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Libraries and College Readiness: The Bronx Community College Library High School Collaborative

by Carl R. Andrews, Reference and Instruction Librarian, Bronx Community College
Dickens Saint Hilaire, Chemistry Professors, Bronx Community College

In today's information-rich global economy, City University of New York (CUNY) graduates need strong critical thinking skills. Over three quarters of the students who enroll across CUNY's 24 campuses are drawn from schools in the New York City Department of Education (NYCDOE) (Strang, 2014). The NYCDOE, the largest public school system in the United States, serving over 1 million students (Strang, 2014). Unfortunately, many of the students who matriculate to CUNY's college and universities are underprepared for college-level work. This is especially the case with students who attend high schools throughout the Bronx, one of New York City's five boroughs. Most of the high schools throughout the Bronx are within the Bronx Community College (BCC) district. One area in particular that many students need additional support and development in is information literacy skills, a set of literacy skills known to be essential for their academic success. Information literacy skills include students' abilities to think critically about the information they encounter online and in print; to evaluate information for its authority, timeliness, accuracy, bias, and appropriateness; and to evaluate the ethical use of information.



Professors Carl R. Andrews (Reference & Instruction Librarian) and Dickens Saint Hilaire (Chemistry)

Bronx Community College is considered a minority-serving institution. The majority of students who matriculate into BCC are of Hispanic, Afro-Caribbean, West African, or African American descent; our student population reflects the demographics for the Bronx. According the United States Census Bureau, as of July 2016, the estimated population of the Bronx was 1,455,720. Of that population Blacks or African Americans represented 43.7% of the total population. Hispanics or Latinos represented 56.0% of the total population (U.S. Census Bureau, 2016). A strong number of our students (both high school and college) face financial hardships. The median household income in the Bronx (in 2015 dollars) was $34,299. Persons living in poverty represented 30.3% of the total population (U.S. Census Bureau, 2016). For many of our students, having the opportunity to graduate high school and enroll into college is an important milestone. For some, they are the first in their families to attend college. BCC offers programs designed for students who are on public assistance and are working to become self-sufficient. We also assist students who wish to obtain their high school diploma. In all of the Bronx Community College Library High School Collaborative (BCCLHSC) workshops, the teachers indicated that many of their students struggle academically, often due to issues rooted in socio-economic hardships. If a student is living in a shelter or struggling economically, this can impact their ability to focus on their school work. BBC and the high schools that feed our college are committed to serving all students regardless of their circumstances, heritage, or means, which is why collaborations like the BCCLHSC are so important. Our work together supports teaching and learning for all our students across the K-16 continuum.

The NYCDOE/CUNY Model

The NYCDOE/CUNY Model was designed to allow the collaborative to meet five times for two hours, during which the participants share their educational values, identify teaching challenges, identify curricular revision opportunities, design pedagogical activities and materials, and offer suggestions on how to implement the revised curricular unit. (See Figure 1.)

Building on the work of the New York City DOE/CUNY Library Collaborative, the BCCLHSC is a series of workshops that bring together high school and college teaching faculty to re-design secondary curricula by infusing information literacy, research, and critical thinking skills. In this article, we share the work done to support the development of information literacy through the BCCLHSC, a collaboration between high school and college educators based on the model developed by the New York City DOE/CUNY Library Collaborative. BCCLHSC's work that speaks directly to the important role libraries play in college readiness, curriculum development, collaborative teaching, and pedagogical communities of practice.

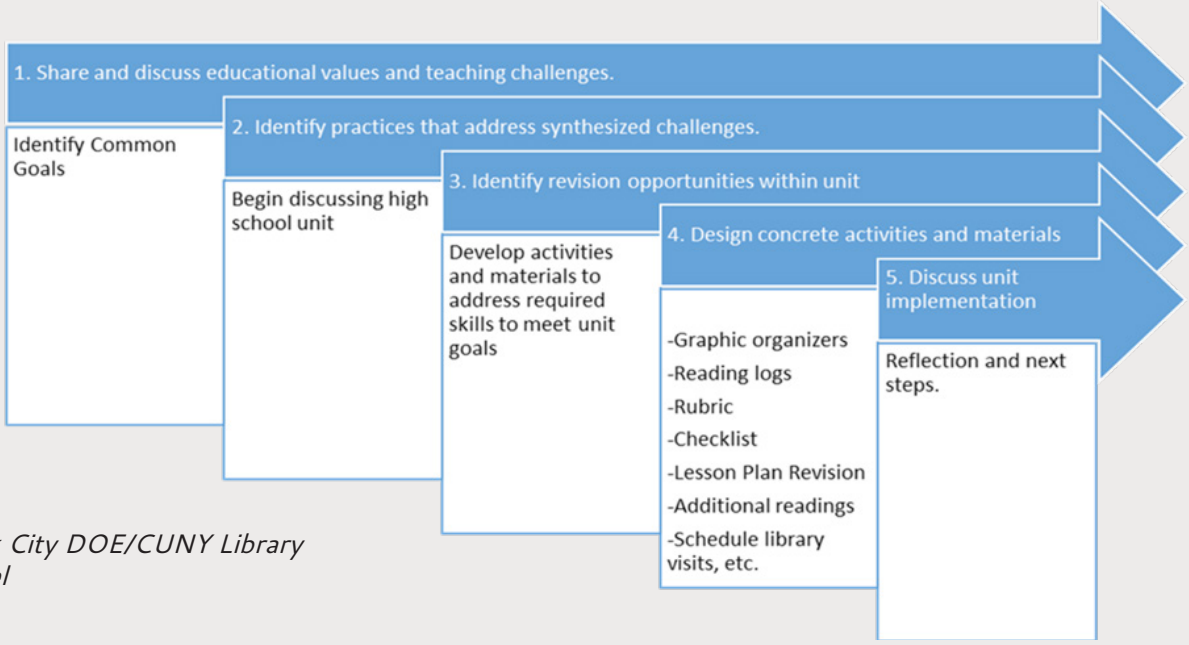


Figure 1. New York City DOE/CUNY Library Collaborative Model

The BCCLHSC used a collaborative framework to support their work towards the following four goals:

- Revise high school curriculum units to be more robust to better prepare high school students to meet the more rigorous demands of college level research.
- Develop and nurture permanent communities of practice among Bronx high school teachers, librarians, college instructors, and education administrators.
- Provide a map for supporting changes in how high school and college educators work together with librarians as part of Communities of Practice.
- Highlight the important role that librarians play in supporting teachers to develop rigorous and robust curriculum units.

Aligning Secondary and Postsecondary Frameworks for Information Literacy

The American Library Association has two divisions that provide frameworks and standards for information literacy that guide the work of the BCCLHSC, the American Association of School Librarians (AASL) and the Association of College and Research Libraries (ACRL). The goal is to align these standards, through the work of the BCCLHSC, so that our students leave high school and enter college with stronger research skills. The first set of standards is provided by the AASL, which published the *Standards for the 21st-Century Learner* in 2007. The report defines and outlines detailed standards for information literacy education around the following four areas of literacy:

- Inquire, think critically, and gain knowledge.
- Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.
- Share knowledge and participate ethically and productively as members of our democratic society.
- Pursue personal and aesthetic growth. (American Association of School Librarians, 2007, p. 3)

Further, in their report the AASL detailed standards based on the skills, beliefs and attitudes, common behaviors, and self-assessment strategies associated with each area of literacy. Across the four areas of literacy, the BCCLHSC has identified nine learning outcomes from this comprehensive list that they anticipate for the secondary learners impacted by the project.

The ACRL is the professional association for academic and research librarians in higher education. The information literacy standards that librarians have used to support higher education curricula were established and implemented through ACRL. On January 11, 2016, the ACRL adopted the *Framework for Information Literacy for Higher Education* (Framework, Association of College and Research Libraries, 2016). The Framework is a set of "interrelated core concepts" that have been adapted to complement the "changing dynamics of the world of information" (Association of College and Research Libraries, 2016, p. 2). These concepts allow more flexibility in implementation than sets of standards, skills, or learning outcomes. The Framework is organized in six frames that are anchored to the following concepts:

- **Authority Is Constructed and Contextual.** Information resources reflect their creators' expertise and credibility, and are evaluated based on the information need and the context in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required.
- **Information Creation as a Process.** Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences.
- **Information Has Value.** Information possesses several dimensions of value, including as a commodity, as a means of education, as a means to influence, and as a means of negotiating and understanding the world. Legal and socioeconomic interests influence information production and dissemination.
- **Research as Inquiry.** Research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field
- Scholarship as Conversation. Communities of scholars, researchers, or professionals engage in sustained discourse with new insights and discoveries occurring over time as a result of varied perspectives and interpretations.
- **Searching as Strategic Exploration.** Searching for information is often nonlinear and iterative, requiring the evaluation of a range of information sources and the mental flexibility to pursue alternate avenues as new understanding develops. (Association of College & Research Libraries, 2016, pp.4–9)

"Students need to be taught literacy skills: reading, writing, comprehension, how to conduct research and write reports. Also, they need proficiency in mathematics."

BCC faculty participant on preparing students to enter college

Recruiting Participants

Recruiting participants for the BCCLHSC was not difficult; most teachers (high school and college) generally have an interest in supporting the academic success of the students they work with. The high school teacher had to be willing to share his or her curricular unit with the group and be open to constructive criticism. She/he did not have to be a certified teacher, but the ideal candidate would have at least three years of secondary teaching experience with grades 11 or 12. For the initial project, our goal was to recruit a high school teacher from one of the STEM disciplines; since Professor Saint Hilaire is a college chemistry professor, we aimed to recruit a high school teacher that would complement his expertise. The teacher can specialize in any of the Common Core subjects (STEM, social studies, and English) as long as they are sharing a curricular unit they are currently implementing, or plan to implement in the following academic year. Of course, having a willingness to work with librarians and an interest in supporting the high school to college transition are also essential. Professor Saint Hilaire played the role of the college professor in all three iterations, with two in social studies (the Progressive Movement and the American westward expansion), and one in physics. Despite the varied disciplines, the workshop outcomes turned out to be rewarding experiences for both him and the high school participants.

Although we had to make a slight deflection from the original model, the same principles remained in place. The college professor in the collaborative ideally will teach in a subject that complements the secondary curricular unit. If the high school teacher teaches global history, the college professor ideally will be an instructor in one of the history courses offered at BCC. The same is true for a chemistry high school teacher and a chemistry professor, or in English courses. Moreover, we designated the workshop meeting times for five 2-hour sessions; we could have easily extended the group-work time to 20 hours, but we did not have the budget to pay the participants beyond 10. We say this to prove that the model is not etched in stone; what is important is the relationships that are established between the institutions and the libraries that serve them.

At BCC, outreach and collaboration are supported by the school's administration, so we were lucky to have administrative support all throughout the project. In addition, the original model included a project manager who handles all of the logistical matters, including the recruiting of group participants. We did not have a budget for a project manager; we were responsible for managing all of the behind-the-scenes things, such as corresponding with the business office and ensuring all of the participants (once recruited) were paid on time, the refreshments were delivered on time, the vendors were paid, the space we used was reserved, and there were no meeting conflicts.

We were also responsible for drafting the announcements to recruit a documentarian, a group facilitator, and the high school educators. We reached out to the BCC teaching faculty, specifically the Education and Academic Literacy Department, for

"Challenging students on a regular basis to form reasoned opinions which they can back up with real research; encouraging critical thinking strategies on material/content being taught; student-centered discussions; peer editing."
-High school librarian in BCC district comment on integrating research into course curriculum

our group facilitator; to the English department for our documentarian; and to multiple academic departments for the candidate who would fill the role of the college professor. We had three different facilitators for the three iterations of the project. Each iteration of the project required extensive marketing. Professor Sharmila Mukherjee of the BCC English department became the group's documentarian, and we are deeply grateful for the work she has done for us. To recruit the high school participants, we reached out to the school librarians first, and they in turn recruited interested teachers from their respective campuses.

Curricular Impact

The curricular units revised throughout the collaborative all offered plenty of opportunities to increase student research and library collaborations. The first unit presented was developed for a 12th-grade American history class and was entitled Lessons for the Progressive Movement. Among the list of assignments included, one required students to evaluate the roles of prominent social reformers from 1880-1912. We recommended literary reviews of primary sources retrieved from Infobase. We shared a number of biographical encyclopedia articles of prominent African Americans and women. All of the recommended content addressed themes related to social reform, education, women's suffrage, social gospel, labor reform, immigration and eugenics, political corruption, conservation, political reform, African American rights, and economics. The group brainstormed ideas on how to engage students by using CQ Researcher reports with progressive themes like the Occupy Movement, the Living-Wage Movement, fighting urban poverty, and human rights. After introducing the recommended resources to enhance his unit, the teacher suggested having students use the CQ Researcher reports as a model for them to create their own report on the Progressive Movement. Creating a report similar to the ones indexed in CQ Researcher requires math, writing, art, reading, and research. The idea of having students form debate teams in class was considered, using gentrification as the theme to engage students. This teacher follows up with his social studies class every semester by bringing a group of students to the BCC Library to retrieve content for their research projects. We recommended a number of scholarly journal articles and advised that he request students to develop an annotated bibliography.

The second unit presented to the collaborative was developed for a ninth-grade physics class and was entitled University Heights High School: Ninth Grade History of Engineering and Inquiry. There was concern about the grade level, but the group worked with the theory that college readiness can begin as early as the primary level. We had fun brainstorming ideas to enhance this unit. Professor Saint Hilaire was heavily engaged since his specialty is chemistry; chemistry and physics deal with the behavior of matter. The unit was aimed at enabling students to conceptualize "models." The core concepts of engineering like precision, conservation of energy, and momentum that are required to be built into mathematical models would help students answer the following questions: How do scientists create models? How can learners develop and use mathematical models and diagrams to describe and predict the motion of an object? Can there ever be an absence of energy? The group strongly advised that the teacher incorporate more writing into the unit. We suggested including an assignment where students would use a scientific database to select a biographical encyclopedia article or a scholarly journal article, then write a summary about what was addressed in the text. The group agreed that this was something both secondary and college students struggled with.

Both Professor Saint Hilaire and the high school teacher gave demonstrations on how they teach a specific lesson in their disciplines. The librarians presented teaching scaffolds from multiple sources that could be used to enhance the unit. It was suggested, through a simulated library lesson, that students be taught how to differentiate between a credible source and a "fake" source of information on the Internet. Professor Saint Hilaire discussed his thoughts on the importance of sharing his college syllabus in the physics workshop: "Sharing my syllabus with the group showed what my expectations from the students are. I learned that not all students have the same level of skills (reading, writing, and math.") The collaborators

"Wish it [library supports and curriculum] were more integrated. The support is there but needs both faculty and library faculty to collaborate to make the support a real success story."
-BCC faculty participant on library supports and curriculum at BCC

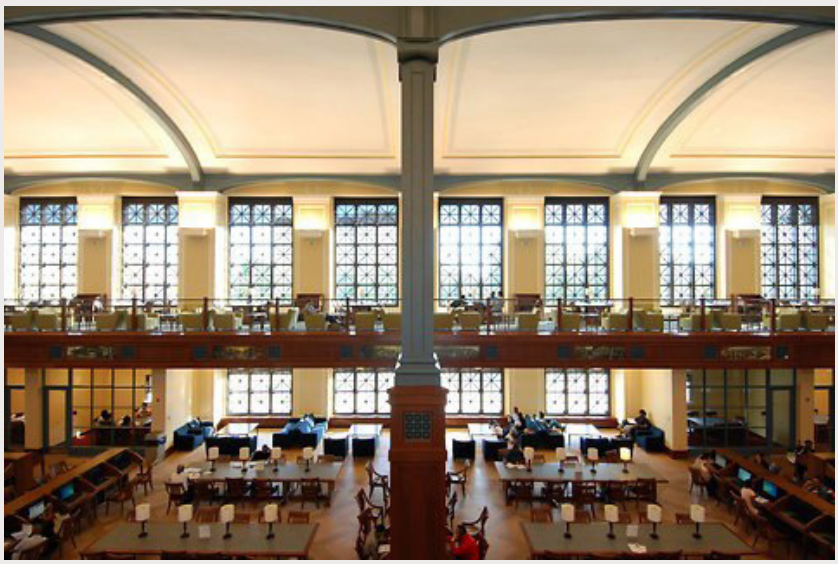
knew the importance of those skills in college readiness and graduation rates. The librarians emphasized using the AASL Standards for the 21st-Century Learner (American Association of School Librarians, 2007) as a tool to promote "wonder" and "curiosity" in ninth-grade students. It was suggested that the librarians' services be maximized to bring the high school student into the fold of the 21st-century learner.

The third and final unit for the collaborative was developed for 11th-grade social studies and was entitled American History of Social Justice Unit 3- Westward Expansion. This was an especially emotional unit to revise, because the teacher wanted to engage her students by analyzing the Trump presidency and Trump's controversial statements about Mexican Americans and Muslims. The group came up with plenty of ideas to get the students to utilize library resources for their research projects. For this unit, we reached out to one of the history professors at BCC and requested he share his course syllabus with us. The syllabus was used as a teaching tool to give high school students an idea of what to expect upon entering college. In addition to the BCC history syllabus we scanned and printed out graphs and charts from Infobase. The recommended research topics for this unit were manifest destiny, Native American territory losses, growth of the railroads (1850-1860), the Louisiana Purchase, the California gold rush (1848-57), the Trail of Tears, Indian Reservations in the Midwest (1840); transfer of Indian land (1850), western expansion of the United States (1787-1867), and the Chinese Exclusion Act (1882). The group brainstormed and proposed developing research assignments about police brutality throughout the country. Students would be tasked to visit the U.S. Department of Justice web page to retrieve statistical data on police misconduct throughout the United States; they would then schedule a day and time to visit a police precinct in their neighborhood to interview a law enforcement official. Once the work was completed, the students would present their findings in a PowerPoint presentation. The issue of gentrification was also discussed in this unit; group members associated the term with modern day ethnic cleansing. The librarians shared several scholarly journal articles and recommended assigning annotated bibliographies. Primary and secondary sources were retrieved from journals and databases such as CQ Researcher, EBSCOhost, and Opposing Viewpoints.

The group also discussed two resources the teacher used for her class: the Stanford History Education Group and the Debating US History Curriculum Project, which is a CUNY college readiness initiative; once users create an account they have access to lessons, PowerPoint presentations, primary sources, quizzes, and a host of other tools to enhance instruction. The librarians offered suggestions for using the ACRL Framework to enhance the unit and to develop an information literacy rubric.

Library Resources

The librarian used a collection of resources to enhance the curricular units. Starting with the NYCDOE's Office of Library Services, the resources supplied by this office were developed to support bibliographic instruction and library/teacher collaborations. College readiness is a team effort that requires input from both secondary and post-secondary institutions. LibGuides are content management tools that libraries use to share, organize, and classify information. Leanne Ellis, Coordinator for the NYCDOE's Office of Library Services Bronx Schools, and one of the original committee members of the NYCDOE/CUNY Library Collaborative, developed a LibGuide dedicated to college readiness. (New York City School Library System, 2017). The guide indexes content for secondary librarians and educators, including information literacy skills tutorials. This LibGuide was referenced throughout the collaborative; all of the high school teachers indicated that the LibGuide contained practical resources for developing their curricular units.



The BCC Library

BCC Library Databases

Most academic libraries subscribe to databases designed especially for undergraduate research; some of these databases are also appropriate for high school research. NYPL subscribes to more online resources than NOVEL, but as an academic library, BCC Library subscribes to a large selection of online resources not available through NYPL or NOVEL. Long after the workshops have ended, we were able to share scholarly and peer-reviewed content, specialized encyclopedia articles, primary sources, and teaching aides that would otherwise not be available to the BCCLHSC participants or their students. The following are examples of the databases and resources that contribute to this work.

- CQ Researcher is a social science database that indexes comprehensive reports that are made up of guiding questions, primary sources, statistics with charts and graphs, rhetorical commentary, timelines, bibliographies, and lists of discipline-specific organizations and agencies. CQ Researcher is one of the best resources to use for teaching because it promotes inquiry-based learning, it supports literacy and writing, and the reports include content designed to complement multiple learning styles.
- EBSCO/EBSCOhost is a scholarly literature database made up of specialized databases that cover all academic disciplines. It is designed for novice researchers and is an ideal resource for teaching information literacy concepts and the scholarly communications process. Some of the features in EBSCO include a citation tool, search narrowing options, a citation page that includes an abstract of the article, subject terms that can generate new search results, links to the journal the article is published in, and several other features.
- Ferguson's Career Guidance Center (Ferguson's) is a dynamic database that supports career readiness. In addition to providing encyclopedic information on industries and careers, users are able to download sample resumes and cover letters, and it provides soft skills tutorials, information on apprenticeships and internships, a career interest assessment, a college planning timeline, and a professional development section complete with lists of professional organizations and agencies. Ferguson's engages students and allows us to connect curricula to the professional world and support experiential learning initiatives.
- GALE Virtual Reference Library is a database made up of encyclopedias. Encyclopedias are essential resources for instruction in high school and college. Many students come to the library with research assignments on a breadth of topics, lacking prior knowledge on the subject. They will know what police brutality or human trafficking are on the surface but won't be familiar with the history or the background of the topics, thus may not understand the significance of learning about the issues. Encyclopedias present information that is comprehensive, factual, and current.
- Infobase Learning Databases (Infobase) is another database made up of subject-specific databases, which users are able to search collectively for encyclopedic content, primary sources, teaching scaffolds, and a host of other features developed to support secondary and post-secondary education. These databases are also good for helping students connect the classroom to the real world. Both provide users with videos, interactive learning activities, experiments, biographies, dictionaries, timelines, and encyclopedias.
- Health Reference Center Academic is a database that is designed for both nursing and allied health students. Many of the high school seniors who matriculate into BCC aspire to major in the health sciences: nursing, medicine, radiologic technology, pharmacy technician, biotechnology, and even forensics.
- World Book Encyclopedia (World Book) is one of the most recognizable library resources today. Most people can recall seeing the print version of World Book in the reference section of their public library when they were growing up. Today, the electronic version of World Book has evolved to compliment all learning (and teaching) styles: there are multi-media, hands-on activities, interactive maps and atlases. World Book provides users with writing prompts for every step of the writing process. For librarians and educators, World Book provides tutorials on how to teach information literacy skills.
- Learning Express/PrepSTEP (EBSCO) (Learning Express) is a database that supports both college and career readiness in secondary and post-secondary students. Learning Express is available free through the NYPL; BCC subscribes to the two-year college version. In the college success skills module of Learning Express, students can work at developing a number of essential skills needed for academic achievement, like organizational strategies, classroom success, information literacy, and seeking academic support. There are also modules on ACT and SAT preparation. Learning Express allows users to practice for civil service careers like nursing, law enforcement, teaching, and several others. There are also modules designed to help students develop their literacy and mathematics skills.

Electronics Resources

With the exception of two books in print, the majority of resources used for the BCCLHSC are in electronic format. This does not mean that traditional print resources are obsolete or irrelevant; whenever the opportunity presents itself, librarians teach and encourage students to utilize traditional print resources for their class work, as well as for leisure. For our project, the use of electronic resources made sharing content with the high school participants easier.

Online research databases. In today's library (school, academic, and public), research databases are varied and abundant. For the purposes of our work, we chose databases we thought were best suited for secondary and post-secondary research. Most research databases are created to support teaching and learning, but not all are ideal for bibliographic instruction. JSTOR, for example, is an excellent database with strong scholarly content; however, JSTOR assumes the user has prior knowledge with academic research and is familiar with the scholarly communications process. The BCC Library, the New York Public Library, and New York Online Virtual Electronic Library (NOVEL) are the access points for the databases referenced throughout the collaborative. In the interest of supporting college readiness in secondary and undergraduate students, the participants in the collaborative felt it was best to utilize databases with the following "college readiness" attributes:

- supports language and literacy development in secondary and undergraduate students
- provides scaffolds that support critical thinking and inquiry based learning
- has email and export features
- contains tools to help students with the writing process
- contains tools to help students with citation and avoiding plagiarism
- complements multiple learning styles and reading levels (read-aloud and language translation)
- provides hands-on and interactive features that support learning
- provides multi-media, images, maps, charts, graphs, and timelines
- is easy to access on or off campus
- allows users to download content onto their mobile/handheld devices

For all three iterations, the librarians in the group extracted curriculum-supporting content from each of the access points and databases listed below. For our project, the recommended resources support teaching, learning, and research related to the Progressive Era, physics and engineering, and the westward expansion. The resources included a variety of scholarly journal articles appropriate for multiple reading levels, such as in-depth social science reports that teachers can break up into segments throughout the school year, lists of professional organizations relevant to the coursework, a variety of specialized encyclopedia articles, newspaper articles, primary sources, and, in one instance, a chapter from a print encyclopedia available only in the BBC Library.

New York Public Library Databases. The New York Public Library (NYPL) is another free resource available to high school students and their teachers. The number of NYPL's online resources surpass what is available through NOVEL, but if a student misplaces their library card, they can use NOVEL as a backup. For the westward expansion unit, we referenced two NYPL databases: The American Indian Experience: the American Mosaic, and Indigenous Peoples: North America. As is the case with the databases available through BCC, these resources are designed for middle school, high school, and undergraduate research instruction. Both contain primary sources, archives, timelines, interactive tutorials, research paper writing guides, and citation tools to help students avoid plagiarism. The NYPL is an important component to the collaborative. Most high schools students in New York City own library cards with NYPL. This not only allows them to borrow books; it also allows access to NYPL's electronic databases. Unless they are on the BCC campus, these students cannot access BCC's databases. In the interest of expanding the number of library resources available to the high school students, we established a line of communication with the public librarians at NYPL branches near the schools we worked with. We reached out to the public librarians, connected them with the teachers, made arrangements for the librarians to visit the schools to sign students up for library cards, and demonstrated how to access the databases from home.

New York Online Virtual Electronic Library (NOVEL). NOVEL is a free online resource developed by the New York State Library (a division of the New York State Education Department) for schools in New York State that do not have libraries. NOVEL indexes databases designed especially for K-12 bibliographic instruction, like Academic OneFile, Opposing Viewpoints in Context, and Scholastic GO! We introduce NOVEL to the high school teachers throughout the collaborative and demonstrate how to access and retrieve content from selected resources. The teachers return to their classes and demonstrate the steps for their students. The students are able to access NOVEL from school, home, or on their mobile devices.

The Big6™. Big6™ is a research model co-developed by Michael Eisenberg, Professor Emeritus and Dean Emeritus at the University of Washington's Information School; and Bob Berkowitz, author of the *Big6™ Research Notebook* (Eisenberg, 2008). In a 2008 article, Eisenberg discusses how the scaffold can be used to help students with the research and writing process:

> My own approach, the Big6, is the most widely used model in K-12 education, world-wide (www.big6.com). With six major stages and two sub-stages under each, the Big6 covers the full range of information problem-solving actions. The Big6 is an approach that can be used whenever people are faced with an information problem or with making a decision that is based on information. Students -- K-12 through higher education -- encounter many information problems related to course assignments. However, the Big6 is just as applicable to professional or personal life. (Eisenberg, 2008)

One of the most essential resources that we used in all three iterations of the BCCLHSC is a research paper organizer. As we have indicated, students are entering college lacking writing and critical thinking skills. The research paper organizer is a graphic organizer, a critical thinking guide, and an information literacy scaffold all in one. Based on the Big6™ research process, the organizer is divided into six distinct sections that guide students through the research and writing process: 1) task definition, 2) information-seeking strategies, 3) location and access, 4) use of information, 5) synthesis, and 6) evaluation (Eisenberg & Berkowitz, 2017b).

Carl Andrews took the Big6™ concept and adapted it to be used with our freshmen students at BCC. The BCC Library research paper organizer can be found on Dr. Andrews LibGuide under the information literacy tools tab. The great thing about Big6™ is that it can be adapted for any discipline. It is a teaching scaffold used primarily in K-12 settings, but after Eisenberg's first year working as an academic librarian, he discovered that the Big6™, although developed for K-12, also could be used with college freshmen. College instructors from multiple disciplines have praised the research paper organizer for its ability to help students to think and write like scholars. Librarians from K-16 use it because it is based on the model of Bloom's taxonomy and because it promotes metacognition.

"Students need to be well versed in research and writing skills. They need a firm grasp on technology, besides Facebook, etc."

High school librarian in BCC district on preparing student to enter college

Color-coded know your information sources is a color-coded graphic guide, derived from the Big6™ collection of bibliographic instructional tools (Eisenberg & Berkowitz, 2017a).Most secondary and college librarians will agree that visuals are a great way supplement bibliographic instruction, especially since much of jargon we use can be foreign to young adults. This resource isolates all of the possible information sources into colors and summarizes the information's type, purpose, and audience. There is not a lot to read, it's simple, and to the point. This is the ideal resource to use when time is of the essence. We reference this guide for all three units, and, in following up, all of the teachers are using it with their classes.

The C.R.A.P. Website Evaluation Checklist is a graphic organizer that teaches students how to think critically and to view information with a skeptical eye (Dolinger, n.d.). The acronym stands for currency, reliability, authority, and purpose and point of view. The C.R.A.P. Website Evaluation Checklist opens the door to plenty of learning opportunities. All of the teachers in the BCCLHSC spoke highly of this resource because of its ability to prompt students to fact check; especially in the era of "fake news."

Sample Research Papers. Sample research papers are an excellent teaching tool for writing. MLA, APA, and Chicago Turabian are foreign languages to many incoming freshmen, who not only have to master the content in their classes, but also need to familiarize themselves with the library's jargon. In all three iterations, the issue of students' writing ability (high school and college) was a concern. The sample research papers give students something tangible to refer to. We referenced sample research papers throughout the collaborative, and the teachers strongly approved of its use. This resource supports the collaborative because it models what writing at the college level looks like.

"Students need to have more high quality instruction that encourages them to think critically, rather than regurgitate information."

High school librarian in BCC district on preparing student to enter college

Topic, Hunt, Information Evaluation, New Knowledge, and Quote

The BCC Library developed a brochure to market information literacy concepts to students and faculty titled THINQ, an acronym for topic, hunt, information evaluation, new knowledge, and quote. Students are encouraged to use the brochure as a reference tool for their research and writing assignments. Teaching faculty are encouraged to use the brochure to infuse information literacy skills into their courses.

Topic Determine the information needed	• Identify and define research topics and keywords drawn from course discussions, syllabi, and assignments • Recognize and articulate research questions • Develop a concise statement or problem of inquiry • Extract the key ideas or topics from his or her statement or problem of inquiry • Identify academic disciplines and their subject categories • Demonstrate an understanding of matching topics and key words with official Library of Congress subject terms
Hunt Access information resources effectively and efficiently	• Identify the type, status, mission(s), audiences, and purpose(s) of the author providing information • Identify a variety of information from authors and the value of the type of information each provides • Perform a general search using the key ideas drawn from his or her statement or problem of inquiry • Understand how to apply search strategies (e.g., Boolean logic, truncation, etc.), how to identify specific subject headings in the general search results, and then how to perform more focused and targeted searches • Identify and use the various methods of access to and use of information in libraries and elsewhere • Perform basic and advanced searches in the CUNY libraries online catalog, and read CUNY+ holdings information • Search for authoritative information across the internet • Know when to extend a search beyond our library through the use of the CLICS service, interlibrary loan, other library catalogs, guides, or the professional expertise of librarians
Information Evaluation Critically evaluate the information and its sources	• Distinguish between different types of resources • Differentiate between scholarly and non-scholarly resources • Select the most appropriate and resources based upon reliability, validity, accuracy, authority (who wrote or authored the work), timeliness (date work was produced), and objectivity (purpose or intent of the website or published work) • Identify the intended audience, scope/coverage, and purpose of resources (e.g., scholarly popular, primary/secondary, expert/lay) • Articulate and apply initial criteria for evaluating both the information and its sources
New Knowledge Incorporate chosen information into your own knowledge base and learning results	• Summarize and organize the main ideas from the resources • Synthesize main ideas to construct new concepts • Compare new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information • Determine whether the initial query should be revised • Apply new and prior information to the planning and creation of a product or performance
Quote Understand the economic, legal, and ethical issues regarding your information use and access	• Identify social, ethical, and economic impact provision of information sources • Be familiar with ownership, plagiarism, and fair use concepts that impact academic scholarship • Name and define the elements of citation • Identify the appropriate citation guidelines used in the discipline • Demonstrate correct attribution of information resources in their research products

Project Challenges

Tracking a Cohort

As of now, we rely heavily on the high school participants to remain in touch with us and to keep the lines of communication open between the BCC Library and the participant's school. Mr. Jeffery Ellis-Lee, the social studies teacher from the first iteration and teacher at the High School For Arts, Imagination And Inquiry (another BCC feeder), follows up every semester by bringing a group of his 12th-grade students to the BCC Library with a research assignment. Unlike University Heights High School, Mr. Ellis-Lee has a campus librarian who works with him to infuse the recommended scaffolds and readings for his unit on the Progressive Era. He is an ongoing participant of the BCCLHSC, and many of the students who visit BCC on their research field trip do plan to attend BCC upon graduation. Unfortunately, it is not a guarantee that they will in fact matriculate into BCC, and we have no way of tracking the students who graduate from the participating schools. This means we cannot determine if they are entering college with stronger research skills as a result of being exposed to the revised unit.

Sustainability and Measurability

Implementing a collaborative that is permanent, sustainable, and measurable is another challenge. The only sure way to do this would be to hire a college librarian designated as the High School library liaison. These librarians that work for colleges have high schools attached to the college, in some instances the school is physically on the college's campus. In this case, the students have full access to the library's research databases on and off campus 24/7. The high school library liaison's job, to reach out and market the library's services to the high school, is simplified. Compiling statistics on the work she/he does with the students and teachers is easy because they are embedded into the school's curriculum development and design process.

Participant Availability

As noted earlier, we had to select teachers from disciplines other than STEM, specifically chemistry. When surveyed, both high school teachers and librarians indicated that a college readiness program that focused on information literacy was important, and if presented with the opportunity, they would be willing to participate in such a collaborative. The most significant issue with recruiting the participants was their availability; most of the teachers we reached out to were not available after school between the hours of 3:30pm – 5:30pm, and many worked at schools with extended days. One of our potential candidates went as far as filling out the paperwork, but at the last minute had to decline because of childcare issues.

Funding

Adding a monetary incentive certainly increased interest in the project, and as we move forward, we will continue to seek out grant opportunities to continue implementing the BCCLHSC. The documentarian and facilitator roles require a specific skill set. Compensation for these jobs is warranted; although unlikely, some people may enjoy doing the work without being compensated. At CUNY, junior faculty (non-tenured) are required to be involved in service activity as part of the tenure-track process, so they're constantly looking for opportunities to enhance their CVs, and participation in a project that speaks to college readiness may look attractive to teaching faculty. Recruiting secondary teachers and librarians to do the work for free is another story.

Surveys

During the last iteration of the BCCLHSC, we administered three surveys to gage our colleagues' thoughts on the importance of libraries, information literacy instruction, working with our high school/college counterparts, and participating in pedagogical communities of practice, as well as their perceptions on how all of these factors relate to college readiness. The surveys were administered to BCC teaching faculty, NYCDOE high school teachers, and NYCDOE high school librarians. Although the survey for high school teachers was shared via email listserv to dozens of secondary teachers throughout the Bronx, only seven teachers participated; what's more, they (the seven) provided very few answers for the open-ended questions. Forty BCC college faculty and 52 high school librarians participated in our survey. These two groups provided answers for the open-ended questions. We extracted questions from the surveys that required open-ended responses; some of those responses are listed below. The survey responses speak directly to the important work we are doing at BCC,

as well as the works done at other CUNY campuses through the NYCDOE/CUNY Library Collaborative. Responses from these surveys are highlighted throughout this article.

Costs and Funding

The initial work of the BCCLHSC was funded through two grants, which combined totaled $11155.00; the awards were dispersed over three semesters. Group members were compensated for 10 hours at rates that reflected their expertise and the role they played in the collaborative. The high school teachers and librarians were paid $50.00 per hour, the group facilitators were paid $65.00 per hour, and the documentarian was paid $25.00 per hour. The authors did not receive compensation since the workshops took place during our normal working hours. We also purchased supplies from Staples™ in the amount of $559.00, which lasted for all three iterations, and refreshments (coffee, bottled water, and cookies) for $222.00 each iteration. We do plan on applying for other grants in the future but would like to try implementing the model without grant funds. Most of the participants are genuinely interested in supporting college readiness and the work done provides professional development for community college educators and secondary common core teachers.

Conclusion

The BCCLHSC has opened the door to further teaching and learning partnerships. Since the spring 2017 iteration, we have been offered the opportunity to collaborate with other college professors who are interested in supporting this college readiness initiative. Professor Saint Hilaire and I look forward to implementing the collaborative in the not too distant future. Currently, we are in the process of editing a paper which details all of the work done. There is a growing body of scholarly literature that addresses the role libraries play in the high school to college transition. We are thrilled to have the opportunity to contribute to the conversation.

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Copies of the curricular units, surveys and survey responses, are available by request from the authors.

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