

How Good Statewide Data and Careful Research on School Textbooks Can Improve Student Learning

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States can benefit from research on the curricula adopted by schools and districts. In particular, recent studies have demonstrated that textbooks directly affect student achievement, and research can help educators determine and adopt the best textbooks for classrooms. Because textbooks are generally similar in price, this could be a cost-effective way for states to improve educational outcomes. However, research about textbooks has been hampered by a lack of good data. Simply put, very few states have collected useful data on which textbooks are used where. From our research collecting and analyzing textbook data from five states, we have distilled best practices for states to consider as they conceptualize and undertake efforts to collect useable data about curriculum materials.

We find that states can improve educational outcomes by investing in long-term data collection infrastructures and ensuring that, once collected, data are made easily accessible to those who can use them for research and pedagogical improvements. Although some states may be constrained by budgets, and what works in one state may not work in all, standardizing data collection could produce better research and policies about curriculum materials – en route to improving educational outcomes for students across the United States.

Where to Collect Textbook Information

To facilitate the best educational outcomes, states should survey all schools to guarantee that the state administrators will know what materials are adopted in each school. States can also collect quality data at reduced cost by surveying schools only in districts that do not uniformly adopt the same textbooks for all their schools (as districts in most states do). State officials need only learn which districts practice uniform adoptions, and then reach out to individual schools only in the remaining districts where data cannot be collected at the district level.

Each listed book should be clearly labeled as to whether it is a district-wide adoption or just a single school adoption.

What Do Surveyors Need to Know about the Books?

Ideally, data should be collected about textbooks used in all grades, subjects, and courses – including information on textbooks for all different tracks and non-core subjects. Given the wide array of high school course offerings in particular, this comprehensive approach may not always be possible.

Alternatively, data could be collected on textbooks used in limited arrays of grades, subjects, and courses – such as, textbooks used by high schools to teach regular-level classes in Algebra 1, English 1, Biology, and Chemistry.

A number of additional kinds of information can usefully be assembled as well:

- *Types of licenses purchased*, especially given that more and more districts are adopting technology-enhanced materials or web licenses for core textbooks. Though recording this information can be complicated, it is important for understanding all the kinds of materials to which students have access.
- *The number of units purchased for each material*, allowing researchers to more easily discern whether a purchased material was a core material that was used by all students or a supplementary material, as well as whether students had their own materials to take home or only a class set.

- *Textbook ISBNs*, which ensure that all books will be identifiable in the case that title, publisher, edition, and year do not suffice.
- *Textbook prices*, which can be collected at the state level if texts are state-adopted books or negotiated contacts. If not, districts must report the price for each material.
- *Teacher use*. Although surveying every teacher within a state is not feasible, it helps to collect some information about how teachers use textbooks in various ways. Researchers could select samples of teachers and ask them about how they use curriculum materials.

Support Long-Term, Routinized Reporting

To ensure that research helps improve student learning, states should routinize data collection so that districts annually report on textbook adoptions. Though requiring districts to respond annually is a demanding step, routinized procedures can make data collection more efficient. And repeatedly collected data will allow for precise determinations of when changes are made, allowing researchers to use sophisticated methods to tease out effects of one book compared to others. Were districts or schools to have systems in place that allowed them to input new adoptions in real time, either as they happen or at the end of each school year, data recording would be easier for schools and highly useful data would be amassed.

Budgetary constraints may dissuade some states from running regular surveys. Instead, they may do surveys every few years rather than annually. In this case, however, states must collect the adoption year for each listed book, so researchers will be able to tell precisely when textbooks changed. Adoption dates are necessary for teasing out how changes in textbooks influence student learning.

Provide Data for Public Use

Once usable textbook data are in hand, states must assure that they are used. The best way to do this is to allow a wide array of researchers and policymakers access to data for research projects, and the easiest way to ensure wide access is by posting datasets on state websites, along with codebooks and lists of the relevant textbooks. If such a public forum is not an option, states must – at the very least – ensure that the public and scholarly researchers can request and receive data on textbook use. It does no good to collect and carefully verify such information statewide if the information, once collected, is not put to good use. But if it is, researchers will be able to tell educators which textbooks work best, and how, to improve student learning at modest cost.

Read more in Morgan S. Polikoff “The Challenges of Curriculum Materials As A Reform Lever” *Brookings Evidence Speaks Reports*, 2, no. 58, (2018): 1-11.