., *The Skin I'm In* [Flake, 2000], *Locomotion* [Woodson, 2003]), as research suggests that students are more engaged with texts they find personally relevant (Ivey & Johnston, 2013; Moje, Overby, Tysvaer, & Morris, 2008; Tatum, 2008).

STARI's second key feature is an emphasis on student collaboration and voice. Much research has demonstrated an association between open discussion and student gains in reading comprehension (e.g., Applebee, Langer, Nystrand, & Gamoran, 2003; Murphy, Wilkinson, Soter, Hennessey, & Alexander, 2009), so student talk is threaded throughout the STARI curriculum. In addition to daily discussion during partner work and guided reading lessons, each unit includes at least one whole-class debate. Thus, STARI is designed to foster dialogic argumentation, or "a specialized way of arguing in which the participants not just defend their own claims, but also engage constructively with the argumentation of their peers" (Nielsen, 2013, p. 373).

The third key feature of STARI is integration of lower and higher level skills, in contrast to typical reading interventions that focus either on context-independent decoding strategies (e.g., Wilson's *Just Words*) or on promoting students' active engagement with text without considering the critical role of background knowledge in comprehension (e.g., strategy instruction; Compton, Miller, Elleman, & Steacy, 2014).¹ Each STARI lesson plan is divided into two parts (see Fig. 1 for a sample lesson plan). First, during fluency practice, students engage in repeated readings of leveled texts, tracking words per minute over time. Topics for these leveled non-fiction passages are related to unit themes to build background knowledge and aid with comprehension. For example, during the unit on *Locomotion* (Woodson, 2003), a novel about a boy in foster care whose teacher inspires him to write poetry, fluency passages included information about the foster care system and the poetry of Langston Hughes.

In the second, comprehension-focused portion of each lesson, students are expected to engage in both partner reading and guided reading each day. In guided reading lessons, the teacher previews a section of text that students then read independently, after which the teacher leads discussion of that section (Fountas & Pinnell, 2006). STARI uses the reciprocal teaching approach to comprehension instruction (Palincsar & Brown, 1984). Teachers model four strategies—clarifying,

Day 32

Objectives

- ▶ Summarize using the 5 Ws
- ▶ Clarify challenging words
- ▶ Find evidence in a text to support judgments about character and plot

Common Core Literacy Standards

- ▶ ELA Standard RL 2: Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- ▶ ELA Standard RL 3: Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.

Materials

- Workbook pp. 127-129
- *The Skin I'm In*
- Post-its
- Slides 48, 62-67

1. Review homework
2. Partner reading: *The Skin I'm In* Ch. 24, pp. 130-136
3. Guided reading: *The Skin I'm In* Ch. 25, pp. 137-143
4. Assign homework

LESSON PLAN DAY 32

Figure 1. Sample STARI lesson plan (Strategic Education Research Partnership, 2015, pp. 132–135). Reprinted with permission.

Day 32 Activities

1. Review homework

Use **slides 62-64 (workbook pp. 125, 126)** to review Homework Day 31, **Descriptive poem**. Ask for a few volunteers to share their poems or their planning page.

2. Partner reading

Partners read Chapter 24 silently and work together to complete **workbook p. 127**. In the first two pages, they read about Char's plan to vandalize Miss Saunders' classroom. They stop and write a prediction about what will happen next. Then, they finish the chapter and respond to three prompts about Maleeka's predicament.

Partner reading: <i>The Skin I'm In</i> , Chapter 24, pp. 130-136, Workbook p. 127	
Set purpose for reading	<p>The conflict between Charlese and Miss Saunders has been getting more intense. Charlese is in seventh grade for the third time. Miss Saunders isn't passing her along like some other teachers.</p> <p>In Chapter 24, Charlese cooks up a plan. As you read silently, think about Maleeka's choices and what <u>she</u> will do. Does Charlese control Maleeka?</p>
<p>Preview questions on workbook p. 127.</p> <p>Students will stop after the first two pages to write a prediction. You may want to distribute Post-its for students to place at the bottom of p. 131 to help them remember to stop.</p>	
Pre-teach challenging words for partner reading <i>Write the words on the board.</i>	<p>majesty (p. 133) - dignity and pride—Maleeka remembers a poem that talks about the majesty of darkness at midnight.</p> <p>whacked (p. 136) - crazy—Caleb tells Maleeka that Charlese is whacked.</p>
Circulate to offer help while partners read and work.	

Figure 1 (*Continued*).

Day 32 Activities, continued

3. Guided reading

Lead guided reading for Chapter 25.

Guided reading: The Skin I'm In, Chapter 25, pp. 137-143	
Recap partner reading	<p>Debrief partner work with Chapter 24.</p> <p>Open <i>The Skin I'm In</i> to pp. 130-131. Turn to workbook p. 127. Who can read the prediction you made after reading the first two pages of Chapter 24?</p> <p>On workbook p. 127, what advice did you give to Maleeka? Do you think she will listen to your advice? Why or why not?</p>
<p>Interactive vocabulary preview</p> <p><i>Write the words on the board, say them, and ask students to say them.</i></p>	<p>foreign (p. 140) - from another country. <i>Would a school store accept foreign money?</i></p> <p>hussy (p. 141) - an insult meaning a rude or uppity woman. <i>Who would you be more likely to call a hussy, a classmate you don't get along with or your grandmother?</i></p> <p>creek (p. 141) - running water, like a stream, but smaller than a river.</p>
Set purpose for reading	<p>Events in the story have been building up to a high point or climax.</p> <p>In Chapter 25, Charlese, Maleeka and the twins sneak out very early, before school starts. What do you think is going to happen?</p>
Students read silently	Direct students to read to the middle of page 139. Look up when you get to the line, " <i>She's gonna kill us for messing it up.</i> "
<p>Questions for discussion</p> <p><i>Select from these.</i></p>	<ul style="list-style-type: none"> • How do we know that Maleeka doesn't feel good about going along with Charlese's plan? • Who can read a line or two that shows how Maleeka is feeling?
Students read silently	Direct students to read to the bottom of page 141.

Figure 1 (Continued).

Day 32 Activities, continued

3. Guided reading, continued

Guided reading: <i>The Skin I'm In</i> , Chapter 25, pp. 137-143, continued	
Questions for discussion <i>Select from these.</i>	Maleeka doesn't want to set the money on fire. <ul style="list-style-type: none"> • What is one thing that Charlese does to make Maleeka use the lighter? • What is another thing that Charlese does to Maleeka? • Can someone read a description of what Charlese does to Maleeka?
Students read silently	Direct students to read to the end of the chapter on page 143.
Questions for discussion <i>Select from these.</i>	<ul style="list-style-type: none"> • Do you think Maleeka is responsible for the fire in the classroom? Why or why not? • Why does Maleeka leave the school, crying her eyes out?
Sum up	Let's look again at our Narrative Arc chart. Stories like <i>The Skin I'm In</i> build up to an exciting high point, or climax. Are we at the high point? Project slide 48 and ask students to make a few notes about the climax on our narrative arc on workbook p. 84 .

Figure 1 (Continued).

summarizing, predicting, and questioning—that are reinforced through guided reading lessons. In addition, students practice these comprehension skills in workbooks, completing activities that ask them, for example, to collect evidence from the text about a character. Through this combination of accessible readability levels and challenging, relevant subject matter; emphasis on student discussion; and integration of higher and lower level reading skills with a focus on building background knowledge, STARI is designed to build students' inferential comprehension skills and engagement with text.

Fidelity and Adaptation

Contemporary scholars distinguish between the *formal curriculum*, composed of the goals and activities written in textbooks or unit plans, and the *enacted curriculum*, which describes the teaching and learning that actually take place (Remillard, 2005). In this study, the “formal curriculum” refers to STARI’s yearlong sequence of units, each composed of a series of daily lesson plans, focused on a thematically linked set of texts and skills. Fidelity of implementation is defined as “the degree to which specified procedures are carried out as planned” (Dane & Schneider, 1998, p. 23). However, programs are never implemented with 100% fidelity (Durlak & DuPre, 2008). Instead, teachers and formal curricula interact to produce the enacted curriculum (Ball & Cohen, 1996), through teachers’ *adaptations* of the formal curriculum—in other words, adding, omitting, modifying or substituting instructional activities (Blakely et al., 1987; Drake & Sherin, 2006; Forbes, 2011). Teachers always make some level of adaptation to curricula (Burkhauser & Lesaux, 2015; Datnow & Castellano, 2000; Leko et al., 2015), even when they meet thresholds for acceptable levels of fidelity of implementation.

Traditionally, intervention research has viewed the relationship between research and practice as a linear process of transmission, wherein basic research leads to applied research, and applied research leads to development of intervention programs, which are then disseminated to practitioners to be implemented as written (Stein & Coburn, 2010). From this point of view, a teacher’s practice is compared with the program as designed, and the goal is the closest possible match (Harn, Parisi, & Stoolmiller, 2013; O’Donnell, 2008). However, adaptation is not only inevitable but may in fact be desirable. For example, Neugebauer, Coyne, McCoach, and Ware’s (2017) study of teacher implementation of a kindergarten vocabulary intervention found that students performed better in classrooms where teachers extended their explanations of key terms beyond the definitions provided by the curriculum. However, the curriculum did not support teachers in offering these extensions; therefore, teachers’ ability to offer extended definitions depended on their preexisting levels of expertise in vocabulary instruction. In another study, teachers in their second year of implementing Kindergarten Peer Assisted Learning Strategies (KPALS) were allowed to choose between implementing the program with fidelity or making adaptations with support (Lemons, Fuchs, Gilbert, & Fuchs, 2014). Students made significantly greater progress in classrooms where teachers chose to adapt the program; however, because teachers were not randomly assigned to conditions, no causal claims can be made about the effectiveness of adaptation. Kim and colleagues extended this work by randomly assigning teachers either to implement a fourth-grade summer

reading intervention with fidelity or with adaptations (Kim, Burkhauser, et al., 2017). As in the study by Lemons et al. (2014), teachers in the adaptive condition were told which aspects of the intervention were core components that must be implemented and which could be adapted, and teachers were provided with supports in creating structured adaptations to the program. The researchers found that the adaptive condition increased family engagement, increased the likelihood of students' reading their assigned books and rating them "just right," and improved student outcomes on a standardized literacy measure.

However, none of the studies discussed examined or evaluated individual adaptations or proposed criteria for doing so. Thus, despite these promising findings, without further research describing how and why teachers adapt curriculum and considering the ways in which these adaptations may be more or less productive than strict adherence to the formal curriculum, the "black box" of classroom instruction remains closed (Correnti & Rowan, 2007). Unlike the teachers in research by Lemons et al. (2014) and Kim, Burkhauser, et al. (2017), STARI teachers were not provided with support in making structured adaptations; the quality of their adaptations relied on their own expertise. Thus, their adaptations might plausibly be productive or might create "lethal mutations" (Brown & Campione, 1996, p. 292). This study presents an in-depth analysis of the productivity of a few purposively selected adaptations to the STARI curriculum.

Productivity of Adaptations

The theoretical framework used to evaluate productivity of adaptations in the present study was developed by Debarger, Choppin, Beauvineau, and Moorthy (2013) when reviewing the literature on curriculum adaptation in math and science. According to this framework, a productive adaptation must, first, be responsive to multiple stakeholders, meaning that it should be faithful to the intentions of the curriculum designers while also responding to the needs of students. Second, a productive adaptation must incorporate responsive discourse practices. This means that teachers must move away from the traditional initiate-respond-evaluate sequence, in which classroom talk consists of a series of brief dialogues between the teacher and selected individual students (Cazden & Beck, 2003), toward a structure that "emphasize[s] the contributions of all students, encourage[s] students to develop their ideas and listen to others' ideas, and support[s] students as they build logical connections and draw reasonable conclusions" (Debarger et al., 2013, p. 302). Teachers may encourage responsive discourse practices through productive talk moves, such as pressing for reasoning when students make assertions (Michaels & O'Connor, 2015). Finally, Debarger and colleagues require that a productive adaptation maintains or enhances task complexity. For example, if students struggle with a task, a teacher might respond in a way that lowers the cognitive demand (e.g., giving students the correct answer) or that maintains it, such as asking students to jot down their reasoning before engaging in discussion, providing more thinking time as a scaffold. Debarger et al. would consider only the second of these adaptations productive.

Although Debarger et al. (2013) developed this framework for math and science, their criteria are appropriate for literacy curricula, specifically STARI, as well. The first criterion, responsiveness to multiple stakeholders, is arguably applicable to all

instruction, as teachers must constantly balance the expectations of curricula and standards with the needs of their students. The second criterion, responsive discourse practices, is appropriate given STARI's emphasis on developing literacy through student talk. Finally, STARI's focus on selecting texts and activities that balance accessible readability levels with cognitively challenging content makes the third criterion, maintaining or enhancing task complexity, also suitable for this analysis. The present study is framed around the following research questions: How do teachers adapt the STARI curriculum? In what ways may these adaptations be considered productive and unproductive?

Sustained Implementation

Adaptation may be especially critical in considering sustained implementation of an intervention. In contrast to a transmission model, implementation science takes a more nuanced view of the process of putting programs into practice. Fixsen, Naoom, Blase, Friedman, and Wallace (2005) have proposed that implementation moves through a predictable series of stages, from exploration and adoption through program installation, initial implementation, full operation, innovation, and, finally, sustainability. Tellingly, these researchers place innovation before sustainability, suggesting, as Datnow and Castellano (2000, p. 795) did in their study of the Success for All (SFA) reading program, that "creating ownership [may] require some level of local adaptation or development." Yet, "most of what is known about implementation of evidence-based practices and programs is known at the exploration . . . and initial implementation stages" (Fixsen et al., 2005, p. 18). Most research into literacy intervention implementation focuses on teachers in their first year of implementation (e.g., Burkhauser & Lesaux, 2015; Leko et al., 2015; Simmons et al., 2014; Solís et al., 2015). To my knowledge, the only study on sustained implementation of a literacy intervention, after the conclusion of an RCT, investigated teachers' use of KPALS (Kearns et al., 2010). This study surveyed teachers 1 year after the conclusion of the intervention study and defined sustained use based on teachers' response to a single item inquiring whether they were still implementing KPALS. No classroom observations were conducted to further analyze sustained implementation.

STARI was implemented in a 5-year trial with the explicit goal of allowing the program to reach the full operation stage before evaluation. One of the teachers in my study taught STARI for the full 5 years of the RCT and was thus in her sixth year of implementation in this study; the other became a STARI teacher in the final year of the RCT and was thus in her second year of STARI implementation. Therefore, the adaptations described in my study may be considered "learned adaptations . . . knowledge-based adaptations designed with respect to what teachers have learned from prior enactments" (Choppin, 2011, p. 335) of curriculum. By focusing on experienced teachers implementing learned adaptations to a literacy curriculum, this study addresses an important yet underresearched area of curriculum enactment.

In sum, this study makes a number of important contributions to the research base. First, it presents a nuanced description of teacher practice that is rare in literacy intervention research. Second, this study offers a look at sustained implementation of an intervention curriculum, which is almost unheard of in any content area. Finally, the study aims to build theory around characteristics of productive and un-

productive adaptations, to help us understand “how much adaptation is really too much” (Datnow & Castellano, 2000, p. 795). Therefore, this study conducts a detailed analysis of a small number of teachers enacting a small number of lessons to deeply understand the ways in which teachers adapt curriculum and the implications of these adaptations for research and practice.

Method

Data were collected at one school that chose to sustain implementation of STARI in the 2015–2016 school year. This school is the only middle school in a rural/suburban district in Massachusetts. It is a Title I school, reflecting moderate to high levels of family poverty, and, as illustrated in Table 1, has a relatively diverse and low-income student population. However, this school had lower proportions of low-income students and students of color than the other three districts participating in the RCT. Although some administrative support for STARI was provided in 2015–2016, namely, scheduling STARI classes and identifying eligible students, no professional development, coaching, or similar supports were provided to teachers by the school.

This study may be considered an embedded multiple case study, as each individual adaptation composes a unit of analysis embedded within the larger study of teacher implementation of STARI (Scholz & Tietje, 2002; Yin, 2014). Furthermore, this study is an instrumental case study because its purpose is not simply to understand the particular case but to build theory around what may constitute productive and unproductive adaptations within the context of teacher implementation of an adolescent literacy intervention. Like other case studies, an instrumental case study involves thick descriptions of a focal case; however, unlike exploratory or intrinsic case studies, instrumental case studies focus “less on the complexity of the case . . . and more on specifics related to the research question” (Mills, Durepos, & Wiebe, 2010, p. 474). Thus, instrumental case studies often involve purposive sampling “to ensure that the case will yield fruitful findings pertaining to the research question” (Mills et al., 2010, p. 474).

This school had four STARI teachers; all were observed and interviewed, and each teacher was found to demonstrate particular patterns of adaptation, reflecting

Table 1. School-Level Demographic Characteristics of Students

Measure	%
Special education	18.7
Low income	35.4
English-language learner	7.4
Proficient or above on NAEP	50
Race/ethnicity:	
European American	69
African American	10.4
Latino	10.2
Asian	1.5
Native American/Pacific Islander	3.5
Mixed/Other	5.4

particular beliefs about literacy teaching and learning (Troyer, 2017b). However, in addition to understanding the ways in which teachers adapted the curriculum, I wanted to gain some understanding of the quality of these adaptations. Therefore, like Sherin and Drake (2009), I focused on adaptations representing substantive departures from the formal curriculum (compared with more “trivial” adaptations, such as adding follow-up questions). I felt that an analysis of these substantive adaptations would contribute more to an understanding of the productivity of adaptations than would a focus on minor adaptations, which were unlikely to be significantly more or less productive than the curriculum as written. Thus, I selected six adaptations made by two teachers, Ruth and Mary (all names are pseudonyms).

Ruth is a White woman, a certified reading specialist with 23 years of teaching experience. She began teaching STARI during the pilot stage and, at the time of the study, was in her sixth year of teaching STARI. She was recorded teaching a group of seven sixth graders, four boys and three girls (although in her second recorded lesson, only five students—four boys and one girl—were present). Mary is also a White woman with 37 years of teaching experience, who was in her second year of implementing STARI at the time of data collection. She was recorded teaching a group of 10 sixth graders, four girls and six boys. Both teachers expressed a positive view of STARI; as Ruth said, “I pretty much follow the plans. I think they’re good.”

Measures

Observations. I observed each teacher three times between December 2015 and June 2016, with each observation lasting a full 50-minute class period. Observations were scheduled at the teacher’s convenience and thus were announced ahead of time. Lessons were video and/or audio recorded and transcribed to allow comparison with the formal lesson plans for the purpose of identifying and analyzing all adaptations. Because I am a former middle-school literacy teacher myself, I presented myself as a colleague to Ruth and Mary. Although I had no relationship with either teacher before data collection, they both stated that they felt comfortable having me as a visitor in their classrooms. The teachers were aware that my goal was to observe their adaptations to the STARI curriculum, and they expressed that they felt free to alter the formal curriculum as they saw fit—for instance, describing her training in STARI, Mary said, “They don’t ever say you have to adhere to the program 100%.” However, both teachers saw themselves as following the formal curriculum closely; for example, Mary said, “I pretty much follow the lessons in the book.” When asked what changes she had made, she replied, “I just pared it down a little bit. I didn’t do every single worksheet that they had because it ended up being time-consuming.” Furthermore, both teachers said that the lessons I observed were representative of their typical teaching style, with Ruth adding, “I didn’t plan for you much.”

Interviews. Immediately following each lesson, I engaged in a brief (10–15 minutes) informal interview with each teacher, discussing her goals for the day’s lesson, reflections on the lesson, and reasons for any adaptations. After the three lessons had been observed, and enacted lessons had been transcribed and compared with the formal curriculum, each teacher participated in a fourth interview lasting approximately 1 hour. In this interview, I described specific adaptations and provided

memory aids, including excerpts from transcripts of enacted lessons, excerpts from lesson plans, and artifacts such as workbook pages. For each adaptation, I asked the teacher to “talk me through her thought process” for making the change, and then asked various probing questions, including whether she would make the same adaptation the next time she taught the lesson and how she had learned to do this particular kind of teaching.

Analyses

Analysis began with a side-by-side comparison of the formal curriculum with the enacted curriculum, comparing the transcript of each lesson with the corresponding lesson plan. I used Dedoose (2016) qualitative coding software to identify each addition, modification, and omission that the teacher made, as well as any activities that she implemented in an unadapted form. I identified all adaptations, even those that seemed obvious, natural, or insignificant—for example, asking follow-up questions to help clarify students’ thinking or guide them toward an answer—because “the qualitative research approach demands that the world be examined with the assumption that nothing is trivial [and] . . . nothing is taken for granted” (Bogdan & Biklen, 1998, p. 6). Of approximately 10 hours of recorded instruction across the four STARI teachers, only 80 minutes, or about 14% of teaching time, consisted of unadapted activities from the formal curriculum. This indicates that the vast majority of instructional time does include adaptations and emphasizes the importance of careful examination of the quality of those adaptations.

After identifying all adaptations, I used open coding to name what the teacher was doing in each adaptation, creating codes that were grounded in the data and allowing new themes to emerge (Emerson, Fretz, & Shaw, 2011). For example, the most common adaptation was for teachers to add additional questions not written in the formal curriculum. I coded these in several ways. For instance, the lesson plan pictured in Figure 1 poses the question: “Why does Maleeka leave the school, crying her eyes out?” In Ruth’s enactment of this lesson, she asked her students: “Why does she leave school crying?” I coded this as *unadapted*, since it paraphrases a question from the formal curriculum. However, when students did not get the answer, Ruth asked further questions, such as, “So do you think that the only reason she was crying is because she was identified?” I coded these as *addition: follow-up question*, because they were prompted by and related to a question from the lesson plan. In contrast, in the same lesson, Ruth asked, “What did we learn about Char in that chapter?”—a question that was unrelated to any part of the formal curriculum. Therefore, I coded this as *addition: new question*. Four of the 12 lesson transcripts were collaboratively coded (Smagorinsky, 2008). In other words, after developing a preliminary codebook, I worked with a colleague to code four randomly selected lessons, discussing each data segment until we agreed on how to code it and revising the codebook as necessary. After this collaborative coding, I independently coded the remaining eight lessons.

After coding all adaptations, I purposively selected the six focal adaptations for this analysis, choosing adaptations that represented substantive departures from the formal curriculum to most effectively build theory around characteristics of productive and unproductive adaptations. I then re-read each teacher’s four inter-

views and excerpted portions where teachers discussed focal adaptations, to understand the teacher's rationale for making the adaptation. Finally, I engaged in theoretical coding (Willig, 2013; Yin, 2014), evaluating each adaptation using each of Debarger and colleagues' (2013) criteria for productivity: responsiveness to multiple stakeholders (i.e., curriculum designers and students), responsive discourse practices, and maintaining or enhancing task complexity.

Findings

In this section, each selected adaptation is thoroughly described along with the teacher's rationale, followed by results of the productivity analysis.

Ruth's Adaptations

Ruth's three focal adaptations took place during two lessons from Unit 1, for which the core text is *The Skin I'm In* (Flake, 2000). In this book, the main character, seventh grader Maleeka, is bullied for having dark skin and for wearing homemade clothes sewn by her mother. Maleeka makes a deal with a bully named Char that Maleeka will do Char's homework in exchange for borrowing Char's fashionable clothes. The novel depicts Char's bullying escalating (e.g., Char forces Maleeka to get her a new hamburger in the school cafeteria, Char shoves a cigarette into Maleeka's hand in the school bathroom) until the climax of the story, in which Maleeka and Char light a fire to destroy teacher Miss Saunders' classroom.

Adaptation 1: Increasing complexity and adding scaffolds. Ruth's first adaptation occurred during a lesson in December 2015. The lesson's objective was for students to "find evidence in a text to support judgments about character and plot." The lesson plan called for students to engage in fluency practice and then to read two chapters of the novel and complete two workbook pages. The first workbook page asked students to find and copy three quotes from the text describing the character Momma (Maleeka's mother) and, on the next page, to draw a picture of Momma. Ruth adapted this lesson in several ways. She omitted fluency practice, she had students read only one chapter and complete the first workbook page (identifying textual evidence) but not the second (drawing a picture), and she added an activity on character traits.

For this added character trait activity, Ruth provided two tools meant to scaffold students' understanding that were not drawn from the STARI curriculum: a list of words students could use to describe a character (see Fig. A1) and a blank T-chart for pairing character trait words with textual evidence, both of which she had been given by an English teacher at the school. At the beginning of the class period, Ruth introduced the character trait list, saying, "This is something we haven't done before, but I think some of you might be using that list in Ms. R's class." The students then read the chapter and completed the workbook page. When she brought the class back together, they briefly discussed the vocabulary term "don't have all her marbles," and Ruth segued smoothly into use of the character trait list. A student, Haley, said, "She's a person that likes to get along with kids, and she doesn't want to act like an adult I guess." Ruth responded, indicating the list: "Let's see if we can find

some character traits here. She doesn't act like an adult. What would you say she acts like? What's another word? Childish. She's childish. She's also what?" Students responded with more words from the list. Many of the words were accurate descriptions of the character, like brilliant, loving, and hopeful. When students offered these suggestions, Ruth repeatedly pressed for reasoning (Michaels & O'Connor, 2015), with comments like, "Where is the evidence of this?" and "Tell us why you think she's hopeful." When students suggested character traits that were off base, Ruth engaged with their thinking rather than providing negative evaluation, as illustrated in her response to a student's characterization of Momma as "insistent:"

Ruth: Insistent? I don't know. Is she insistent? Does she insist on anything?

Unknown student: I don't know what *insist* means.

Ruth: It means to make you do something. I insist you do your homework, right? You need to do your homework. I insist. Is she strict?

After a 7-minute discussion using the character trait list, Ruth transitioned into an activity using the T-chart. She modeled creating a T-chart on the board, with the trait "smart" on the left side, and the textual evidence, "She's a math whiz and can add numbers faster than anyone I know," on the right. Students copied this onto their T-chart handouts. At that point, class was over, but Ruth told students, "Tomorrow we'll do a couple together."

Ruth's rationale. In interviews, Ruth explained that she decided to incorporate these tools because "it kind of fits perfectly into what I'm doing, and it's reinforcing what they're doing in ELA [English language arts] class," and because "I think that having the list helped them—so they didn't have to do so much thinking, sort of like having the answers at the top of the page before the questions. So I think that's really helpful, especially for kids who don't have good recall or don't have good vocabulary. They don't have to think about it. It's right there." Therefore, her decision to incorporate this adaptation seemed to be based on desires to support and reinforce her students' ELA instruction and to scaffold the activity for her students.

Responsive to multiple stakeholders. Ruth's activity addressed the lesson plan's stated objective to "find evidence in a text to support judgments about character and plot." Moreover, STARI's theory of change posits that student talk is the mechanism through which students will build deep comprehension. Thus, engaging students in a discussion of Momma's character traits, facilitated by Ruth's productive talk moves, is faithful to the intentions of the curriculum designers. In addition, it seems that Ruth intended this activity to respond to student needs, as she stated that "having the list helped them."

Responsive discourse practices. Ruth engaged in responsive discourse with students, pressing for reasoning in response to answers that were on and off track. She encouraged students to contribute and to develop their ideas and supported them in drawing reasonable conclusions (Debarger et al., 2013). Thus, this adaptation meets this criterion for productivity.

Task complexity. Despite Ruth's statement that she made this adaptation so students "didn't have to do so much thinking," a comparison of this adaptation with the formal curriculum suggests otherwise. The lesson plan required students only to identify and copy three quotes from the text to describe Momma, without any re-

quirement to infer character traits from this textual evidence. Ruth's adaptation required students to infer character traits (with the list as an aid) and to provide supporting textual evidence. This adaptation enhances the task's complexity.

Adaptation 2: Increasing complexity without added scaffolds. Ruth's second and third adaptations took place during a lesson on *The Skin I'm In* (Flake, 2000), recorded in January 2016. The lesson's objectives were for students to "summarize using the 5 Ws" and "find evidence in a text to support judgments about character and plot." In this lesson, students were supposed to read and discuss two chapters of the text, including the climax of the novel. Instead, Ruth began the lesson by reviewing the concept of conflict, then had students read one chapter and engage in discussion. Ruth then led students in writing a brief summary of the chapter, reviewed conflict a second time, and then had students begin their homework. I will consider two of these adaptations: the summary students wrote and Ruth's teaching of conflict.

After Ruth's students had read the chapter and engaged in discussion using questions from the lesson plan, she directed students to write a "10-word gist," or brief summary of the chapter. She distributed sticky notes for students to write on and modeled writing her own gist on a small whiteboard. She told me that students completed a 10-word gist after every chapter, and they were clearly familiar with the activity; for example, they knew Ruth's rule that "names don't count" toward the 10-word maximum. As in the character trait activity, Ruth used questioning to address misunderstandings and to push students to add information. For instance, when student Thomas suggested, "Maleeka got her shoulder blade broken and busted her knee open," Ruth responded: "Wait a minute. Is that the important part? What happened that was the most important part here?" When Haley suggested, "Maleeka, Char, and twins got caught by janitor," Ruth responded, "Got caught doing what? . . . How did they destroy the room? What's the biggest part of it?" The class spent approximately 2 minutes completing this activity.

Ruth's rationale. Ruth stated that the 10-word gist is her preferred summarizing activity because "they have to synthesize what they read." Furthermore, she added that students would place their gists, written on sticky notes, in the text at the end of the chapter to use as a "memory thing." She also said several times that students "really like doing" the gist. Therefore, she made this adaptation to encourage students' ability to synthesize text into a brief summary, to provide a record of what they had read to consult in the future, and perhaps to engage students.

Responsive to multiple stakeholders. The objective for this lesson plan was for students to "summarize using the 5 Ws." Ruth's adaptation, having students summarize using a 10-word gist, seems faithful to the intention of the curriculum designers, as it is simply a different activity aimed at the same skill. Also, Ruth had considered how this activity might benefit her students.

Responsive discourse practices. This particular adaptation did not seem to include responsive discourse practices. Students worked largely independently (though several spontaneously shared their work aloud). Ruth engaged with their thinking, but largely in the form of veiled corrections ("Wait a minute. Is that the important part? What happened that was the most important part here?") and requests for additional information ("Got caught doing what? . . . How did they destroy the room? What's the biggest part of it?").

Task complexity. Ruth argued that a 10-word gist, compared with a 5 Ws summary, would force students to synthesize the text they had read. Although this seems likely, given the level of support students needed to complete the task—essentially, through questioning, Ruth told them what to write—it is possible that they would have derived more benefit from the less complex 5 Ws summary. Furthermore, of the 41 conversational utterances that took place during the completion of this task, 15 (more than a third) were solely concerned with the number of words a student had written (e.g., “Isn’t that only one word, ‘cause the names don’t count?” and “You should count ‘&’ even though it’s a symbol”). This adaptation had the potential to increase the complexity of the task; however, this enactment may not have done so effectively.

Adaptation 3: Adding a tool and creating confusion. In the same lesson, Ruth added instruction around the concept of conflict by using a long piece of colored yarn—red on one side and blue on the other—that she had draped around her neck like a scarf. She began class by asking students to summarize the chapter they read in the previous lesson, then interjected, “Oh, so there’s a conflict. Okay, so Maleeka is conflicted because before this—so you see this? This is the rope. It’s like a tug of war.” Through questioning, she tried to get students to see that characters Caleb and Char are pulling Maleeka in opposite directions. However, as illustrated in the following excerpt from the lesson transcript, students seemed to struggle to come up with the answers she was looking for, and Ruth ended up answering most of her questions herself:

Ruth: What’s Caleb’s plan?

Kyle: He’s like trying to convince her not to go.

Ruth: What does he want to do, though?

Haley: Well, Maleeka likes—

Thomas: He’s trying to change things.

Ruth: In the school, right?

Thomas: Yeah.

Ruth: He wants to—he was cleaning the bathrooms. He wants to clean things up, right? So that’s Caleb pulling at her. She’s that knot in the middle. Okay?

[Thomas then brought up another character, and Ruth tried to prevent the conversation from deviating.]

Ruth: Okay, so we have Caleb. I want to get back to Caleb. So Caleb is in the red, right? He’s saying—

Roman: Don’t go.

Ruth: Well, he’s saying—he says—I’ll quote it for you, “Char’s the kind of friend that will get you locked up or shot up.” Ooh.

Roman: Shot up?

Thomas: Oh, wow.

Ruth: And he wants to clean up this McClenton High School, right? What about Char? She’s the blue.

Ethan: She wants to like—

Ruth: No, she’s planning on doing what to the school or the room?

Kyle: To jack up Miss Saunders and the room.

[The class then briefly discusses Char.]

Ruth: So do you see the conflict that Maleeka's having? Does she do a good thing or does she do the bad thing?

Roman: I feel like she's right in the middle.

Ruth: She's right in the middle. What do you think she's going to do?

[The class then makes predictions before they begin to read the chapter. Conflict is not mentioned again before reading.]

The transcript excerpt above illustrates some challenges that Ruth faced incorporating this additional tool, the colored rope, into the lesson. She did not engage with student thinking when they suggested answers different from the ones she had in mind (e.g., when Kyle said, "He's trying to convince her not to go," or when Ethan said, "She wants to like—" and Ruth cut him off). While there did seem to be some level of student understanding by the end of the discussion ("She's right in the middle"), it was unclear whether the rope tool contributed to students' understanding. This activity took approximately 2 minutes.

After students read the chapter, discussed it, and completed the 10-word gist, Ruth returned to using the rope as a tool to support students' understanding of conflict. It appeared that she did so on the spur of the moment, as she introduced the activity by saying, "I didn't plan on this, but I'm going to give you some choices. . . . Are you understanding the narrative arc a little bit better? . . . Do you want me to go over that again? Let me just go over it." She began by pointing at a narrative arc chart (see Fig. A2) on the whiteboard, and then referred to the rope, asking students to list conflicts that had taken place in the story so far and then tying a knot in the rope to represent each conflict. The class came up with a total of seven conflicts, of which three were suggested by students and four by Ruth. Typically, students were able to come up with the conflict Ruth had in mind through her questioning. For instance, Ruth asked: "Did [Maleeka] ever try to get back at Char?" Students replied, "No." Ruth prompted, "Secretly? Come on. Think about it." Thomas then came up with the example that Ruth seemed to have in mind. Throughout this discussion, students several times displayed confusion about the purpose of the rope; for example, at one point Thomas said, "So the bigger the conflict, the bigger the knot?" Ruth responded: "Well, it's just the way I'm tying them." At another point, Thomas seemed to believe the rope was representing character change: "So in the beginning of the year, she's red and now, she's like. . . ." Ruth concluded this activity by saying, "Anyway, do you see the conflicts now? Is that getting kind of clear?" Students chorally responded, "Yeah," and Ruth moved on and let them begin their homework. This second rope activity took approximately 6 minutes.

Ruth's rationale. Ruth explained that "I knew [the students] had trouble with conflict, and I knew they didn't understand it." She chose to use the rope because "they're such concrete thinkers." She explained that the rope came from another reading curriculum she had taught, called Project Read. When, after the lesson, she reflected on the activity where she knotted the rope to review the conflicts in

the text, she said, “I think it made them pause, reflect. . . . I think the visual, the actual knotting, was more fun and more engaging for them.” Thus, Ruth used the rope to try to make conflict more concrete for her students and perhaps to engage them.

Responsive to multiple stakeholders. The objective of this lesson was to find evidence to make judgments about plot. According to the lesson plan, the teacher was supposed to set a purpose for reading by telling students that events in the story have been building to a climax and to sum up the lesson by reviewing the story’s events using a narrative arc. The homework assignment was a worksheet about conflict in the text. Therefore, Ruth’s choice to use the rope to teach conflict seemed faithful to the intentions of the curriculum developers. It appears that Ruth also considered her students’ need for concrete visuals when designing this adaptation.

Responsive discourse practices. Although Ruth attempted to engage her students in discussion around her use of the rope to teach conflict, the resulting discussion was closer to an example of recitation than of responsive discourse. Although some content—notably, almost half the conflicts represented by knots in the rope—was student generated, Ruth seemed to have correct answers in mind that she attempted to elicit from students through questioning.

Task complexity. Ruth’s enactment changed the content of the lesson very little, merely using the rope as alternative representations of conflict at the beginning of the lesson and of rising action after reading. Thus, this adaptation could be said to maintain the complexity of the task. However, the confusion that resulted from Ruth’s use of the rope was probably unproductive.

Mary’s Adaptations

Adaptation 1: Increasing complexity and participation. Mary’s first focal adaptation took place during a lesson on *The Skin I’m In* (Flake, 2000), recorded in January 2016. The lesson’s objective was for students to “participate in a structured debate” about who has the power: Char or Maleeka. The formal curriculum suggested dividing students into groups of four, each assigned to argue for Char or for Maleeka. Within groups, the curriculum suggested assigning each student a role: facilitator, timekeeper, recorder, or presenter. Each group would then collaborate to write talking points in support of their argument, using a workbook page as a template. On debate day, presenters would deliver their group’s prepared argument. The lesson plan used language like, “Encourage presenters to look up some of the time, not just to read from the page. If they practice enough, they may be able to do this!” and “The audience may ask questions of each team at the end of their presentation.” Thus, in the formal curriculum, the day’s activity was clearly a “structured debate,” rather than a true debate involving dialogic argumentation (Nielsen, 2013). Mary, on the other hand, engaged her students in a true debate.

The beginning of the lesson plan suggested that in “debate preparation,” presenters from each team should practice delivering their arguments. Instead, Mary began class by giving her students time to gather evidence, continued from a previous day. Students divided into groups and collected evidence from the text on sticky notes. Mary circulated to assist, repeatedly engaging with students’ thinking, and sometimes facilitating switching of sticky notes among groups if someone collected evidence that would better support the other point of view.

After about 20 minutes, she asked students to move their desks into two rows of five, facing each other, representing the Char and Maleeka teams. Introducing the debate, she said, "I don't want to be in charge of the debate. I want you to be in charge of the debate and being as grown up as you possibly can." She selected a student director for each group to call on their teammates to speak. The debate began with each student sharing his or her position along with one piece of evidence. Mary intervened three times, each time to clarify students' thinking and/or press for reasoning, as in the following excerpt:

Mary: So why did Maleeka have the power there?

Eric: Because she could have called the cops or walked out.

Mary: Did anyone else know that Char had to do this?

Eric: Only Maleeka.

Mary: So that puts her in power in a way?

Eric: Yeah, because she knows why Char is so bossy.

When all students had shared their positions, Mary opened up the discussion, asking, "Is there anybody that wants to rebut a statement about Char having power?" For the remaining 17 minutes of the debate, students engaged in four topical episodes, defined as "all turns of talk or utterances lying between topic shifts" (Boyd & Rubin, 2006, p. 151) of dialogic argumentation. The first, lasting 4 minutes, was about an episode in which Char forced Maleeka to get her a new hamburger, and Maleeka retaliated by covering the mold on the hamburger bun with ketchup and mustard. Student Ryan had introduced this topic as evidence that Char had the power. In response to Mary's request for rebuttals, Eric responded, "I disagree with Ryan because she wasn't forcing Maleeka to do it. Maleeka could have said no and walked away. . . . Maleeka had the power to walk away and not do what Char said." Mary then encouraged dialogic argumentation by returning to Ryan, asking, "Do you agree?" This topical episode continued for 4 minutes and involved the participation of two more students besides Eric and Ryan.

The next topical episode was also student initiated. It began when Mary asked, "Does anyone else have anything they would like to discuss and talk about with another person on the team?" and student Joshua responded, "I have something. Can I do one more of mine?" He then introduced the topic of the deal between Maleeka and Char, in which Maleeka would do Char's homework in exchange for borrowing Char's clothes. This topic was discussed for 5 minutes.

The two remaining topical episodes were both introduced by Mary: she introduced the third episode by saying, "What about the cigarette incident? Who was in power there?" This topic was discussed for about 1.5 minutes. Mary then introduced the fourth and final topical episode, Char's home life, by saying, "So this is what I wonder. Why would [Maleeka] put herself in this situation? What does she know about Char that keeps Char in power?" Students discussed this topic for approximately 4 minutes. Throughout the debate, Mary engaged in talk moves such as pressing for reasoning ("So you're agreeing with Jack? Why would you agree? How is just putting mustard and ketchup on the hamburger showing that Maleeka has the power?"), encouraging students to say more about their ideas ("So what are

you arguing here, that Maleeka could have had the power?”), and inviting other students’ ideas (“Does anyone disagree with Jack? . . . Did Maleeka have power at that moment?”; Michaels & O’Connor, 2015). Near the end of the class period, Mary cut off the debate and asked students to raise their hands to show whether they thought Maleeka or Char had the power. Remarkably, almost all the students raised their hands to indicate that Maleeka had the power—remarkable because, first, this position represented a more inferential interpretation of power in the text, and second, because this group of middle-school students changed their minds based on a class discussion rather than becoming entrenched in their positions.

Mary’s rationale. Mary explained her adaptation to the debate structure: “I didn’t set it up where people weren’t involved. I had tried that where I had Teams 1 and 2 up here and 3 and 4 back here. But it just seemed, for that group in particular, better if everyone was involved and could take, get involved in the discussion. And I think everyone was participating. And that’s what I’m always looking for, 100% participation. . . . [This group of students] is a very immature group. And any time left on their own, they’re just not engaged. I’m looking for engagement and motivation.” Thus, this constituted a “learned adaptation,” where she drew on knowledge from previous enactments of this curriculum to inform her decision (Choppin, 2011). Her goal was to increase student engagement and participation by involving all students in the debate.

Responsive to multiple stakeholders. STARI’s theory of change explicitly states that student talk is the mechanism through which deep comprehension will develop. Mary’s rationale for whole-class participation in the debate was to meet her goals of “100% participation” and “engagement and motivation,” both goals that are well aligned with STARI’s theory of change. Thus, Mary’s adaptation of this debate to include the participation of all students was faithful to the intentions of the curriculum developers. Furthermore, her adaptation was based on observations of her students. She had tried using the structure described in the lesson plan before and felt that it was disengaging to the students who were not actively participating. Thus, this adaptation was responsive to both the curriculum designers and Mary’s students.

Responsive discourse practices. Mary’s adaptation to a whole-class debate emphasized the contributions of all students. Her talk moves throughout the debate encouraged students to develop their ideas (as she pressed for reasoning) and to listen to others’ ideas (as she repeatedly invited students to respond to their peers; Michaels & O’Connor, 2015). Thus, this adaptation supported responsive discourse practices.

Task complexity. The lesson plan called for students to read aloud a prepared argument in response to the debate question. Mary required her students not only to prepare an argument but to engage in dialogic argumentation—listening and responding to one another in the moment, drawing on textual evidence—a structure that allowed them to modify their own views in light of the evidence presented by their peers. Thus, this adaptation enhanced the task’s complexity.

Adaptation 2: Adding an activity. Mary’s second adaptation took place during a lesson recorded in April 2016. At this point, she was teaching Unit 2, on *Locomotion* (Woodson, 2003). This text, a novel written as a series of poems, is about main char-

acter Lonnie's adjustment to living with a foster family. The lesson plan objectives were for students to "improve reading rate and phrasing," "notice character traits," and "notice formatting of poetry as opposed to prose."

Mary chose to begin class with a teacher-created activity in which students wrote original poems, saying, "we said every single day we're going to be writing poetry." She distributed and read aloud a list of phrases that the curriculum had included for a block party to introduce the text (see Fig. A3), saying, "If you need some ideas, I figure that probably all of these . . . ideas happen in people's lives." She instructed students twice to write a memory poem, and while they wrote on lined paper, she wrote her own poem on the whiteboard. After approximately 7 minutes of writing time, Mary read her poem on the board aloud and then invited students to share their poems (see Fig. A4). Three students shared, and Mary responded with quick verbal feedback; for instance, in response to Kevin's poem about an amusement park visit, she said:

Do you think there's some language you can add to that to make it more dynamic? . . . How do you feel in your belly? When you go to the top of the rollercoaster—if you were to write another poem, I would like it set when you're at the top, the top, the top, and your stomach is in your mouth, and you feel like you might throw up, and you're screaming and laughing but really you would rather be crying. . . . You know what I'm saying? Just that actual one moment where you were feeling like, "Oh, I'm out of control. My body is going to hurl out of this car, and I'm going to fly across the world." Add some imagination to it. Someone else want to share?

In response to Sierra's poem about a car trip to Florida for her birthday, Mary said, "You could have even said on the last line, the best birthday gift ever. Driving hours and hours, 17 hours, oh my gosh. Nonstop? Did you put in the word nonstop? . . . Someone else want to share?" In total, this activity took approximately 23 minutes.

Mary's rationale. In interviews, Mary spoke at length about her love of writing and her extensive training in writing and the teaching of writing, including work with the National Writing Project. She explained her decision to add poetry writing to the *Locomotion* unit: "I'm very big into writing. Always done a lot of writing with my students. I think it's really important . . . even for those kids who you would say are basically nonwriters. . . . It's that fluidity of being able to understand that you can write. . . . And they can do it, but they need more of that, I think." Thus, her decision to make this adaptation seemed primarily based on her own strengths and interests as a teacher.

Responsive to multiple stakeholders. STARI is principally a reading program, which does not include much writing-related instruction, and the lesson's objectives all focused on reading rather than writing. Thus, Mary's adaptation was not entirely faithful to the intentions of the curriculum developers. Mary believed that writing poetry was beneficial to her students, that it helped them believe that they could write, and that "they love writing the poems," suggesting that she planned this activity in response to her perceptions of her students' needs.

Responsive discourse practices. Mary attempted to provide feedback on her students' poems when they read them aloud. However, this feedback tended to take the form of evaluation rather than responsive discourse. In both examples provided, she rephrased sections of students' poems, telling them what to add or change, and then moved on without giving Kevin or Sierra the chance to respond. Thus, this adaptation did not reflect responsive discourse practices.

Task complexity. Writing poetry is certainly a complex activity, more complex, many might argue, than reading poetry. Thus, this adaptation did seem to maintain or enhance the overall complexity of the lesson.

Adaptation 3: Modifying an activity and changing its purpose. Mary's third adaptation occurred during the same lesson on *Locomotion*. According to the lesson plan, students were supposed to begin with fluency practice, then read two poems from the text with a partner and complete four workbook pages. Mary skipped fluency practice, the reading, and two of the workbook pages; after poetry writing, she spent the rest of the class period focused on one adapted activity from the workbook. The workbook page provided students with all of the words from "Line Break Poem," the poem on page 4 of *Locomotion*. Students were supposed to cut these phrases out and then paste them onto the next page of the workbook. The workbook instructed students to "Make it look just like page 4 in *Locomotion*" (see Fig. A5).

Instead, Mary instructed students to cut up the lines and paste them onto their paper in any order of their choice, and then to add four more lines, creating an original poem. Students worked on this for approximately 25 minutes. Student confusion was evident, as students repeatedly asked questions: "Can we glue it on the next page? I don't know where to glue it"; "Can you put them in a different order?"; "We're not allowed to write words on here? They have to be from this?" Mary responded to individuals with clarifications, but it was apparent that her frustration was increasing as she began making comments like, "Kevin, where are your listening skills? I've said this four times," and "What's so hard about this? If you would just sit and concentrate. . . ." To conclude the activity, five students shared their poems, and then Mary attempted to bring the activity back to the text by saying, "'Line Break Poem.' Look it up on page 4, right there. See how they did it. What's different between yours and theirs? They're much smaller, aren't they? All right. Did you look at the poem on page 4? It's different." At that point, class was over and students began to pack up their belongings.

Mary's rationale. Mary explained that her students gave her the idea for this adaptation, and she decided in the moment to make the change: "A couple of them asked me, 'Well, do we have to put it in the same order?' . . . And then my creativity took over and I said, 'Well, see what you come up with.' . . . I thought that was a much deeper way of—rather than just copying. . . . I think we ran out of a little bit of time, but we talked the next day: 'Why did the author choose to write it this way?' And that to me is, you're getting into analysis and evaluation." Thus, she made the adaptation in response to a student's idea, with the intention of increasing the task's complexity and making it more "creative."

Responsive to multiple stakeholders. The lesson objective states that students should "notice formatting of poetry as opposed to prose." It is possible that students

could have met this objective through this activity; however, the recorded lesson offered no evidence that this objective was met. Mary's brief reference to the poem on page four of *Locomotion* in the last few moments of the class period was insufficient for students to comprehend the use of line breaks in poetry. Perhaps students met this objective through the next day's discussion that Mary referenced in her interview; however, based on the lesson recording, this adaptation does not appear to be faithful to the intentions of the curriculum designers.

Mary explained that she made this adaptation in response to her students' questioning of the activity and that "they were much more into it" than they would have been if she had implemented the activity as written. Thus, it appears that she made this adaptation in response to a student's suggestion and in an attempt to make the activity more engaging for her students, though it is unclear whether she considered her students' skills.

Responsive discourse practices. This activity involved very little discussion. Most interactions involved student confusion and teacher clarification. Even when Mary provided more substantive feedback (e.g., "Think about punctuation as well. Are you going to need quotation marks? Do you want an exclamation mark? Do you want something said with feeling?"), the feedback tended to be brief and somewhat evaluative, with little room for students to respond. Thus, this adaptation did not reflect responsive discourse practices.

Task complexity. Creating an original poem by reorganizing and adding to the language of a poem from the text is certainly more complex than simply "copying" the poem from *Locomotion*. Thus, this adaptation did maintain or increase task complexity.

Discussion

This study analyzed the productivity of adaptations made by two experienced teachers engaged in sustained implementation of an adolescent reading intervention, after the formal RCT had concluded. Through observation and interview, I identified adaptations each teacher made to the curriculum and evaluated the productivity of three adaptations made by each of two teachers. Ruth's three focal adaptations were (a) asking students to infer character traits, rather than merely collecting evidence, and adding a list of character traits and a T-chart to scaffold their ability to do so; (b) asking students to summarize a chapter they had read using a 10-word gist; and (c) using a prop (a rope made of red and blue yarn) as a visual aid in teaching conflict. Mary's three focal adaptations were (a) involving the whole class in a debate rather than having representatives from each group read aloud a prepared argument, (b) adding a creative writing activity by asking students to write an original poem, and (c) adapting the use of curriculum materials to turn an exercise in recognizing line breaks into a creative writing activity by asking students to create original poems.

All three of Ruth's adaptations were faithful to the intentions of the curriculum designers. Furthermore, each of her adaptations had the potential to maintain or enhance the task's complexity. In her first, most productive adaptation (the character trait activity), she provided students with scaffolds (a trait list and T-chart)

to support them in tackling this increased complexity. However, in her other two adaptations, students struggled significantly with the tasks. In addition, only the character trait adaptation reflected responsive discourse practices. In contrast, all three of Mary's adaptations increased the level of task complexity compared with the activities in the formal curriculum. However, two of the three adaptations were not faithful to the intentions of the curriculum designers, nor did they reflect responsive discourse practices.

After examining all six adaptations, I propose that all three of DeBarger and colleagues' (2013) criteria may need to be met for the adaptation to be considered productive. Each teacher made one very productive adaptation (Mary's debate and Ruth's character trait activity), in which she stayed faithful to the intentions of the curriculum designers, increased the level of task complexity while meeting her students' needs with appropriate scaffolds, and engaged in productive talk moves to encourage students to develop their ideas. The other four adaptations, by failing to meet one of these criteria, must be considered unproductive. For example, Mary's second and third adaptations, the two that involved student poetry writing, were both complex and creative tasks. However, in neither case was it evident that the intended student learning took place, and still less evident that this learning was equivalent (or superior) to that which would have occurred if she had enacted the lesson plan as laid out in the formal curriculum.

Choppin's (2011) work examining learned adaptations to a mathematics curriculum demonstrated a similar proportion of productive adaptations; one of the three teachers in his study made productive adaptations, whereas the other two made adaptations that were less productive (though Choppin did not provide clear criteria for productivity). The factor that differentiated the more productive teacher was her analysis of student thinking and focus on how curricular resources functioned to support student learning. Importantly, though both Choppin's work and the present study focused on learned adaptations, neither focused on structured adaptations (Kearns et al., 2010; Kim, Burkhauser, et al., 2017), in which teachers were supported to adapt in ways consistent with core curriculum components. One promising direction for future research might be to examine the productivity of structured adaptations.

Finally, it must be acknowledged that even the two productive adaptations had room for improvement. Although Mary's interventions into the debate consisted mostly of skillfully deployed productive talk moves, she did not accomplish her own goal of students, rather than herself, being "in charge of the debate." Furthermore, the debate was dominated by three (male) students. Of the 10 in the class, several only spoke when Mary called on them directly. Although Ruth's students appeared mostly to select appropriate descriptors for Momma, she ran out of time before students began the more complex task of supporting these traits with evidence.

Implications

Given the lack of attention in the existing research literature to sustained intervention implementation or to evaluating teachers' adaptations to curriculum, this

study suggests several important implications for development, implementation, and analysis of future reading interventions. Despite the extensive professional development teachers received in implementing this curriculum, only a third of the six focal adaptations were productive. To some extent, this reflects the challenges inherent in teaching adolescents who read significantly below grade level. Often, teachers' rationales for their adaptations involved trying to engage a population of students who are often disengaged, or attempting to differentiate to meet the wide range of needs their students presented. However, these attempts were not always successful.

Perhaps this finding should lead to a call for a renewed emphasis on fidelity; however, previous research suggests that this emphasis is ineffective. The SFA program, for example, has, over the course of more than 20 years, shifted away from a fidelity-focused approach to implementation "because it found that schools and trainers were overly focused on visible details of the implementation rather than the theory underlying their use. Superficial engagement with the program seemed to result in compliance to mandates and fidelity to implementation but did not necessarily translate into enhanced student outcomes. . . . Thus, SFA increasingly emphasizes an understanding of the theory behind the [curriculum] tools, as it has found that it was important for teachers to understand the concepts behind the tool in order to utilize the tools more effectively or adapt them to fit the needs of students" (Datnow & Park, 2010, p. 85). Drawing on lessons from SFA and other programs, I suggest that rather than an increased focus on fidelity, curriculum design and teacher training should be oriented toward supporting teachers in making productive adaptations even in early stages of implementation. Earlier research into teacher implementation of STARI shows substantial teacher-level variation in fidelity of implementation during the RCT phase, suggesting that teachers make significant adaptations even when instructed to implement with fidelity (Troyer, 2017a). Therefore, because adaptation is inevitable, professional development at all stages of intervention implementation should focus on increasing the productivity of these adaptations. Throughout their initial and ongoing training, teachers should be taught which aspects of an intervention are core components that must be implemented as written, and teachers should be supported in making structured adaptations to other intervention components (Kim, Burkhauser, et al., 2017; Lemons et al., 2014). Furthermore, teachers should be taught the three criteria for productive adaptations described in this article and asked to use these criteria to examine their own adaptations.

In addition, drawing on recent work on educative curriculum materials in math and science (e.g., Davis et al., 2014), I propose that curriculum materials should provide teachers with rationales for both content and instructional strategies. According to Remillard (2000, p. 347), curriculum materials typically "speak through teachers, by guiding their actions. [They do] not speak to them about these tasks or the ideas underlying them." Teachers are positioned as passive "transmitters" of curriculum (Ben-Peretz, 1990), with their "implicit role . . . to 'deliver' activities to students" (Remillard, 2000, p. 346). However, research suggests the importance of teachers understanding the "first principles" of a reform to adapt it successfully; without deep understanding of these principles, their adaptations are unlikely to be aligned with the intentions of the curriculum developers (Han & Weiss, 2005;

McLaughlin & Mitra, 2001). This also underscores the importance of sustained implementation of interventions, as teachers are unlikely to reach this understanding of principles in early enactments of a new curriculum.

Limitations and Conclusion

Although the findings of this study make an important contribution to our understanding of teachers' adaptations to intervention curricula, several limitations should be acknowledged. One limitation is this study's exclusive focus on the work of teachers while glossing over the role of students in contributing to (productive or unproductive) adaptations. Unfortunately, it was beyond the scope of the present study to collect student-level data, such as literacy achievement scores or student reports on teachers' effectiveness, that might have been used to triangulate this analysis of the productivity of adaptations. In lieu of this, I have tried to provide "enough descriptive evidence in the text so the reader might be able to offer an alternative hypothesis, a different interpretation of the data" (Lawrence-Lightfoot & Davis, 1997, p. 91)—in other words, to present sufficient thick description of each focal adaptation for readers to make their own judgments about its productivity. In addition, the present study's focus on evaluating whether a particular adaptation is productive or unproductive may oversimplify the nuances of productivity; future work may benefit from considering a scale of productivity rather than a binary relationship between productive and unproductive adaptations. Despite these limitations, this study offers an important contribution to the literature, as previous research on teacher adaptations to literacy curricula is limited. This study provides valuable insight for future developers of intervention curricula by helping us understand the ways in which teachers productively and unproductively adapt curricula. Furthermore, this study examines sustained implementation of a literacy curriculum, an area that is rarely researched.

In conclusion, I would like to recognize the challenges inherent in implementing a complex curriculum or in working with students significantly below grade level, let alone doing both at the same time. Therefore, like Charalambous and Hill (2012, p. 461), I ask that my work "be read more as an analysis of the work of teaching rather than as a critique of the teachers" (emphasis in original). In fact, I am tremendously grateful to Ruth and Mary for allowing me to visit their classrooms and for using their limited time to share their perspectives with me.

This study supports the findings of previous researchers that suggest that although adaptation is inevitable (Burkhauser & Lesaux, 2015; Datnow & Castellano, 2000; Leko et al., 2015), productive adaptation is difficult (Ben-Peretz, 1990; Taylor, 2013). Therefore, curriculum developers and coaches should plan with adaptation in mind. Curriculum should be designed to speak "to" teachers by including educative materials. In addition, the professional development that takes place with the introduction of any new curriculum should include training, coaching, and practice in productively adapting curriculum to meet the needs of a teacher's unique situation. Curriculum cannot meet the needs of struggling learners while bypassing, or speaking "through," teachers, as teachers always adapt curriculum. Therefore, only by supporting teachers in making productive adaptations can we hope to improve learning outcomes for students.

Appendix

A List of Character Traits		
active	compassionate	exciting
adventurous	competitive	fair
affectionate	conceited	faithful
afraid	concerned	fidgety
ambitious	confident	fierce
angry	confused	foolish
annoyed	conscientious	friendly
anxious	considerate	frustrated
argumentative	cooperative	funny
astonished	courageous	generous
attentive	cowardly	gentle
babyish	critical	glamorous
bewildered	cross	gloomy
bored	cruel	greedy
bossy	curious	grouchy
brave	dangerous	happy
brilliant	daring	hateful
busy	dependable	helpful
calm	determined	hopeful
capable	discouraged	hopeless
careful	dishonest	humorous
cautious	disrespectful	ignorant
charismatic	doubtful	imaginative
charming	eager	immature
cheerful	easygoing	impatient
childish	efficient	impolite
clever	embarrassed	impulsive
clumsy	energetic	inactive
cold-hearted	enthusiastic	independent
insistent	puzzled	sweet
intelligent	quick	tactful
jealous	quiet	talented
joyful	reliable	talkative
lazy	relieved	tasteful
logical	respectful	tenacious
lonely	responsible	terrified
loving	restless	thankful
loyal	rowdy	thoughtful
lucky	rude	thoughtless
mature	sarcastic	thrifty
mean	satisfied	timid
meticulous	scared	tolerant
moody	secretive	touchy
mysterious	selfish	trusting
nervous	self-reliant	trustworthy
noisy	sensitive	uncontrolled
obedient	silly	unfriendly
obnoxious	sincere	unselfish
observant	skillful	upset
optimistic	sly	useful
peaceful	smart	valiant
persistent	sneaky	versatile
pessimistic	snobbish	vivacious
picky	sociable	vulgar
pleasant	stingy	warm-hearted
polite	strange	weak
popular	strict	wise
precise	stubborn	witty
proud	studious	worried

Figure A1. Character trait handout.

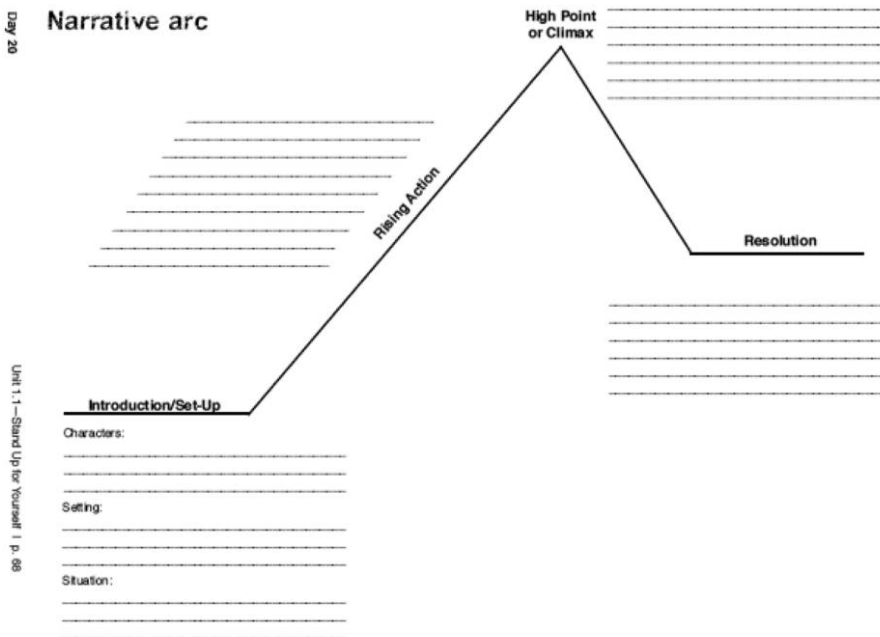


Figure A2. Narrative arc chart.

Day 13 Activities

1. Review homework

Students share their memory poems. Consider having partners share poems, and then asking for volunteers to read their poems to the whole class. Encourage other students to respond with something they liked about the poem.

2. Block party to launch *Locomotion*

Each student has a phrase strip showing a line from *Locomotion*. Students mingle, reading their phrases to each other and discussing how they might be related. Then, small groups work together to make predictions about the characters, setting, or happenings in the new book based on the phrases.

1. Introduce the activity.
2. Distribute one phrase strip to each student (repeats are fine).
3. Students mingle, reading their phrases to each other and discussing possible connections.
4. Class breaks into small groups of four to five students.
5. Groups discuss what they think will happen in the new book based on all the phrases they heard and ideas they discussed.
6. Groups work together to write predictions on **workbook p. 79**.

Locomotion phrases

- When you don't know where your sister is anymore
- I used to laugh real loud
- Children should be seen and not heard, Miss Edna said.
- it's Miss Edna's over and over and over Be quiet!
- There used to be four of us
- I see the firemen wearing oxygen masks
- sometimes people lie
- I don't know why he's so evil some days
- stop thinking about moving 'cause this is home
- Not a whole lot of people be saying Good, Lonnie to me
- feels like June's a long, long way away
- me and her don't always get along but she's all I got right now
- I write the word HOPE on my hand
- Knows some things we'll never know
- I want to say You sure are something
- How long will he carry this burden?
- Lots and lots and lots of words
- Sounds like it should always be in this house

Figure A3. Phrases for *Locomotion* “block party.”

Student poems from creative writing activity

Kevin's poem:

Sunny hot day
tons of people
running to the tallest ride
waiting in line like waiting for a
microwave to beep
strapped in
going uphill slowly
at the top
everyone screaming
going downhill
going upside down and all around
having fun
finally stopped

Sierra's poem:

In the car
At a rest area
in Connecticut on my birthday
getting gas
thinking I'm going to be *[inaudible]*,
use the bathroom,
back in the car
put on my seatbelt
my parents tell me we're going to
Florida.
I freak out, then realize
we have 17 more hours to go,
I look back,
and that's why
my little sister is wearing shorts
my mom told me
she packed me clothes,
we drive and drive,
I could feel it getting hotter
I have not been to Florida in years
I tell them this was the best birthday gift
ever

Figure A4. Student poems from creative writing activity.

Read the poem out loud as if it were not a poem. Read it like regular prose or speech. (Hint: it may be easier to read on the next page!)

Cut up the sentences on the next page from "Line Break Poem."

Glue each part of a sentence down on the lines below. Make it look just like page 4 in *Locomotion*.



Talk to your partner.

Now that you're done making the line breaks, what words stand out?

Figure A5. "Line Break Poem" activity.

Line Break Poem

Ms. Marcus
says
line breaks help
us figure out
what matters
to the poet
Don't jumble your ideas
Ms. Marcus says
*Every line
should count.*
(Woodson, 2003, p. 4)

Jack's poem:

Don't jumble.
Matters count to the poet.
Line break,
every line should
help you figure out what your idea said.
Ms. Marcus explains

Figure A6. "Line Break Poem."

Notes

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1. Wilson's *Just Words*, <https://www.wilsonlanguage.com/programs/just-words/>

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