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# Successful Implementation of High-Quality Instructional Materials

## 5 Case Studies

By Amanda Fuchs Miller and Lisette Partelow September 2019

Center for American Progress



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# Contents

- 1 Introduction and summary**
- 2 Tulsa Public Schools**
- 5 Fort Dodge Community School District**
- 7 Orange County Public Schools**
- 9 Pasco County Schools**
- 12 OpenSciEd**
- 15 Conclusion**
- 16 About the authors**
- 17 Endnotes**

# Introduction and summary

While numerous studies show that high-quality curricula affect student achievement, adopting such curricula is just the beginning. In fact, new research on the topic found that even when elementary schools used highly rated math textbooks, there was little evidence of differences in average student achievement growth. The researchers suggested that differences in use and support could influence a given textbook's efficacy.<sup>1</sup>

In August 2018, the Center for American Progress published a report examining the extent to which public school districts have chosen to adopt highly rated instructional materials.<sup>2</sup> As part of that research, the authors spoke with representatives from districts that had served as models because they had adopted and implemented instructional materials rated as highly aligned to the Common Core State Standards across grade levels and subject areas. These district representatives and other experts emphasized the importance of thoughtful processes for implementation of new curricula, especially instructional materials that were intentionally designed to facilitate shifts in teacher practice.

This new report continues that research, examining five different approaches to successful professional learning as it relates to the implementation of high-quality instructional materials. It shares lessons learned that districts and school leaders should consider as they prepare teachers and provide them with the knowledge and skills to ensure that the adoption of high-quality instructional materials translates into improvements in student achievement. These case studies demonstrate that when provided with the appropriate supports, teachers can develop the content and pedagogical knowledge that they need to help their students successfully tackle the challenging material found in high-quality curricula.

# Tulsa Public Schools

An urban public school district in Oklahoma, Tulsa Public Schools has 39,609 students enrolled in pre-K through 12th grade.<sup>3</sup> It contains 87 public schools and charter partners.<sup>4</sup> The student population is 24.5 percent Caucasian, 24.4 percent Black, 34.1 percent Hispanic, 5.3 percent Native American, and 2.1 percent Asian.<sup>5\*</sup> Eighty percent of students in the district are eligible for free or reduced-price lunch.<sup>6</sup>

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Providing content-based professional development that is aligned with college-career ready standards

In an interview with one of the authors, Devin Fletcher, the chief talent and learning officer of Tulsa Public Schools, said that the question that the school district's leadership asks about professional development is, "How are we as a district creating strong experiences for leaders to continue to build content knowledge and ensure they understand standards?"<sup>7</sup>

In June 2014, Oklahoma Gov. Mary Fallin (R) signed a law requiring her state to have new academic standards ready in 2016 to "ensure students are prepared for higher education and the workforce, reflecting Oklahoma values and principles."<sup>8</sup> When the district had previously adopted new curricula that was based on district standards which were aligned with the Common Core, teachers were offered only limited opportunities for professional development. That professional development mainly consisted of districtwide workshops provided to large rooms of teachers from different schools, grades, and subjects. The reviews of that offering from the district's educator workforce were mixed. Previous professional development efforts around curriculum also fell short because there were no opportunities for teachers to practice what was learned, and there was no follow-up evaluation of what was working for students and what was not.<sup>9</sup>

This time, when Tulsa Public Schools adopted new curricula to align with the new 2016 state standards, the district worked with a small number of schools, using trainings built around the specific curricula. According to Fletcher, “We were not agnostic to the resources. That decision was intentional. We see the curriculum as a vehicle for us to build our knowledge of college-career ready standards and content.”<sup>10</sup>

Tulsa Public Schools hired Leading Educators—an organization that works with districts and teachers to scale exceptional teaching and create the conditions for teachers to be effective in their jobs—to tailor trainings with individual schools based on their specific needs.<sup>11</sup> To do this, Leading Educators utilizes what it refers to as “empower” cohorts in these schools.<sup>12</sup> This means that once a school opts into the training, school leaders pick teachers to become the content leaders for their own building. Starting in ten schools, and adding ten more the following year, the district’s goal is to build teacher leadership across all its schools.

Leading Educators employs two constructs to support teachers: a “distributed leadership” structure and a cycle of improvement model.<sup>13</sup> The distributed leadership structure utilizes a school-based team led by a content expert who leads teachers’ work with a team approach that is focused on specific content. The cycle of improvement model is structured in such a way that teachers first work to deeply understand a specific lesson by spending 90 minutes modeling it and anticipating challenges with their content expert before delivering it to students in their classrooms. They complete the cycle by returning one week later to reflect as a team about the impact on the students and to identify potential areas for improvement.<sup>14</sup>

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## Lessons learned

Tulsa Public Schools’ approach to professional development includes several aspects that the district feels are contributing to its success. These include providing collaborative time for planning, implementing cycles of learning with specific cohorts of teachers, using peer collaborations as a professional development strategy and to provide opportunities for practice, and allocating time for teachers to engage in a continuous feedback loop that includes reflection.<sup>15</sup>

The district recognizes that it has a responsibility to consider how it structures time, expectations, and funding for schools to enable the successful professional development of its educators. For example, schools must have flexibility in how they use their funding and how they build in time away from the classroom for educators

to pursue professional development opportunities. In order to be successful, the district recognizes that buy-in from school leaders and principals for these shifts is critical. Because of what it learned from its first set of schools, the district is now implementing its training around instructional materials at a slower pace than originally planned so that it can ensure it is first getting buy-in from school leadership.<sup>16</sup>

Tulsa's example offers several lessons, including the following:

- Utilizing specific curricula as vehicles for professional development allows educators to build their knowledge of standards.
- Any professional development must build in an opportunity for practice, reflection, and feedback.
- Buy-in from teachers and school leadership on the process for professional development is critical for success.

# Fort Dodge Community School District

Fort Dodge Community School District serves the Iowa communities of Fort Dodge, Badger, Coalville, and Otho, as well as surrounding rural areas. It serves more than 3,000 students in pre-K through 12th grade. It contains seven public schools, including one early learning center, four elementary schools, one middle school, and one high school.<sup>17</sup> The student population is 72.2 percent white, 7.6 percent Black, 12.2 percent Hispanic, 0.8 percent Asian/Pacific Islander, and 0.3 percent Native American.<sup>18</sup> Fifty-eight percent of students in the district are eligible for free or reduced-price lunch.<sup>19</sup>

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## Focusing on job-embedded professional development

When Fort Dodge Community School District trains its educators on how to implement high-quality curricula, it takes a “job-embedded professional development” approach. As its main professional development technique, the district uses inquiry cycles in order to get student achievement data at the beginning of the process, come back to student-centered goals, and see the impact. The trainings focus on a specific component of a curriculum so that teachers understand content as well as purpose. The district’s theory of action is that if teachers understand why a particular aspect of a curriculum is designed differently from what they may be used to, they are more likely to implement the curriculum as it is designed.<sup>20</sup>

When Fort Dodge adopted its new English Language Arts curriculum, it hired Teaching Lab, a professional learning organization that utilizes a “head, heart, habit cycle” approach.<sup>21</sup> In this approach, the “head” refers to the fact that the core academic content used in the classroom is aligned with specific curricular materials and research-based materials; the “heart” refers to a teacher-led community, a strategy that builds social capital and buy-in from teachers; and the “habit” refers to the repeated cycles of inquiry that allow teachers to apply what they learn and evaluate evidence of student learning.<sup>22</sup> The cycle of inquiry starts with convening and identifying a specific challenge, reviewing content and the plan for instruction,



implementing the new approach in classrooms and gathering evidence through the collection of student work, reviewing the evidence to analyze its effectiveness, and then repeating the cycle on a new topic. The cycles occur with groups of educators throughout the year and include both studying curricula and learning about their design principles and specific terminology.<sup>23</sup>

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## Lessons learned

Stephanie Anderson, director of elementary education in the Fort Dodge Community School District, said in an interview with one of the authors that resources are one of the more significant challenges facing districts that seek to do this type of professional development. Anderson noted that states should ensure that districts have flexibility to use the pools of funding available to them for professional development. She also pointed out that policymakers need to realize that even with free curricula, there are still associated fees, including for the materials that are needed to implement the professional development in order to ensure that the open-source materials are being used in the way that was intended.<sup>24</sup>

Fort Dodge Community School District's approach to professional development offers the following lessons:

- By focusing on one specific component of a high-quality curriculum and explaining its purpose, teachers can better understand it and are more likely to teach it as intended.
- Inquiry cycles can contribute to successful implementation of high-quality materials by ensuring that teachers understand the material, have an opportunity to try it out in the classroom, and have the time and the environment to analyze its effectiveness.

# Orange County Public Schools

Orange County Public Schools is the fourth-largest school district in Florida, and the eighth-largest school district in the United States.<sup>25</sup> It serves more than 215,000 students in kindergarten through 12th grade.<sup>26</sup> It contains 199 public schools.<sup>27</sup> The student population is 25.3 percent white, 24.8 percent Black, 42.6 percent Hispanic, and 4.6 percent Asian. Sixty-three percent of students are eligible for free or reduced-price lunch.<sup>28</sup>

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## Building professional development around high-quality curricula

When thinking about how to improve student outcomes, Orange County Public Schools' leaders asked themselves, "What can we do as a department to support and impact the quality of instruction our teachers provide, which the research shows is the most important factor for improving student outcomes?"<sup>29</sup>

The district has built teachers' professional development around a specific resource, using an educative curriculum materials framework.<sup>30</sup> Educative curriculum materials are K-12 curriculum materials that are designed to promote teacher learning. These materials are intended to deepen and integrate teachers' knowledge base about content and pedagogy; enable them to apply that knowledge in real time to make instructional decisions; have them become an agent in the design and enactment of the curriculum; and help them engage in a range of practices including classroom instruction, planning, lesson modification, assessment, collaboration with colleagues, and communication with parents.<sup>31</sup> The district creates instructional materials for teachers that include scope and sequencing, overview unit plans, vocabulary, and daily lesson plans.<sup>32</sup>

The district has provided professional development on its standards-aligned instructional materials in several ways, including through professional development offered after school hours. In these sessions, a small group of teachers—who get paid for attending—are provided professional development on how to use the resources in

their classrooms. They then return to their schools prepared to coach others and support their colleagues. The district also brings all instructional coaches together five times per year at a training to discuss strategies for teaching specific materials. Notably, both types of training are embedded in specific content.<sup>33</sup> Rob Bixler, associate superintendent of curriculum and digital learning for Orange County Public Schools, said, “Content-based training ensures that the professional development is relevant to improving instruction, and gives the teachers the materials they need and a plan of use going forward.”<sup>34</sup>

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## Lessons learned

To build support among educators, the district has a continuous feedback loop on their materials. Allowing teachers to have a say in the curricula that they teach increases buy-in and the likelihood of use, and fine tunes the effectiveness of the resource. In addition, individual teachers can adapt and localize all available materials for their specific classroom needs. One advantage that the district has had in doing so has been the flexibility that the state grants it to design resources and professional development to support classroom teachers.<sup>35</sup>

Orange County Public Schools’ approach offers the following lessons:

- Professional development must be built around the specific content of curricula to ensure that teachers have the knowledge they need in the classroom.
- High-quality instructional materials that are developed with input from teachers, and can be adapted for their specific students’ needs, are more likely to be used in the classroom.

# Pasco County Schools

Pasco County Schools in Florida serves 75,001 students in 96 traditional and charter schools in pre-K through 12th grade.<sup>36</sup> It is comprised of 49 traditional elementary schools, 16 middle schools, 14 high schools, one school serving sixth through 12th grade, one K-12 virtual school, three alternative education sites serving sixth through 12th grade, one technical college, and 11 charter schools.<sup>37</sup> The student population is 61.3 percent white, 7.6 percent Black/African American, 23 percent Hispanic, 2.9 percent Asian, 0.2 percent Native Hawaiian/Other Pacific Islander, and 0.3 percent American Indian/Alaskan Native.<sup>38</sup> Fifty-four percent of students are eligible for free or reduced-price lunch.<sup>39</sup>

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## Training to ensure an understanding of the instructional materials

Vanessa Hilton, assistant superintendent for student achievement of Pasco County Schools, told one of the authors in an interview that Pasco County Schools worked to involve all stakeholders in the process of adopting and implementing new curricula at the elementary level.<sup>40</sup> In the first pilot stage of this work, new materials were introduced in six to 10 schools, depending on grade level, starting with the most high-need schools—schools with a high percentage of students receiving free or reduced-price lunch and students from historically marginalized communities. Professional development on the new curricula was part of that pilot.<sup>41</sup>

Pasco County Schools took a two-pronged approach to professional development on its new curricula that consisted of helping teachers understand the materials and working with them on how to implement them in the classroom. The publishers of the curricula conducted the first part of the teacher training for two days in individual school buildings. After those teachers were trained, they were able to take what they had learned and train their peers. When the materials were expanded to the rest of the district, ambassadors from the pilot schools led the trainings along with district staff.<sup>42</sup>

The implementation training was done through module studies in two- or three-hour sessions throughout the school year in advance of instruction of those specific lessons in the classroom. These module studies included a deep dive into the material, and then allowed time for the teachers to conduct the lessons themselves to make sure they fully understood the content. These were initially led by the district but were later provided by coaches.<sup>43</sup>

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## Lessons learned

One unique aspect of Pasco County’s professional development is that the district has made all the module studies accessible online so that educators can view them at any time from their school sites. This has helped Pasco County overcome the common challenge of struggling to find the time needed to pull teachers out of the classroom for professional development.<sup>44</sup>

Hilton also noted that getting consensus during curriculum selection on the front end was a critical lever for the implementation of the new instructional materials. She said, “It was critical because the teacher voice was in it from the outset, it got them bought into using the materials and wanting to come to the trainings.”<sup>45</sup>

The district’s ongoing approach to the training has also been beneficial to the materials being successfully implemented in classrooms. As new teachers join the district, they receive professional development as part of their onboarding. In addition, the district continually asks for feedback from its teachers and makes adjustments to its training and coaching based on their needs.<sup>46</sup>

Hilton emphasized that an important part of the professional development program was making sure teachers were also trained on the state’s academic standards, as well as on how the materials aligned to those standards. She noted that this is somewhere where states can play a larger role, saying, “If teachers don’t understand the standards and the reasons for the adoption of the specific quality materials, it impacts the implementation process.”<sup>47</sup>

Pasco County Schools' professional development efforts offer the following lessons:

- Teachers must be trained on the specific content of new curricula upfront in order to be able to implement it well.
- Utilizing peer training is an advantageous way to ensure everyone using the new curricula is prepared.
- Making the professional development easily accessible—by putting it online and offering it regularly—is a key component of its success.
- It is critical to always ask teachers and other stakeholders about needed next steps and to adjust supports based on their feedback.

# OpenSciEd

OpenSciEd is a nonprofit initiative among science educators, curriculum developers, teachers, and philanthropic foundations to improve the supply of and demand for high-quality K-12 science instructional materials by producing free curricula designed for new college and career-ready science standards.<sup>48</sup> It has created a set of exemplary, open-source science instructional materials designed for and aligned to the Next Generation Science Standards. It has brought together multiple partners—including 10 states—that are currently piloting the instructional units. In addition to the instructional materials being open to all, the professional development materials are also accessible at no cost to the educators who are utilizing them.<sup>49</sup>

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## Creating high-quality, open-source professional development materials

While high-quality instructional materials are a great lever for instructional change, curricula alone are not enough. Operating from the belief that professional development is a key component of ensuring that students have access to high-quality curricula, OpenSciEd is making its training materials free and accessible online in a format that can be adapted locally.<sup>50</sup>

Recognizing that teachers make sense of materials based on their unique experiences—which can be different from what the designers intended based on their experiences—the professional development OpenSciEd has put forward is framed around a broader ability to grasp concepts in a way that is tied to students' perspectives. With equity in mind, the curricula are flexible and designed to meet students where they are in terms of their knowledge and the way they comprehend the materials.<sup>51</sup>

There are three main design features of the professional development program:<sup>52</sup>

1. The “student hat” experience in which the teacher goes through the training as if they were a student
2. Videos and pictures of instructional delivery that depict culturally and linguistically diverse classrooms so teachers can picture conducting the lessons with their own students
3. Opportunities for reflection and application that provide space for teachers to better understand their instruction, their school context, and their own classrooms

Teachers divide their time between wearing the “student hat” and the “teacher hat” so that they experience the lessons both as their students would and with an understanding of why the new curricula are designed as they are. All of the design features are intended to help teachers and students make a shift to the new standards, and all the tools and resources are quickly accessible in order to support busy teachers.<sup>53</sup>

Another key focus of the professional development design is providing a sense of community by ensuring that teachers have structured time to learn and reflect with their peers. Teachers participate in four days of professional learning in the summer that focuses on a unit for the fall, and then two days of professional development in the winter to reflect with their peers on what happened in the first unit and examine next steps. They are also provided online meetings at intervals to reflect with their peers.<sup>54</sup>

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## Lessons learned

Louisiana has been participating in the pilot of this program, but the state has taken it upon itself to scale it and has already trained more than 1,000 teachers. Jill Cowart, assistant superintendent of academic content at the Louisiana Department of Education, commended OpenSciEd for the intense four-day upfront training that focuses on pedagogical shifts and high-quality curriculum implementation.<sup>55</sup>

Massachusetts is also participating in the pilot program, having started with 30 teachers in six districts.<sup>56</sup> As the state observed the teachers during the first year of the professional development program, it noticed “spillover effects.” When state officials observed classrooms, they found that some of the teachers who had gone through the training began using the OpenSciEd techniques in other topics where they did not have a specific curriculum, taking instructional shifts from OpenSciEd



and applying them to other units.<sup>57</sup> Two science teachers in Weymouth Public Schools who have participated in the pilot commended the student hat/teacher hat approach that gave them time to try what they learned and experience lessons as a student. They also reported appreciating learning with their peers, being provided time to receive training on curricula, and having professional development that came from multiple sources.<sup>58</sup>

In an interview with one of the authors, Jim Ryan, executive director of OpenSciEd, said, “Professional development without good curriculum is frustrating to teachers. Materials without good professional development doesn’t work. Teachers need a new pedagogical approach to make the materials come alive.”<sup>59</sup>

As training is prepared for instructors around other high-quality materials nationwide, OpenSciEd’s approach to professional development illustrates several key lessons, including the following:

- Professional development must not be an afterthought to curricula themselves.
- Enabling teachers to be trained on high-quality curricula from the perspective of the student provides insights into teaching techniques that may otherwise be missed.
- Professional development techniques should enable teachers to utilize the materials in their specific classrooms, with their own students, rather than taking a more generic approach to the implementation of the materials.

# Conclusion

Districts across the United States are shifting their curriculum procurement process, which is a key step in the right direction to improve student outcomes. The selection and adoption of high-quality instructional materials is a critical first step to improving student learning. However, what the research and interviews with organizations that specialize in this work, and with educators and school leaders doing the work, have shown is that the materials themselves are not enough to ensure student success.

In each of these five case studies, the districts and OpenSciEd have taken slightly different approaches to implementing or facilitating the implementation of high-quality instructional materials. However, a review of the lessons learned from each case study revealed three best practices that should be incorporated into the implementation process.

First, it is critical to get buy-in and input from teachers and other stakeholders throughout the process—from adoption and development of the instructional materials to the process for training around its use. Second, professional development must be content based and built around specific curricula. Third, teachers must be given the time they need to understand the new curricula, as well as be given the opportunities to practice, reflect, and provide feedback.

The goal of this report is to provide some ideas for approaches to shifting professional learning. There are numerous players in this process—including states, districts, administrators, teachers, trainers, parents, community leaders, and curricula publishers themselves—that need to update and adapt their approaches to professional development so that they are rooted in specific high-quality curricula. Only then will the benefits of high-quality instructional materials be realized.

*\*Authors' Note: Demographic labels reflect the source material for each case study.*

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## About the authors

**Amanda Fuchs Miller** is a consultant with the Center for American Progress.

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