

1776 Unites! Social Studies Knowledge Map™ 2021

The achievement gap is, in large part, a knowledge gap. Extensive research reveals that most democracies around the world require all schools to teach a standard body of knowledge, and that a comprehensive, content-rich curriculum is a signature feature of high-performing systems. Despite this research record, a majority of social studies curricula in the United States treats social studies not as a source of building and applying knowledge, but instead as a site to attempt honing abstract skills. Furthermore, established political science studies indicate that students can benefit from actively practicing civil disagreement – a skill that a well-designed social studies curriculum can encourage.

The Johns Hopkins Institute for Education Policy (“Institute”) has developed the Social Studies Knowledge Map™, a tool with which to analyze a curriculum in terms of the knowledge it reinforces in students. This analysis involves mapping the knowledge domains implicitly covered in the evaluated sources. This mapping enables policymakers to visually parse the topics that are discussed and missed in a curriculum, the degree to which these topics are opened, and across which grade levels. The Institute also evaluates units for their inclusion of multiple perspectives and whether teachers are equipped to encourage deliberation and disagreement. Throughout this review process, the Institute works closely with instructional leaders to ensure that the Knowledge Map™ reflects the system’s vision of an educated person, and that the curriculum includes region-specific knowledge domains. The Knowledge Map™ is a unique analytic resource that enables policymakers, school leaders, and parents to better understand the strengths and weaknesses of a particular curriculum.

The methodological approach is as follows:

- The Institute maps all items in the evaluated grades on three initial dimensions and at different grain sizes of coverage. For example, a letter by abolitionist Thomas Garrett about Harriet Tubman would be categorized like so:
 - Domain: U.S. History to 1865
 - Topic: Slavery/Abolition
 - Subtopics: Harriet Tubman; Underground Railroad
- The team evaluates the quality of every student-facing resource both individually and in the broader context of the unit.
- The Institute constructs a vertical mapping of the knowledge domains at each level, first by grade and then across multiple grades.
- The Institute creates a coverage report that visually illustrates the depth of emphasis a given domain receives across the grades.

- The Institute evaluates each unit for its presentation of distinctive viewpoints and for the presence of teacher-facing instructions that support a deliberative classroom (referred to as ‘Open Classroom Climate’).

With all aspects of the report combined, the analysis enables a clear picture of which knowledge domains are reinforced, overrepresented, and/or ignored within a curriculum, as well as in which grades the reinforcement occurs and with what quality or bias. The Institute provides budget-sensitive, high-level recommendations that may include adoption of new materials, amendments to existing materials, or targeted professional development.

Project Description

Funded by the Woodson Center and centered around Woodson Center Principles, the 1776 Unites! project is a series of open-access lessons on Black achievement, historical events, and contemporary scholars. Each lesson includes lesson plans and a presentation for the teacher along with primary and secondary source materials in various formats for the students. At the time of the Institute’s review, the project included 14 lessons; however, it continues to undergo further development.

The Institute reviewed the student-facing materials that comprise the 1776 Unites! online social studies project. Each resource, both text and non-text, was evaluated individually, in the context of its unit, and in the curriculum’s cumulative knowledge-building capabilities.

It is important to note that 1776 Unites! was not released as a standard social studies curriculum, but as an online project or set of materials. This context should be considered when discussing the findings of the Knowledge Map™ analysis.

1776 Unites! achieves high quality scores for nearly all its resources. This suggests that the materials used in each unit provide substantial information, offer the possibility of high impact for students, and contain a multitude of topics. The project also scores extremely well on the Institute’s measure of Open Classroom Climate, indicating that it helps instructors encourage critical thinking and healthy discussion in the classroom. In addition, the project earns even higher ratings for its incorporation of multiple perspectives. This indicates the project purposefully addresses both tragedies and triumphs from America’s past.

The project scores strongly for topical coverage in the Civics & Government domain, although this is the only domain to achieve strong coverage. Although a full breadth of topical coverage would not make sense when measured against the project’s aims, instructors using the project should note where gaps occur in order to supplement them with additional, relevant materials.

The coherency, or degree to which the materials within a unit work together to build knowledge, varied from unit to unit. Units with stronger coherence tend to center around historical time periods as compared with units that focus on individuals.

Institute Recommendations

The 1776 Unites! project provides students with high-quality texts that represent multiple perspectives, as well as opportunities for discussion and inquiry. The Knowledge Map™ analysis highlights crucial areas of knowledge building and assesses associated strengths and weaknesses. Therefore, the Institute recommends that the district:

- The design of most units is very well executed, with secondary materials effectively chosen to support the deepening and broadening of targeted content. However, teachers need to incorporate the project’s materials so they fit naturally and appropriately into their curriculum. To support teachers, the project should consider suggesting appropriate time periods in history for when to incorporate materials. This will ensure that students are simultaneously learning the appropriate background knowledge, and that the project’s materials build and strengthen on this.
- As the project continues to develop new lessons, consider strengthening topical coverage of focused domains. For example, within the American History domain, topics such as Manifest Destiny or the Cold War could be explored. In addition, when focusing on an individual, providing the historical context of the individual’s contributions will help ground it topically and among state standards.

The first section of the report addresses the specific findings of the heat map exercise, followed by quality and coherence findings.

1776 Unites! Knowledge/Heat Maps

One of the Institute’s critical gateway questions addresses the level of exposure students receive to each important domain of knowledge and to the topic within those domains. Each heat map expresses the findings visually using a color-coding scheme, as shown in Figure 1 below. Lighter blue squares represent fewer knowledge-building texts, such as one or no text, while darker blue squares represent more knowledge-building texts, such as eight or more. The results for each of the eleven topical domains in Grades K-5 appear in the figures below.

A mere mention of a topic does not necessarily indicate exposure to that topic. The Institute tags a topic only when the text’s presentation of it is robust enough for a student to convey specific facts about it. This metric is age-dependent, and takes the context of student age and education level into account.



Figure 1. The color-coded rating scheme used in heat maps, where lighter blue indicates fewer texts and darker blue indicates more texts.

Strong Knowledge-Building Domains

The project presents robust knowledge building in several domains and additional topics, shown below alphabetically when similarly rated. Strong knowledge-building domains appear in the heat maps as dark blue, indicating that many texts address the topic (for instance, the heat map categories of 8+ Texts or 5-7 Texts).

One domain, Civics & Government (Figure 2), scored strongly for topical coverage. Students are presented three or more texts in six of the nine topics within this domain. Only one topic, Comparative Politics & Types of Government, is not covered.

Additional knowledge domains exhibit patterns of strength in specific topics. The Geography (Figure 5) domain has moderate coverage as a whole, yet the topic of Place & Regions has over eight texts.

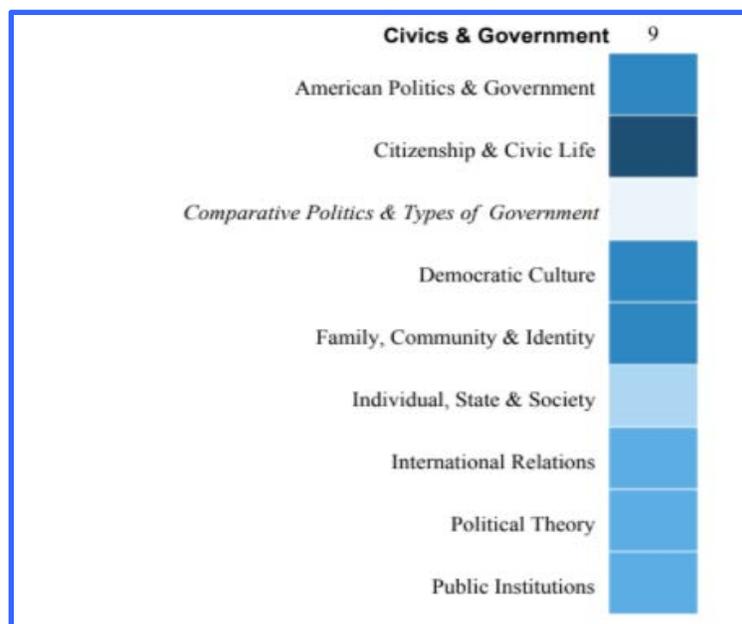


Figure 2. Heat map analysis of the Civics & Government knowledge domain in the 1776 Unites! course.

Moderate Knowledge-Building Domains

The project presents several moderate knowledge-building domains and topics. Moderate knowledge-building domains have 1 – 4 texts in almost all topics or have over 5 texts in nearly half of the topics.

The domains that were rated moderately were Economics (Figure 3), Equity & Inclusion (Figure 4), Geography (Figure 5), Media (Figure 6), Sociology (Figure 7), US History Since 1865 (Figure 8), and US History to 1865 (Figure 9).

The Economics domain (Figure 3) is an example of a moderate knowledge build in which almost all topics have 1 – 4 texts. The Equity & Inclusion (Figure 4) is an example of a moderate knowledge building in which half of the topics within the domain have 5 or more texts in nearly half of the topics.

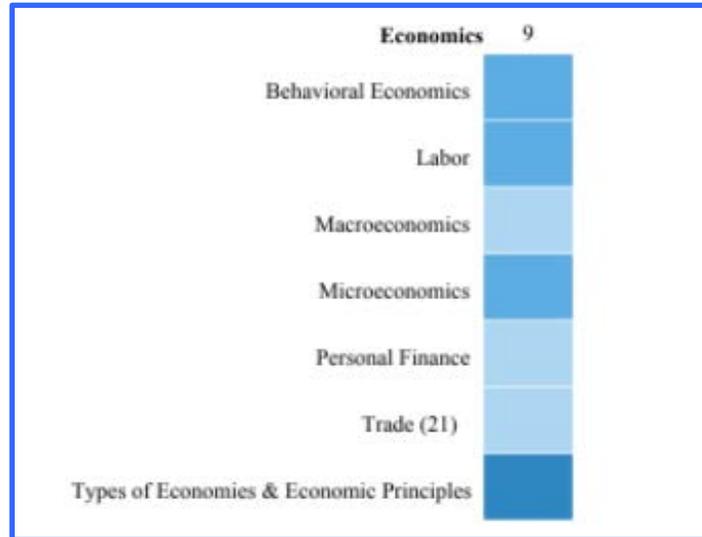


Figure 3. Heat map analysis of the Economics knowledge domain in the 1776 Unites! course.

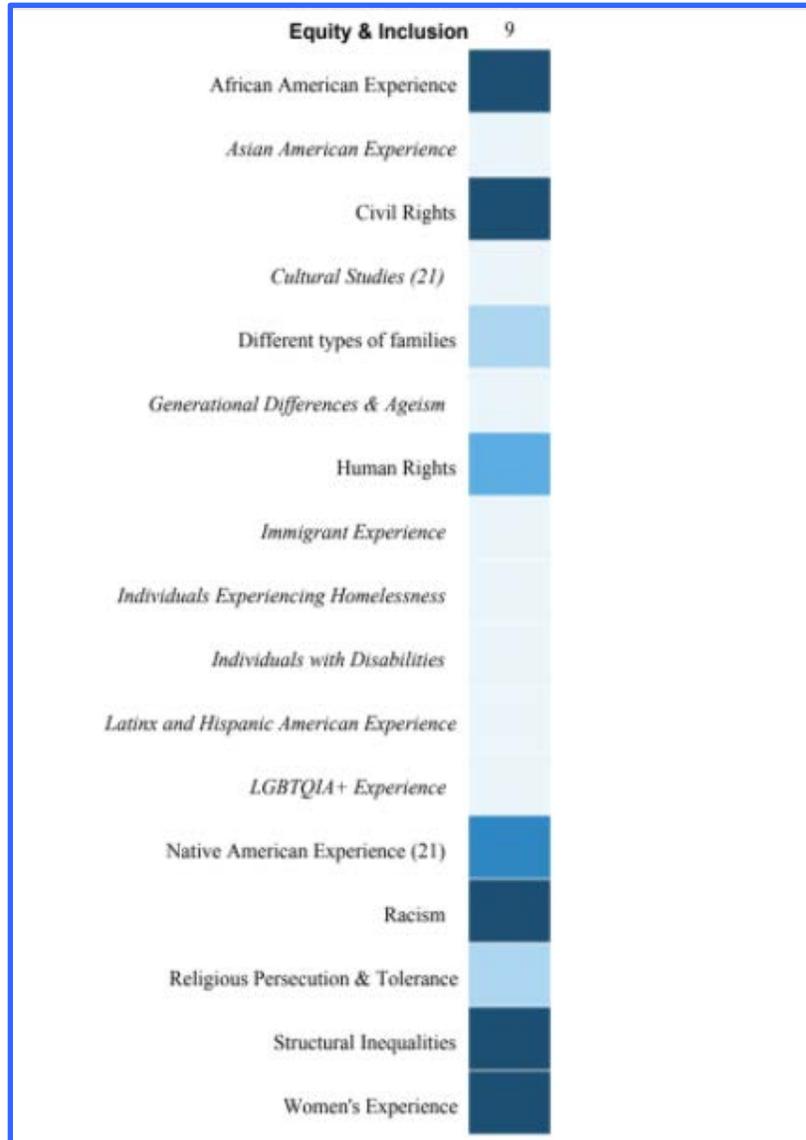


Figure 4. Heat map analysis of the Equity & Inclusion knowledge domain in the 1776 Unites! course.

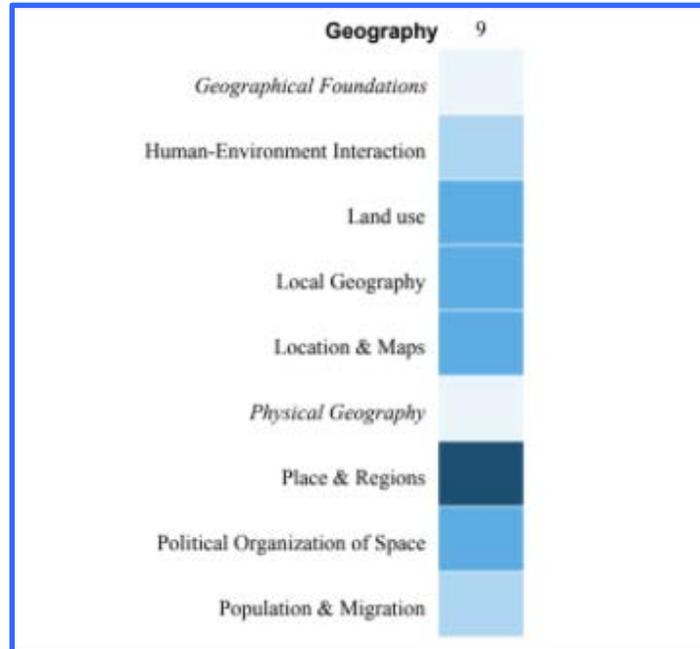


Figure 5. Heat map analysis of the Geography knowledge domain in the 1776 Unites! course.

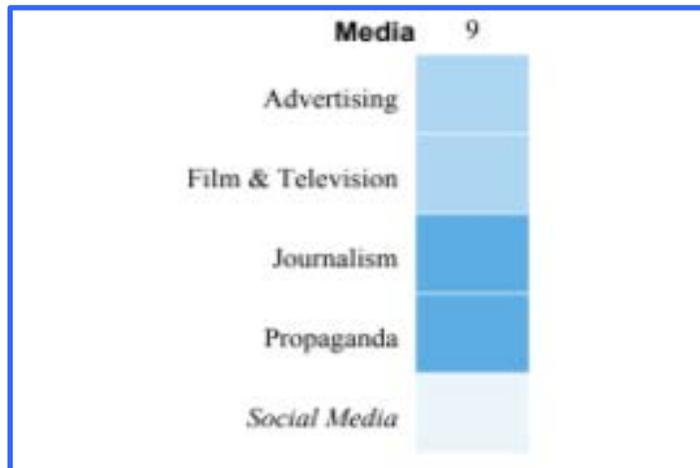


Figure 6. Heat map analysis of the Media knowledge domain in the 1776 Unites! course.

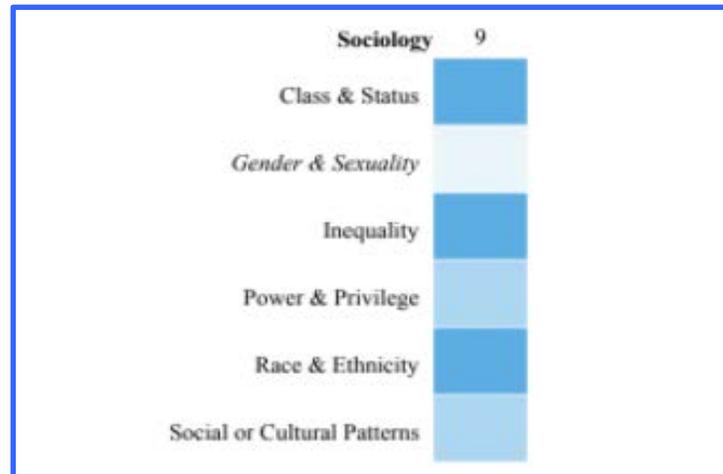


Figure 7. Heat map analysis of the Sociology knowledge domain in the 1776 Unites! course.

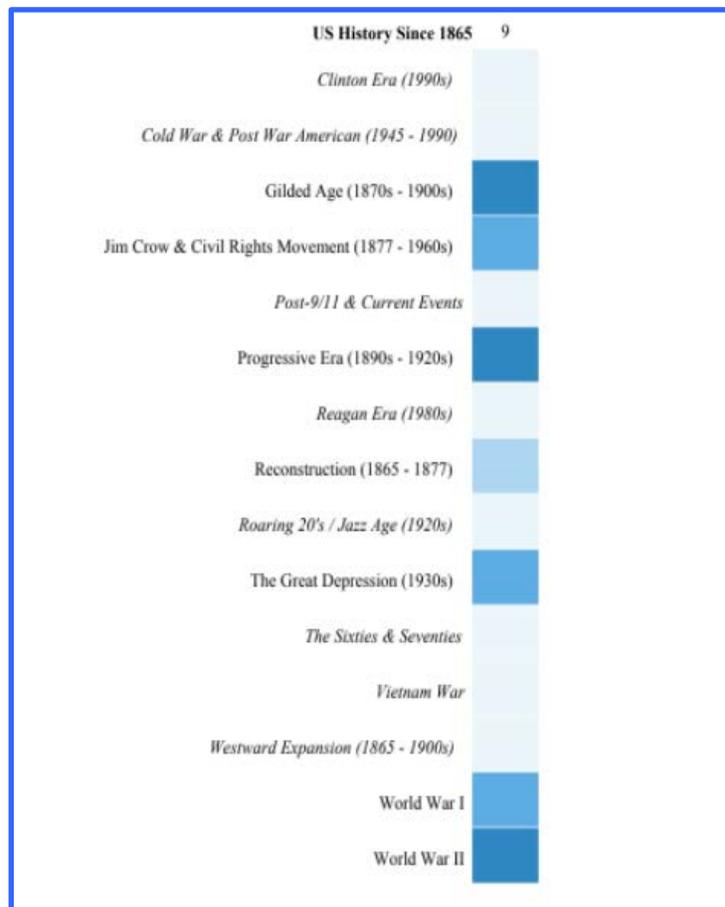


Figure 8. Heat map analysis of the US History Since 1865 knowledge domain in the 1776 Unites! course.

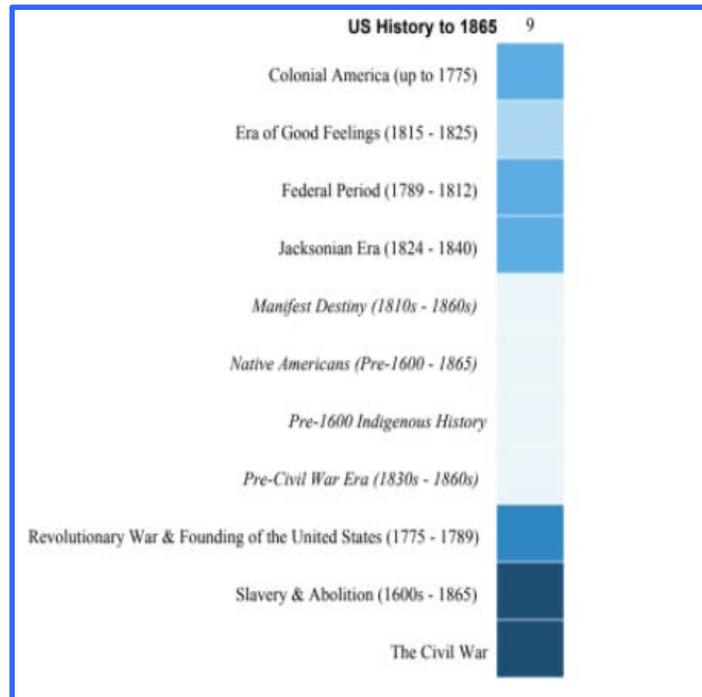


Figure 9. Heat map analysis of the US History To 1865 knowledge domain in the 1776 Unites! course.

Minimal Knowledge-Building Domains

The project presents minimal knowledge building in several knowledge domains and topics. Minimal knowledge-building domains appear in heat maps as primarily light blue or gray, indicating that one or no texts address the topics. It is important to note that heat maps should be considered in the context of the evaluated system – in a specialized course such as 1776 Unites!, absences often reflect the scope of the project. However, gaps may be worth examining in order to identify potential areas of further knowledge reinforcement.

The domains that rated weakly were African History (Figure 10), Anthropology (Figure 11), European History (Figure 12), Global Themes (Figure 13), Philosophy (Figure 14), Psychology (Figure 15), and Religion (Figure 16).

Heat Maps indicate strength and weakness of particular topics. For example, Global Themes (Figure 13) is a domain with minimal overall topical coverage, yet there are several topics within it, including Historical Thinking/Concepts, Political Movements, and Social Movements, that all have a moderate number of texts present. For U.S. History Since 1865 (Figure 8), is a moderate domain in terms of overall topical coverage, yet there is no coverage of Westward Expansion.

Finally, there are several domains that did not contain any texts for the topics. These domains include Ancient Civilizations, Asian History, Classical History, Law & Criminology, and Mesoamerican, South American, & Caribbean History.

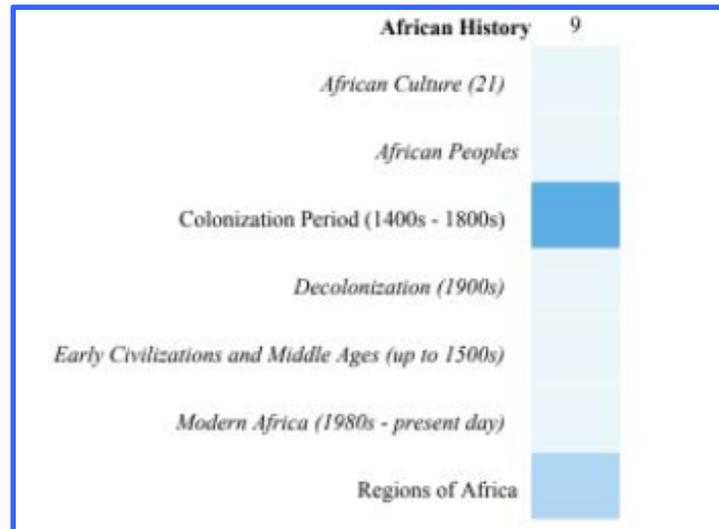


Figure 10. Heat map analysis of the African History knowledge domain in the 1776 Unites! course.



Figure 11. Heat map analysis of the Anthropology knowledge domain in the 1776 Unites! course.



Figure 12. Heat map analysis of the European History knowledge domain in the 1776 Unites! course.



Figure 13. Heat map analysis of the Global Themes knowledge domain in the 1776 Unites! course.



Figure 14. Heat map analysis of the Philosophy knowledge domain in the 1776 Unites! course.

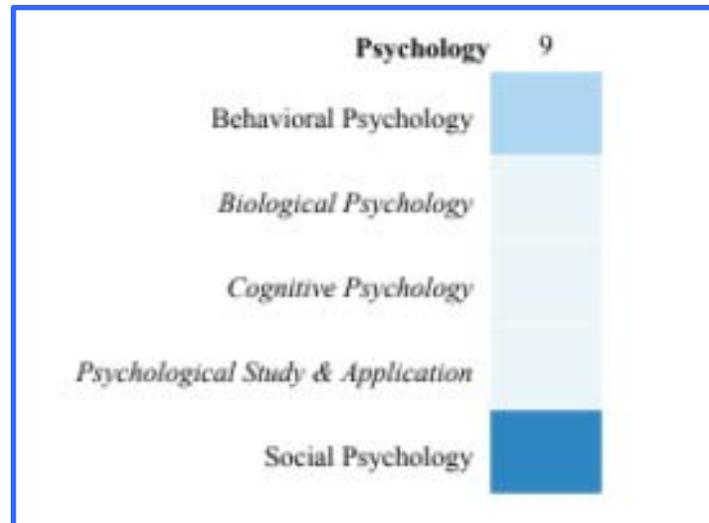


Figure 15. Heat map analysis of the Psychology knowledge domain in the 1776 Unites! course.

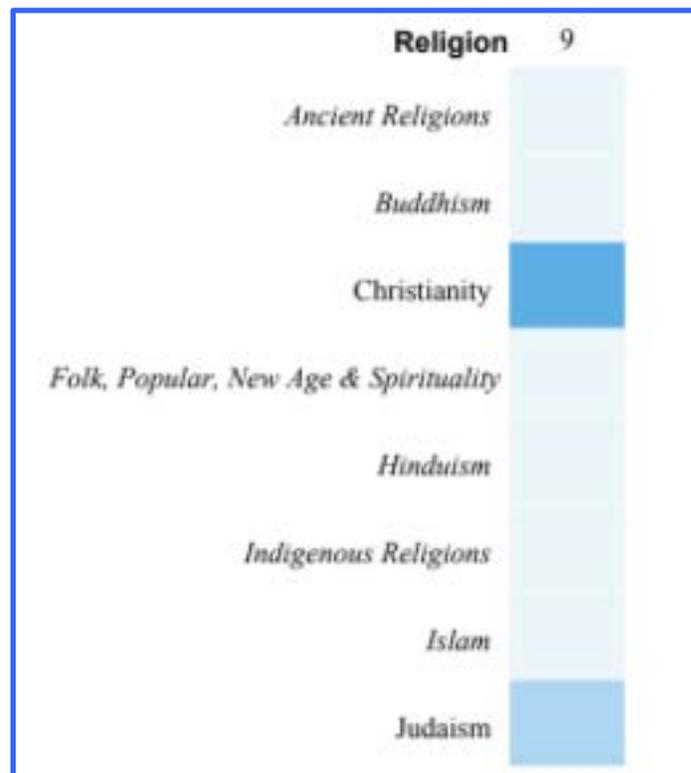


Figure 16. Heat map analysis of the Religion knowledge domain in the 1776 Unites! course.

1776 Unites! Quality & Coherence

As mentioned previously, the Institute’s analysis includes tagging each text for the knowledge domains, topics, and subtopics that it reinforces. The evaluation also rates each individual text for quality according to the rubric below. For each item, the Institute

applies a tagging system that rates how well supplemental materials reinforce the knowledge found in the anchor text.

Quality and coherence findings vary and are not linked to each other. A unit may score highly on overall quality, shown as a percentage, but have a low coherence rating in terms of how well the supplemental texts reinforce the knowledge built in the anchor text. In other words, units with high overall quality scores may only weakly reinforce central themes through the inclusion of additional materials, and vice versa.

Rubrics for Quality

The Institute applies three rubrics for analysis of individual text quality – a rubric for written primary sources, visual primary sources, and all secondary sources.

Primary Sources: Written, Spoken, and Verbal

Emotion: The degree to which the source is memorable due to its impact upon the reader.

Language: The degree to which the source is an example of outstanding or representative writing.

Universal Questions: The degree to which the source addresses important aspects of the human condition or the relevant historical context.

Content Knowledge: The degree to which the source contributes to students' background knowledge of the tagged domains and topics.

Prominence: The degree to which the source reflects its historical period or provides important context to the related events or documents.

Primary Sources: Visual, Artistic, or Non-Verbal

Emotion: The degree to which the source is memorable due to its impact upon the reader.

Authenticity: The degree to which the source reflects authentic interpretive experience or visual representation of the historical context.

Universal Questions: The degree to which the source addresses important aspects of the human condition or the relevant historical context.

Content Knowledge: The degree to which the source contributes to students' background knowledge about the tagged domains and topics.

Prominence: The degree to which the source reflects its historical period or provides important context to the related events or documents.

Secondary Sources: Written, Spoken, and Visual

Accuracy: The degree to which the source is empirically accurate.

Language/Artistic Technique: The degree to which the source is an example of outstanding writing or artistic expression.

Source: The quality and trustworthiness of the source.

Content Knowledge: The degree to which the source contributes to students' background knowledge about the tagged domains and topics.

The quality and coherence review also includes an evaluation that measures the presence or absence of two factors: multiple perspectives on a given subject and encouragement to create a deliberative classroom.

Coherence Analysis

The Unit Coherence Map utilizes a spoke visual, where the unit name appears in the central square and the surrounding squares represent the materials within that unit. The percent shown on each outer square represents the percentage of shared topics weighted against the total number of shared topics within a unit. This means the more a topic is shared within a unit, the higher the percentage for each text that includes that topic; likewise, less-shared topics within a unit will result in a lower percentage for each text. The proximity of each spoke to the central unit square visually represents this relationship. In addition, there is an overall unit Coherence Score in the upper right corner in blue. The Coherence Score averages the coherency percentages of all texts within a given unit but also includes a .5% penalty for each domain that is not shared in any texts.

The quality and coherence findings for the project follow in the section below. This report highlights the highest- and lowest-quality units present in the course, and provides a discussion of knowledge reinforcement within those units. The caption below each graph provides an overall quality score for the unit. The Institute considers units with a text quality score of 75% or above to be high quality. A unit is acceptable as low as 66%, and any quality score below 66% denotes poor quality.

1776 Unites! Quality & Coherence Findings

The project receives an overall quality score of 87.45%, placing it in the high quality band.

Highest-Rated Unit

Unit 3, Jessie Owens & The Berlin Olympics, is the highest-quality unit within the project, with an average text quality score of 96.08%. All of the texts within this unit share the topics of the African-American Experience of the Equity and Inclusion domain. *Highlights of the 1936 Olympics* has the lowest coherency score (40%) because it also covers the topic of The Great Depression which is only shared with one other resource, *More Than Gold: Jesse Owens and the 1936 Olympics*.

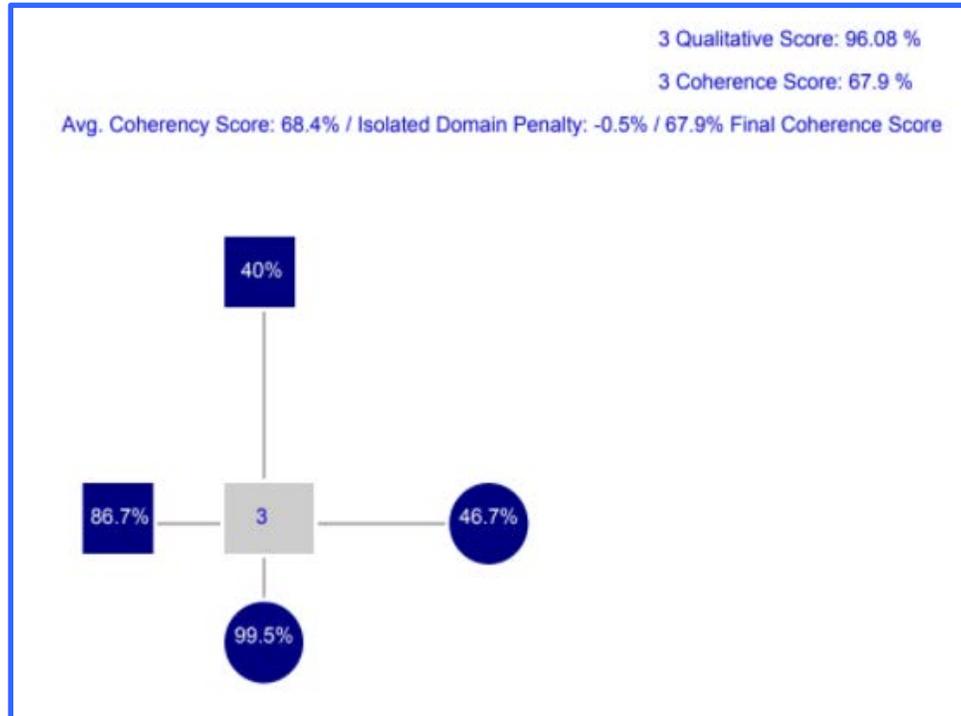


Figure 17. Coherence map of 1776 Unites! Unit 3. The average unit score for text quality is 96.08%.

Lowest-Rated Unit

Unit 2, Bessie Coleman, is the lowest-quality unit at this grade level, with an average text quality score of 82.17%. Despite having the lowest text quality score, the unit still falls within the Institute’s high-quality range, with only two texts out of ten falling below the minimum 66% threshold. The texts with the higher coherency scores explore topics of the Women’s Experience and the African-American Experience of the Equity and Inclusion domain, Change Makers of the Global Themes domain, and the Gilded Age of the American History domain. The text *Air Crash Averted* has the lowest coherency score because it only shares one topic, Women’s Experience, with the other texts.

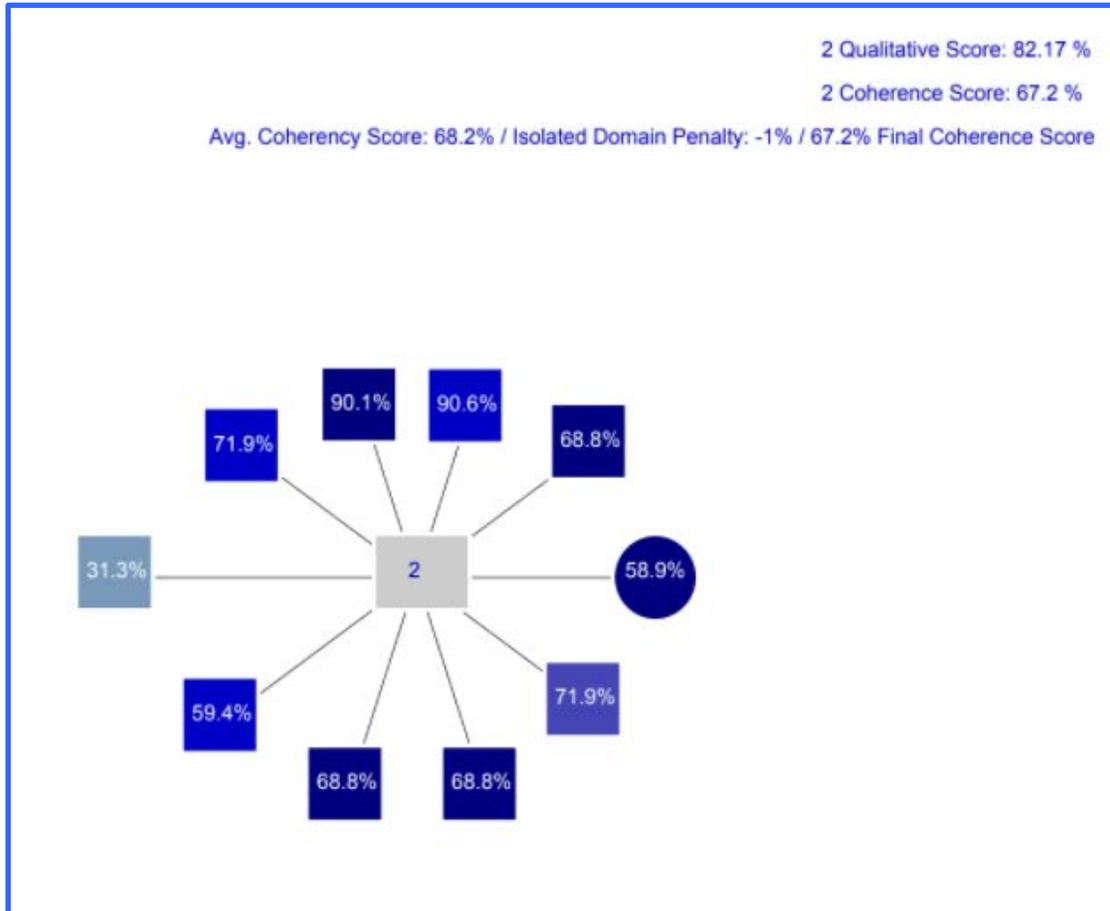


Figure 18. Coherence map of 1776 Unites! Unit 2. The average unit score for text quality is 82.17%.

Unit Analysis of Open Classroom Climate & Multiple Perspectives

The Social Studies Knowledge Map™ also includes a unit-level assessment of the inclusion of multiple perspectives and the intended open classroom climate. The multiple perspectives score measures the extent to which the unit provides a holistic approach to its broader context by representing a range of voices and viewpoints. The open classroom climate score analyzes teacher-facing materials to determine the extent to which instructors are encouraged to include discussion and student inquiries. It also evaluates whether appropriate space is left for students to form their own opinions on controversial or contested issues. The bar graphs below provide the scores for each unit, and include an average for the entire grade on both measures. Scores in both categories range from 1 to 3; an average score of 2.5 or above is considered high, while a score between 2 and 2.5 is considered acceptable.

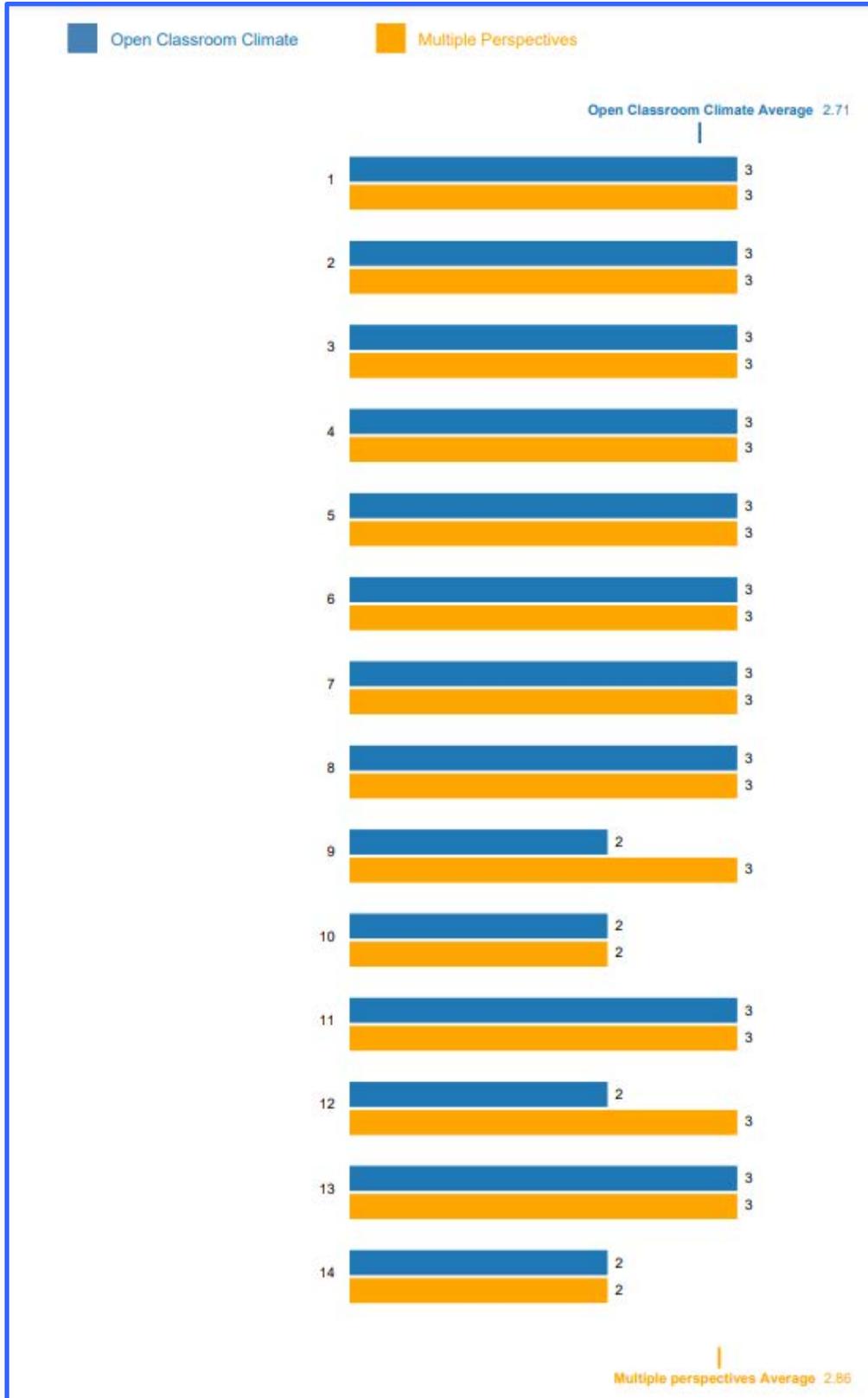


Figure 19. Visual representation of Multiple Perspectives and Open Classroom Climate scores.

The majority of the units had a score of 3 in both categories, with a few scoring a 2 in one or both categories, and no units ever scoring a 1 in either category. The strongest units are Units 1-8 (Walter E. Williams, Bessie Coleman, Jessie Owens & The Berlin Olympics, Tulsa: Terror & Triumph, Paul Cuffe, 54th Massachusetts, Crispus Attucks, and Alice Coachman), all achieving perfect scores, as well as Unit 11 (Booker T. Washington and the Rosenwald Schools) and Unit 13 (Elijah McCoy). Several of the later units are where discrepancies begin to appear, most notably with Unit 10 (Benjamin Banneker) and Unit 14 (Robert Woodson) which both received the lowest combined scores. The average score for Open Classroom Climate was a 2.71, and the average score for Multiple Perspectives was a 2.86. Both of these are enough to be considered high-end results, and this indicates that the 1776 Unites! project represents a wide range of thought-provoking materials and perspectives that students are able to draw knowledge from, and that the course grants students enough room to analyze the content they are being taught, form their own conclusions, and debate and discuss these conclusions with one another.