Why College Ready, College Bound

For the past two years the IUPUI University Library has been working on an information literacy project — College Ready, College Bound. Information literacy is the ability to find, evaluate, and critically and ethically use information. We believe such skills are critical to academic success.

The College Ready, College Bound (CRCB) project has two overarching goals.

The first is to verify our belief that information literacy is a key component for academic success at IUPUI and for college level work in general.

Second, we want to establish what information literacy skills students possess when they complete high school and how these skills match what is required to be academically successful in college. Our suspicion is that many students leave high school without the sound information literacy grounding they will need for college work. We also suspect that neither high school teachers nor college faculty understand that this gap exists. The result is that students are less successful than they could or should be.

The College Ready, College Bound project aims to demonstrate the gap in students’ information literacy skills and the negative impact it has on student academic success. The result will be an increased understanding of the problem and the motivation to work to solve it. The project also proposes to develop and test interventions to begin to address the problem.

David Lewis
- Dean of University Library, Indiana University - Purdue University Indianapolis

Kenneth J. Burhanna
- Assistant Dean for Engagement & Outreach, Associate Professor, Kent State University Libraries

In our current environment of diminished resources and disappointing student achievement, it is more important than ever that librarians within our educational systems help solve the problems of their institutions. College Ready, College Bound presents a timely and adaptable model for how librarians and libraries can help solve a very important problem - how to improve student readiness for college - and shows again how librarians may be better positioned than most to collaborate across the educational continuum. After all, school librarians and academic librarians are much more alike than they are different.

In many ways, College Ready, College Bound exhibits all the key characteristics and best practices required to address this problem. From a foundation of collaboration, it focuses on the local educational system; includes ongoing discovery, dialogue and reflection; stresses learning and professional development; and makes use of formal assessment tools like TRAILS (Tool for Real-time Assessment of Information Literacy Skills). The practice of assessment is particularly important and often the missing piece for similar projects. For whether librarians and teachers use TRAILS or other similar tools or even if they create their own unique information literacy assessments, it is important to measure and gauge student competency levels so learning can be demonstrated and lessons more aptly designed, and perhaps just as important, so we can communicate the impact of this work to key stakeholders. In the end, College Ready, College Bound asks as many questions as it answers, which is as it should be, but I have a hunch (and certainly hope) that it will help many others take similar steps and find answers where they previously had only questions.
College Ready, College Bound began as conversations about connections, relationships, and future partnerships between high school and academic librarians. The following questions arose:

• How many school librarians in Indiana had been reassigned or dismissed in public, private, and charter schools, and did this have an impact on student achievement and engagement?

• How had students at IUPUI been prepared for college-level work and research?

• How do librarians have a role in college preparation, student engagement, retention, and persistence?

What does it mean to be College-Ready? College Bound?

Who is college bound? How are students prepared take on the challenges of higher education? How are libraries and librarians connected to college-readiness?

In the 12 years it takes for Indiana students to graduate from high school, what connections have they made, how have they prepared themselves not only through curriculum, but through thought processes, decision making, skill building, and relationships?

Does it make a difference if one person, one teacher, one class, or one opportunity is missing, and if students don’t even realize that it is missing, how do they “make up for lost time”? Is a library or librarian part of the college-ready, college-bound equation?
What is a certified school librarian?

A certified school librarian is a teacher and is required to have a teaching license. Librarians are also trained at the graduate level to:

- Acquire/maintain a collection of age-appropriate, balanced, and current materials to support curriculum
- Introduce and encourage a love of recreational reading
- Utilize instructional technology
- Guide students through the process of thinking critically when finding & evaluating information

According to Indiana Code 511 IAC Sec 6, all schools shall have a media program that is an integral part of the educational program. A licensed media specialist shall supervise the media program. Each school shall spend at least eight dollars ($8) per student per year.

Libraries by the Numbers

The American Library Association (ALA) estimates that school librarians help more than 30 million students each week navigate a vast landscape of digital content, because the majority of students still lack the ability to analyze information found online (Sullivan, 2013).

- Current school climates, budgets, and policies in Indiana and around the country have eliminated or vastly decreased the number of librarians in public, private, and charter schools in the last few years.
- In an emerging trend, charter and magnet schools may not have a library at all, nor does state policy require that a school have a library space or librarian on staff. In a search of 10 Marion County charter high schools where a staff directory was provided, none indicated the presence of a librarian (e.g. certified media specialist).

More than 60 education and library studies have produced clear evidence that school library media programs staffed by a qualified school librarian have strong and positive impacts on student achievement, and research indicates that students who had access to a well-staffed, adequately funded library scored significantly higher at both the elementary (18%) and secondary (10%) levels (“Fast Facts”, 2002).
Libraries are an integral part of a flourishing, democratic society, one that places great value on education and community. A funded, well-staffed library in an urban high school serves as:

- An agency of culture
- A place for language acquisition
- A physical space to seek refuge as well as provide financial and personal improvement.

Libraries and their staff matter to the public. According to the AASL report (Davis, 2009), when asked about school libraries, “97% of Americans agree (224.5 million) that school library programs are an essential part of the education experience because they provide resources to students and teachers” and “96% of Americans agree (222 million) that school libraries are important because they give every child the opportunity to read and learn” (p. 4).

Children who grow up in lower income urban areas “are generally not exposed to the same amount of print sources in their households and communities as those living in higher income communities” (Borowski, 2009, p.2). Many bookstores, libraries, and classrooms have begun to adopt electronic versions of books, magazines, and news sources, which creates an even further divide and accessibility issue for adolescent students in poor, urban areas. The function of a school library, particularly in a high school at a time when students often dismiss or do not enjoy reading, is not only for collecting materials that are relevant to the youth who frequent the space, but the library becomes a place for socialization, support, and collaboration. Lance, Welborn, & Hamilton-Pennell (1993) conducted a study in cooperation with the U.S. Department of Education to examine the impact of school media centers and academic achievement. Their findings showed the following:

- Well-funded media/library centers yield higher academic achievement, whether schools and communities are rich or poor, whether adults in the community are well or poorly educated
- Students whose library media specialists participate in the instructional process are higher academic achievers
- Better funding for space and materials fosters academic success by providing students access to more library media staff and larger, more varied collections (p.5)

This is particularly grim reality for students in non-achieving schools across the country, particularly those in low-income, majority-minority school districts. Clemmitt (2007) stated: A public school enrolling mainly middle-class white students has a one-in-four chance of producing good test scores, across years and in different subject matter. A school with a predominantly low-income minority population has a 1-in-300 chance of doing so.”

“A school without a library is like a wheel that doesn’t turn. The spokes may stay connected but the wheel doesn’t function.”
- Lena Darnay

Indiana Administrative Code, 511 IAC 6.1-9-9
Curriculum, (e)

The school has a media center that holds a balanced collection of print materials, nonprint materials, and teaching/learning equipment which is sufficient in quantity and quality to meet the educational needs of the students. All media and other library materials are classified and catalogued according to a commonly accepted system. The school budgets an appropriate amount of money each year to maintain an effective media program.
Lance, Rodney, & Russell (as cited in Scholastic, 2007) found that students tended to perform better at all grade levels on state tests where principals: “valued teacher-library media specialist collaboration, supported flexible library scheduling, met regularly with the library/media specialist, and had the library media specialist serve on key school committees” (p. 14). High schools in particular had better results when the delivery of instruction and design included a skilled library professional. Todd, Kuhlthau, and Oelma (2004, as cited in Scholastic, 2007) also found that nearly 100% of 13,000 students indicated that the “school library, its services, and library media specialists have helped them with their learning” (p. 24).

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<td>Standard 1. The information literate student determines the nature and extent of the information needed.</td>
<td>1.1.3: 1.2.1</td>
<td>Students plan strategies to guide inquiry; students identify and define authentic problems and significant questions for investigation; students plan and manage activities to develop a solution or complete a project.</td>
<td>CC11-12WH/SS/S/TS7</td>
<td>Develop A Topic</td>
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<td>Standard 2. The information literate student accesses needed information effectively and efficiently.</td>
<td>1.1.4: 1.1.8: 1.2.5: 1.2.6: 1.2.7: 2.2.1</td>
<td>Students collect and analyze data to identify solutions and/or make informed decisions; students understand and use technology systems; students select and use applications effectively and productively.</td>
<td>CC11-12.W8</td>
<td>Identify Potential Sources</td>
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<td>Standard 3. The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.</td>
<td>1.1.5: 1.2.4</td>
<td>Students evaluate and select information sources and digital tools based on the appropriateness to specific tasks.</td>
<td>CC11-12.W8</td>
<td>Develop, Use, and Revise Search Strategies</td>
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<td>Standard 4. The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.</td>
<td>2.1.1: 2.1.2: 2.1.6: 3.1.1: 3.1.3: 3.1.4</td>
<td>Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology; students apply existing knowledge to generate new ideas, products, or processes; students create original works as a means of personal or group expression; students communicate information and ideas effectively to multiple audiences using a variety of media and formats; students contribute to project teams to produce original works or solve problems; students process data and report results.</td>
<td>CC11-12RS/TS2</td>
<td>Evaluate Sources and Information</td>
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<td>Standard 5. The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.</td>
<td>3.1.6</td>
<td>Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior; students advocate and practice safe, legal, and responsible use of information and technology.</td>
<td>CC11-12SH/SS/S/TS8</td>
<td>Recognize How to Use Information Responsibly, Ethically, and Legally</td>
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“In 2013, about 87 percent of all ACT-tested high school graduates said they want to attain at least a two-year college degree.” - (Bidwell, 2013)

While students and teachers often have the same goals in mind, expectations for information literacy skills may not meet reality.

- How to get help when you need it

**Reality**

- A recent survey of college and university librarians revealed that 88% felt that fewer than 40% of their students were prepared for research.

- A panel discussion with both high school students and first year college freshmen indicated that they could not distinguish between a journal and a book when given a citation, identify keywords in a thesis, or distinguish between a popular magazine and scholarly journal. (Schein et al., 2012; Achieve, 2005; Conely, 2005, as cited in Burhanna, 2007; Schien, 2012).

**Expectation**

- Recognize the need for information and where to find it

- Know how to access information resources in various formats and with a wide variety of technologies

- Evaluate, analyze, and apply the information Communicate the information effectively and ethically

- Transfer skills from school to real-world applications

**What Works**

- Introduce and reinforce research and information literacy and critical thinking skills

- Promote reading and literature, both physical and digital

- Offer assistance and support in new pedagogical skills, instructional design, and emerging technologies

- Assign work that utilizes resources through curricular approaches like project-based learning or cross-curricular materials

- Exposure to college-level resources and expectations, lowering student anxiety and building skill levels

- Create a collaborative praxis between school and academic librarians, to include faculty, teachers, administrators, and community

- High impact doesn’t mean high costs or high stakes.
3,589 students
52.4% passed the ISTEP in 2008/2009
Student-teacher ratio: 18:1
Student-librarian ratio: 1794: 1

Michael McCullough and Diane Zentz,
Media Specialists, Warren Central High School Metropolitan School District of Warren Township

“Across K-12 and Beyond”

In 2004, after living overseas for 10 years, I returned to find the small library I had left with a card catalog, no student computers or Internet access, partnered with the public library system and over 20 computers for using an online catalog and databases. I had a steep learning curve, but gained a unique understanding of the benefits gained through those digital tools. As a school librarian it is my role to equip students with the skills to independently locate, evaluate, interpret and utilize information from various sources in a variety of formats in order to meet the academic demands of college level courses. School Librarians can provide classroom teachers with a collaborative partner in creating projects and teaching key literacy and 21st century skills. I hope that over the next several years both libraries and education will find a healthy balance between using “tried & true” techniques and adopting every “latest, greatest” technology that comes along.

2012-2013
Enrollment: 3,101
201 teachers—17:1 student to teacher ratio
47.1% students passed ISTEP
10.7% passed AP exams

Kathy Hicks-Brooks,
Librarian/National Board Certified Teacher, Ben Davis High School Metropolitan School District of Wayne Township

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“Big School, Library in Transition”

“WCHS is so large! The student population is larger than my hometown,” says media specialist Michael McCullough. “I love the challenge of working with young people daily. I think being able to work with students one-on-one, as well as in groups, is important. The one-on-one gives me the opportunity to guide students to the best information for research. My role is to guide students to seek information and not be afraid to seek assistance from librarians. I also encourage them to be aware that they are lifelong learners.” Michael’s colleague, Diane Zentz, explains, “My favorite thing about being a high-school librarian is connecting with kids about everything from books to new technology, and helping them find the information they need to achieve their future goals. At a time when school libraries are closing and many librarian jobs are being cut or shared, I’m lucky to be able to work at a high school that employs two full-time certified media specialists. I would love it if every person in teacher education programs would get the opportunity to take a class detailing the great difference in learning successes for students when teachers and librarians co-plan and co-teach.”

Number of students in 9th-12th grades: 455

92.8% passed ISTEP (this includes all grades, not just high school)

Percentage of high school students that go on to college: 97%

Janice Houghton, Library Services Director, Heritage Christian School

“Many Students, Many Opportunities”

In her work at Ben Davis High School, Kathy Hicks-Brooks plays an integral role in preparing students to make the transition to college. “Our school is very large and the teachers and administration are very supportive of library activities. I help students with day-to-day assignments when needed, to ensure that their GPA is where it needs to be. Navigating the information and resources can be daunting and the students and adults at my school can feel free to ask me for help at any time. I work closely with our college coordinator to provide resources such as SAT and ACT books for students to prepare for exams. I also help students navigate college websites and support them in finding the right college for their needs.”
Initially, a pilot phase was implemented in 2011, with 3 school media specialists participating. Through our conversations and analysis of implementation of the TRAILS assessment, we continued the study in 2012, and expanded to 12 participants (9 schools) (5 IUPUI participants) with over 1200 12th grade students taking the assessment in the fall of 2012.

Schools in Marion County that participated in the project included public, private, and charter/magnet schools. School total numbers gathered from the Indiana Department of Education website.

“The teachers liked it... that they got the research process in a short assessment and focus(ed) on the areas that need more time...”
- CRCB Participant

“It’s the first time that I get to assess what they know or what I have taught and to prepare them for admission to college.”
- CRCB Participant

In Marion County public schools, there is approximately 1 librarian for every 1500 students.

Enrollment data for 9-12 grades from IDEO Compass site, and does not include adult learners. Librarian personnel data gathered from school websites.
College Ready, College Bound has focused on the role of the librarian in preparing students for higher education, as well as the support systems, partnerships, and communication that is necessary to fully support students in their educational success. School and academic librarians, teachers, administrators, and college faculty were brought together to better understand roles, responsibilities, and how to move forward in creating relationships and best practices.

Some key observations:

- Discussions between librarians and teachers were extremely valuable in creating collaborations and relationships in the classroom, as well as in the use of library resources.

- CRCB participants indicated that they could have a role in preparation for ISTEP, SAT, or ACT tests, as many of the skills measured on these assessments are directly related to information literacy, critical thinking, or technology skills.

- Time, timing, and support of librarians being involved in classroom assessments (like TRAILS) were important to CRCB participants, as well as working with teachers and faculty on how best to incorporate the assessment into the curriculum at key times during the semester or throughout the year.

- Participants felt that being a part of a study like CRCB gave them a better understanding about pedagogy, assessment, and developing a stronger case for connecting curriculum with student success. Spending time with students in the library or utilizing resources, participating in library instruction, and focusing on information literacy skills (search strategies, critical thinking, evaluation, and sources of information) were part of their preparation to the transition to college.

- Additional studies and literature indicate that librarians can have a positive effect on student success, and further our determination to continue exploring options for professional development, new pedagogical models such as project-based learning, and working with schools that currently do not have a librarian/media specialist on staff.

Future research and exploration of best practices for CRCB:

- Participants in the pilot phase have continued to consult with us on various modifications in the delivery of the questions, including the use of clickers, group work, and making connections to research and cross-curricular examples to include transferable critical inquiry and information literacy skills.

- Pre-and post assessments can be a benchmark for more high-impact practices, and gauge readiness for deeper inquiry into research methods, evaluation of resources, and ethical use of information.

- Applicability and outcomes-based assessment through an instrument like TRAILS (or ETS iSkills, Project SAILS, or other information literacy/ICT skill-based tests) can serve as a conversation starter with students, administrators, teachers, and higher education faculty and librarians, to further explore the transferability of skills, expectations of knowledge, and relationships to support student success.

Aggregate score for all CRCB participating schools, Develop a Topic category of the TRAILS assessment: **4.6 out of 10**

*SD = 1.74 • Testing occurred in Fall, 2012 Pilot data excluded

One CRCB participant continued the use of TRAILS in the 12th grade classes, and used all 5 of the TRAILS assessments as pre- and post-test exercises, as well as discussion and review of information literacy topics. They collaborated with teachers on curriculum, including in-depth work with the librarian on research assignments, and encouraged use of library resources and increased time spent in the library, in an attempt to raise student and teacher awareness of information literacy and college-readiness skills.

From fall 2012 to spring 2013, scores on the “Develop a Topic” questions increased between **4.2% - 18.2%**.
The TRAILS categories include:

1. Develop a Topic
2. Identify Potential Sources
3. Develop, Use, and Revise Search Strategies
4. Evaluate Sources and Information
5. Recognize How to Use Information Responsibly, Ethically, and Legally

TRAILS Suggested activities:

- One-on-One: Work with a student or a small group of students to go through TRAILS questions with an instructor. This would allow for individualized instruction and opportunity for discussion.
- Game Show: Create a fun learning opportunity with the instructor or one student serving as a “master of ceremonies” with students in the class answering TRAILS questions. Instructor could project the assessment on a large screen with a computer and projector. Instructor should have the answers available so feedback and discussion can occur during the assessment administration.
- Information Literacy Curriculum Mapping: Following a TRAILS assessment, use results to map information literacy needs and opportunities across curricular areas. Meet with faculty in those identified areas to create an instructional strategy.

What is TRAILS?

Started in 2002, TRAILS is a freely accessible online assessment tool through Kent State University. Initial support for TRAILS was provided through the University Libraries’ grant partnership with the Institute for Library and Information Literacy Education (ILILE), which was a federally funded initiative of the Institute of Museum and Library Services (IMLS) and the U.S. Department of Education. ILILE was established to provide local, regional, and national leadership in fostering successful collaboration among K-12 teachers and school librarians who are concerned with advancing library and information literacy in the K-12 school curriculum.

Research Studies

The authors of a research study in Ohio found that over a four-year period (from grade 9 to grade 12), students who took the “Develop a Topic” survey both as freshmen and seniors (49%) indicated that they remained unsure of themselves when starting a topic or research assignment. However, other categories like “Identify Potential Sources” and “Develop, Use, and Revise Search Strategies”) had much better results over the 4 year period, which may be due to the thorough and careful selection and use of resources and alignment with state standards, curriculum integration, and collection policies implemented by the librarians (Kovalik, Yutzey, & Piazza, 2012).

In our research, we held pre-and post-assessment interviews as well as focus groups, concentrating on the process of implementing the TRAILS assessment. The participants utilized the “Develop a Topic” category for virtually all of the high school and IUPUI students. The ability to determine criteria to narrow or broaden a topic for an assignment is a building block for further research projects or assignments that students would encounter in future classroom settings. Librarian interview questions focused on: 1) whether TRAILS was an effective way to gauge college readiness skills, 2) insights into teaching and assessment, and 3) reflections on relationships with teachers and administrators in creating college-ready curricula through the library resources.

TRAILS has now been administered to more than 1,000,000 students throughout the United States.

TRAILS categories are meant to build upon the research experience for a student, and scoring of these assessments was not intended as a high-stakes grade or test, but to generate conversation about information literacy and research skills amongst students, librarians, and teachers. As our research continues, we hope to be able to expand the scope and scale to include both 9th and 12th grade students, in order to establish benchmarks for incoming IUPUI students.
Questions, Discussion, and New Opportunities

“When a certified library media specialist serves the school on a full-time basis, the school library media center is more likely to have electronic connections to other school collections and the public library, secure more federal funding, provide more frequent instruction in the use of electronic resources, and maintain a website linking to current and relevant professional resources.” - Callison, 2004

- What resources and skills are needed to equip high school and college teachers and school media specialists with the skills necessary to support students’ transition from high school to college?

- What early approaches or supports could be implemented in grades 7-12 to provide essential information literacy skills necessary for college readiness?

- What 21st century information literacy skills are necessary not only for entry into higher education, but continued success, retention, and completion?

Along with these questions, there is supporting literature to indicate that having a strong information literacy program, systematic assessment and evaluation of information literacy and critical inquiry skills, and professional development support that focuses on engaged, authentic learning for librarians (and teacher partners) can lead to long-term student achievement and retention efforts. Connections in curriculum, assessment, and retention are evident in students who are better prepared, better able to navigate the information landscape, and ultimately, better skilled in achieving their goals in education and employment. Information literacy is not simply about reading or researching better, it is the lifelong learning and exploring of knowledge beyond the library, to be consumers, voters, educators, community members, and contributors to society as a whole.
Resources


Additional Resources


Standards Websites:


ACRL (Association for College & Research Libraries), Information Literacy Competency Standards for Higher Education: http://www.ala.org/acrl/standards/informationliteracycompetency

Common Core Standards Initiative, State College and Career Readiness Standards: http://www.corestandards.org/

ISTE (International Society for Technology in Education), National Educational Technology Standards for Students: http://www.iste.org/standards/nets-for-students

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Since its inception, The Indianapolis Foundation’s Library Fund has awarded more than $27 million to increase literacy, information literacy, and information access for Marion County residents.

Rhonda Huisman is the Education Librarian at IUPUI, and lead researcher on the College Ready, College Bound project. She has a Masters degree in Education from Briar Cliff University, and a Masters in Information Science and Learning Technology from the University of Missouri-Columbia. She has published, presented, and taught on information literacy, assessment, instructional technology, first year seminars, and faculty-librarian relationships. Rhonda also has 2 children who attend schools in Indianapolis both of which are currently without a library.