Knowledge Map™ Impact Plan
November 2019

Executive Summary

Students in the United States lag behind their international peers academically in both absolute and relative terms. Research suggests a key factor behind the low performance: our classrooms may promote academic *skills*, but often fail to teach academic *knowledge*. High-performing countries, by contrast, require students to master important domains of knowledge about the world and about the human condition. For this reason, the progress many of our states are making towards standards-alignment is necessary but insufficient, since those standards, especially in the English language arts (ELA), are largely silent about content. Our students need more: access to a content-rich, sequenced, robust curriculum, and educators who are prepared to impart it.

The first challenge in getting there is diagnostic: how do we know, exactly, which background knowledge a set of instructional materials provides? The Johns Hopkins Institute for Education Policy ("the Institute") and Chiefs for Change have developed an innovative tool to help leaders answer exactly this question: The Knowledge Map™ for ELA.

The Knowledge Map™ allows us to review every resource in a given ELA curriculum; identify the domains of knowledge, topics, and subtopics each resource supports; rate each item's quality according to fifteen different indicators; analyze each unit for its coherence and quality; and provide a grade-by-grade account of the topics that are reinforced – and those that are omitted. Our reviews can be calibrated to local concerns; inclusive of one or all K-12 grades as needed; and mapped onto the relevant science and social studies standards where appropriate. The analysis and reports provide critical data that enable leaders to make the best ELA curricular decisions for the students they serve.

The Institute and Chiefs for Change have piloted the Knowledge Map™ project in districts across the country. The work is housed within a dedicated database at Johns Hopkins University that allows long-term research on important national questions, such as: Are there specific books that most American students read? At which grade level? Are there important variations in rigor and content between high- and low-performing school systems? What patterns and trends are noticeable across time and between regions of the country or school sectors? This one-of-a-kind instrument is already influencing how our pilot districts approach ELA curricular choices. We look forward to supporting additional districts, charter management organizations, and private-school networks, and to bringing new data to the national conversation on the curriculum effect.

Note: The Knowledge Map™ is an effective tool for states, districts, charters, private schools, and curriculum providers. For the purpose of this memo, we use "districts" to refer to all of the above.

Part I: The Solution

The Challenge. The achievement gap is in large part a knowledge gap. There is now compelling research that students' reading levels – especially from fifth grade onwards – are deeply related to students' level of background content knowledge. More affluent students succeed on skills-based ELA assessments not because they are better at "finding the main idea," but because they are far more likely to know more about the subject matter discussed in any given text. Research from our peer nations shows the same: most democracies around the world require all schools to teach a common body of knowledge, and a comprehensive, content-rich curriculum is a signature feature of high-performers.

Despite the research record, the great majority of the United States' ELA curricula treat texts not as a source of building knowledge, but simply as a site for trying (fruitlessly) to hone disembodied reading "skills." Our state assessments follow suit: by design, they do not assume that students have read any specific texts or mastered any specific literary genre. Consequently, education leaders seldom know which specific bodies of knowledge their students have experienced across the K-12 system. Do they learn about the geography of the Middle East? Are they welcomed into the ancient world – Egyptians, Greeks, and Romans? Have they encountered the deep questions about the good life, suffering, and love, through novels that challenge and delight them? We don't know, because we haven't asked.

As Dr. Sonja Santelises, Superintendent of Baltimore City Public Schools (BCPS), wrote recently in *The Washington Post*, "If we want to ensure that all students — no matter their zip code, family income or background — get what they need to be successful, we must take a far more thoughtful approach to curriculum: the actual content kids learn in school." BCPS had just completed a curriculum audit that included the use of our Knowledge Map.™

The Solution. The Institute has developed a tool with which to analyze an ELA curriculum in terms of the knowledge it offers students, both about the world (mainly through non-fiction texts) and about human psychology and the human condition (through both non-fiction and fiction texts). We conduct this analysis by "mapping" the knowledge domains that are reinforced across the ELA texts. We also illustrate the domains that a curriculum omits.

In one district, for instance, we found remarkable attention to social and emotional skills, but nothing on Asia, the Middle East, or the Harlem Renaissance. In another curriculum, almost a third of the ELA materials focused on the African-American experience as the district had hoped, but while the anchor texts were of high quality, the supplementary texts were not. Throughout the exercise, the Institute works closely with instructional

leaders to ensure that the map reflects the district's or state's vision of an educated person and includes specific knowledge domains that matter locally. This is a one-of-a-kind instrument.

The Knowledge Map™ is a tool to support local efforts. Unlike *EdReports*, which evaluates nationally-recognized curricula and publishes its evaluations for widespread use, the Knowledge Map™ is local, and its reports are not public unless made so by the entity involved. The Knowledge Map™ should not be used to replace a standards-alignment review, which is a separate but important evaluation. A curriculum could be aligned with most or even all state standards, but be weak on knowledge-building. The reverse could also be true.

Importantly, the Knowledge Map™ does not establish a canon of must-read texts. Rather, it presents graphic displays of *what is actually read* throughout the ELA curriculum and includes topics that matter locally (state history? cultural relevance? the immigrant experience?) or to the curriculum providers. The Institute is currently reviewing several curricula at the request of the designers of those curricula. The findings are not made public by the Institute but will, however, support the curriculum providers' efforts to improve the knowledge build in their materials. (They will be free to publicize the research if they so choose.)

Additionally, the dedicated database at Johns Hopkins University allows long-term research on important national questions, such as: Are there specific books that most American students read? At which grade level? Are there important variations in rigor and content between high- and low-performing school systems? What patterns and trends are noticeable across time and between regions of the country, or between school sectors and states? Over time, the Institute's reports will provide important comparative data to parents, practitioners, and policymakers alike about what American students are reading and which areas of knowledge their ELA classes engage.[1]

Anticipated Outcomes. What would success look like, if the model scales up across the country? First, the Knowledge Map™ process would give more and more districts the information they need to adopt or build out sequenced, spiraled, robust ELA coursework. As this work continues, we anticipate that states and philanthropic foundations will provide funding to networks of enterprising, but under-resourced, districts and schools. Our capacity to undertake this work is limited only by the number of partners we identify over time.

The second signal of success has a broader and more long-term scope. If successful, the Knowledge Map™ data will help turn the national policy conversation towards the concrete work of building up students' content knowledge, year by year, with – we expect - a positive impact upon students' academic performance. Further, accreditors and state education agencies would begin to review their schools' academic curriculum in terms of the knowledge build; policymakers would consider knowledge-based assessments as

[1] All public reports will present aggregate data, i.e., "seventh-grade students in the Midwest," rather than identify specific school systems or schools.

alternatives to those that reinforce academic skills alone. (Louisiana is piloting such an assessment currently, after having partnered with us on a prototype Knowledge Map™ in 2017.)

A third signal of success is funding to create a Knowledge Map™ in social studies and science. The former has been accomplished; in August 2019, the Institute received support for a social studies map from the Louis Calder Foundation.

Evidence of Early Success. In 2018, the Institute and Chiefs for Change piloted the Knowledge Map™ in one state and six districts, and the results provide compelling, actionable data that chiefs have used to adopt or amend classroom materials.

> Example: Baltimore City Public Schools. In Spring 2018, Baltimore City Public Schools (BCPS) partnered with the Institute to conduct a Knowledge Map™ review of its K-12 ELA curriculum. The resulting analysis contributed to BCPS's decision to adopt a high-quality, content-rich curriculum in Grades K–8 and, with us, to revise the supplementary texts in Grades 9-12. Janise Lane, Executive Director of Teaching and Learning at BCPS, said of the process:
>
> *"City Schools is so grateful for the partnership and expertise of the JHU team. The Knowledge Mapping that they were able to provide equipped our team with the details to diagnose the strengths and needs within our curriculum. We were able to study the sequential strands of knowledge building not only within a grade level but across the full continuum of grades from PreK through Grade 12. The constant communication and collaborative supports aided our process in identifying high-quality materials that provide access for every student to grade level standards and rigorous tasks to prepare students for both college and future careers."*

In 2019, we conducted an additional fourteen analyses with three more underway currently. These have resulted in either district adoption of higher-quality materials, or significant modifications to district-created materials – whichever path best met the district's culture and resources.

Our second important success is the Pilot Assessment in ELA that is being implemented in select districts in Louisiana. We are senior content advisors on this initiative, which is a first-in-the-country state-level assessment that is integrated with a content-rich curriculum (Guidebooks) and asks students to demonstrate their content knowledge after the completion of key curriculum units.

Part 2: Implementation Plan

Vision for Impact. The stage is set for this work to scale up:

- The argument for high-quality instructional materials is being successfully promulgated by membership organizations such as Chiefs for Change and CCSSO; public reviews by EdReports; research performed by scholars at Harvard, Johns Hopkins, and USC/Santa Barbara (to name a few).
- The argument for the importance of content-rich curricula is being made by scholars (E.D. Hirsch and Dan Willingham), international bodies (the OECD's PISA reports), and journalists (Robert Pondiscio), and David Steiner of our own Institute through multiple reports.

Practitioners and policymakers are coming on board, but have not had the tools to analyze their own curricula in terms of the knowledge build. *The Knowledge Map™ fills this need in English language arts.*

The vision for impact is:

- Within five years, it will be impossible for policymakers and practitioners *not* to address the knowledge-build that occurs within their ELA curricula;
- Within five years, publishers will begin to amend their materials to respond to the demands of the field; and
- Within five years, schools of education will begin to include curriculum literacy *and the importance of knowledge-building* in their teacher preparation programs.

Ideal Conditions. The Knowledge Map™ works best as part of a well-crafted, strategic plan to improve teaching and learning. This means:

- Leadership's commitment to content-rich curriculum and appropriate professional development.
- Funding to engage in the Knowledge Map™ work (from state/district or philanthropic dollars).
- A master plan to bring teachers and parents into the conversation with user-friendly research; to take the necessary next steps (either issuing an RFP or remediating the existing materials),
- A commitment to sustained and meaningful professional development.

Baltimore City Public School's detailed action plan serves as a model to other districts.

Regional Focus/Other Partners. There are several key partners in this work currently:

- Chiefs for Change, which supports this work amongst their members across the country;
- Achievement Network (ANet), which connects the Institute to their own network of partner school systems;

- The Charles Koch Foundation, which is funding the Institute to conduct Knowledge Maps™ of eight curricula in common use among home schools and private schools. These reports will be made public in Spring 2020.

Timeline, Key Action Steps, Milestones.
Next steps: Leaders can find materials that help districts identify their current needs vis a vis content-rich curriculum on the Institute's and Chiefs for Change's websites. The resources include: an introduction to the importance of knowledge-rich curricula for student learning, a sample report, and contact information for next steps.

Budget. The cost of each Knowledge Map™ project is straightforward at $4,235 per grade, or $55,055 for a complete K-12 analysis.

District Budget	
Grade-level analysis, K-12 ($4,325/grade)	$55,055
Inclusive of: Zoom conferences with district leaders, analysis, reports, and Johns Hopkins University's 21% IDC	

Because the results of the Knowledge Map™ provide actionable data that can generate new depth and rigor in the classrooms, local philanthropies and state education agencies often provide financial support for the work.