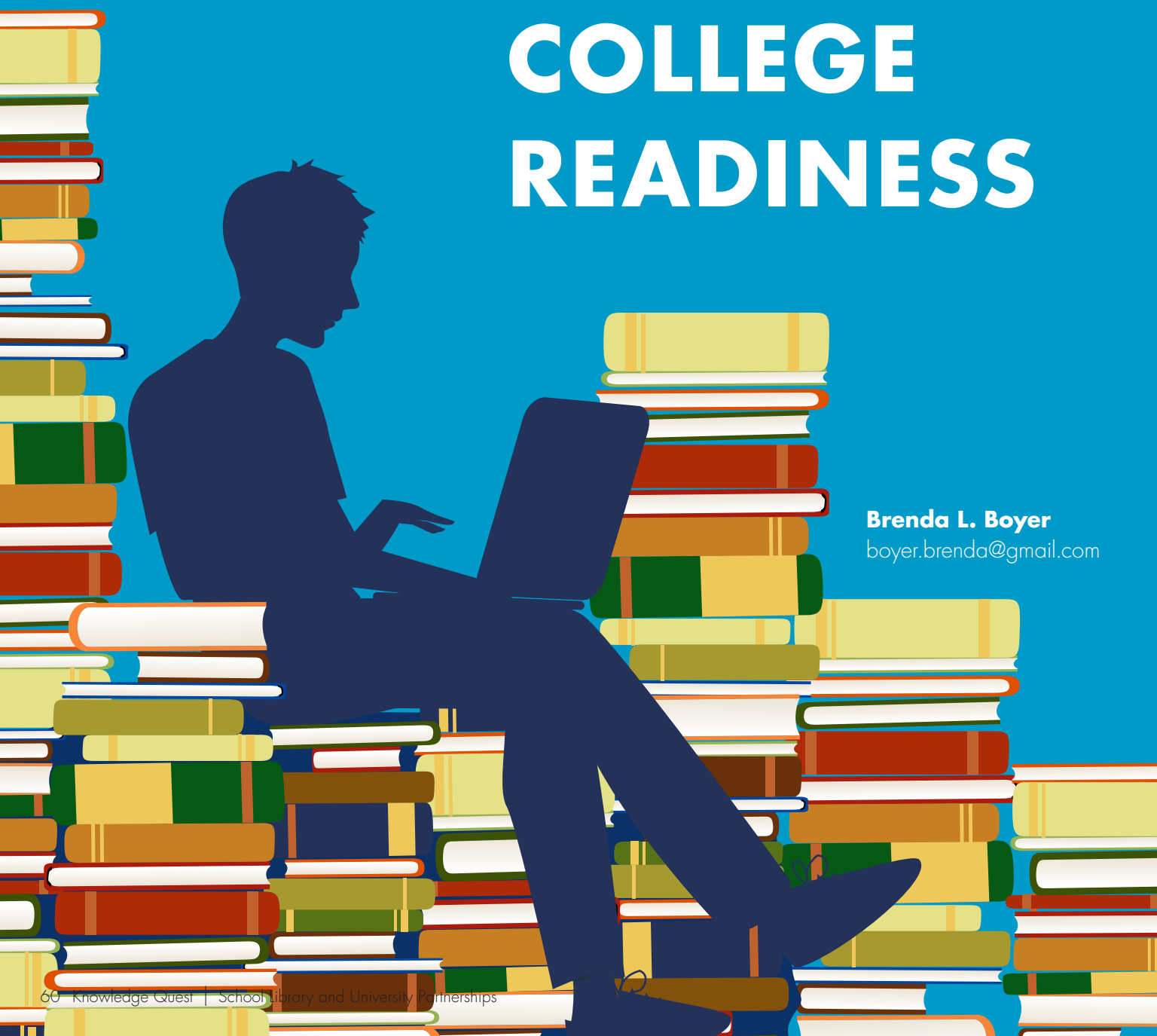
ARTICLE

Collaborative Instructional Design for COLLEGE READINESS



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High school seniors' success in making the transition to college hinges greatly on their ability to perform college-level research. Studies pointing out failure to provide this critical preparation abound (Head 2013; Head and Eisenberg 2010). Helping students make this leap is the topic of much research and discussion between members of the Association of College and Research Libraries and the American Association of School Librarians.

The Kutztown (PA) Area Senior High School was honored to receive AASL's 2014 Collaborative School Library Award for our project "College Ready: Collaborative Instructional Redesign of the Senior Research Project." Factors comprising this award included the learning outcomes achieved through the collaborative effort, the collaborative process undertaken, the use of library resources within the project, and the degree to which the project meets the principles of AASL's *Empowering Learners: Guidelines for School Library Programs* (ALA 2009).

Kutztown's project serves as an example of embedded library practice emerging from a shared need to improve our senior students' readiness for college-level research. From the outset we understood equipping learners for this task demanded more than a handful of typical meetings between librarian and teachers since "successful embeddedness also relies upon the development and nurturing of collegial collaborative relationships" (Boyer and Kocis-Westgate 2014, 162). In our quest to improve our senior research project, a team comprised of the school librarian and members of the language arts faculty worked steadily from fall of 2012 through spring of 2013 to design and develop a student-centered senior capstone project that incorporated critical information-fluency skills with reading nonfiction, along with metacognitive reflection. While the origin of our project was a desire for consistent information-fluency instruction while addressing rigorous inquiry standards, broader implications emerged from this lengthy process as we saw deeper potential for our targeted learning outcomes and the need to alter the scope and sequencing of our instruction in lower grades.

When the team initially undertook the redesign of the senior project, we wanted to shift the focus of the learning away from just the product (e.g., a written paper) to the inquiry and thinking process needed for deeper rigor. Nonfiction reading strategies and reflection opportunities were required if we were to achieve these objectives. The team worked for six months to design instruction, develop specific learning strategies, and prepare reflection and inquiry process guides. A detailed description of this original collaborative process appears in Kathryn Kennedy and Lucy Santos Green's *Collaborative Models for Librarian and Teacher*

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Partnerships (Information Science Reference 2014).

Multiple AASL and Common Core State Standard learning outcomes are met with this renewed learning event. Chief among these are evaluating information, applying strategies to draw and formulate alternative conclusions, making sense of information, collaborating with others to broaden and deepen understanding, and using social networks and digital media to gather and share information. An ongoing emphasis on metacognitive reflection on their own research and thinking processes forces students to slow down, take stock, recognize the importance of the strategies their instructors are talking about, and become more intentional in their actions. When learners develop a fuller awareness of personal learning habits and weaknesses, their heightened level of metacognition may not only help students make a smoother transition to college but may potentially aid future academic achievement (Young and Fry 2008). Integrated elements of visualization (mind mapping, graphic organizers) and reflection are key boosts to critical thinking in this process.

Three online platforms are coordinated to support students through the entire research learning event: Google apps, LibGuides, and the school's learning management system Moodle. These integrated platforms allow us to seamlessly scaffold learning throughout the process, creating minimal confusion for students as they independently access resources, instructional tutorials, organization tools (such as NoodleTools, Turnitin), reflection prompts, and assessment guides in the form of rubrics. For example, glossary settings within Moodle provide support for displaying a definition of any unfamiliar research term simply by hovering the cursor over the term. Resources such as database widgets within the LibGuides are also directly linked within the Moodle pages for quick and easy searching. The Inquiry Process Guide (IPG) in each student's Google drive gives every member of the collaborative team access to support students with answers and suggestions and encouragement. The IPG contains all directions, instructional links, rubrics, and reflection prompts from pre-search topic ideas through final reflections after the project is scored. The embedding and comprehensive inclusion of library resources alongside tutorials and other instructional aids ensure that learners are continually guided to higher-quality resources and are able to skillfully navigate and use these resources to meet their research needs. Throughout the project learners are assessed on how efficiently and effectively they are applying information-fluency and critical-thinking skills. Usage statistics of the school's LibGuides and individual online resources evidence that this plan has been working for the past three school years.

Despite any changes, our overarching goal of helping learners see research as a metacognitive process of discovery remains. One way we work toward this goal is by consistently placing more emphasis on the research/inquiry process than on the product.

What We've Learned

Student data in the forms of final inquiry project scores, reflection postings, and other anecdotal evidence are monitored, and all components of the project are examined and subject to revision every term as we strive to ensure that all parts of this experience are relevant to our students and their learning needs. For the past three years the team has engaged in a continual process of evaluation of each component of our collaboration and has made several tweaks and adjustments to the original learning event. Critical review of our expected outcomes, formative assessments, rubrics, and instruction occurs. Despite any changes, our overarching goal of helping learners see research as a metacognitive process of discovery remains. One way we work toward this goal is by consistently placing more emphasis on the research/inquiry process than on the product.

The biggest obstacle to helping learners grasp the importance of the inquiry process is the high school student's desire to simply get every project done in the shortest amount of time. We want students to see research as a thinking process that is then expressed in writing (or speaking, or a movie, or poetry, etc.). Though it sounds simple, achieving this goal has been a major challenge as we have

witnessed successive classes move through our system believing that research is primarily a writing process. We need to help students see that writing well is impossible without doing significant thinking.

While our inaugural group of students back in 2013 initially pushed back at the notion of the research process being worth more points than the final product, they offered later feedback that they appreciated earning points for all of the hard research and critical-thinking work they were doing along the way. When offered analogies to other coursework they do such as physics or mathematics, they more readily saw the need to place value on the research process, not just the final product. We believe this mindset shift is critical if students are going to be able to master and apply research skills proficiently prior to college.

Confronting the mindset issue caused me to rethink my approach to collaborations with my colleagues as well. Teaching and learning in a one-to-one laptop environment has perhaps inadvertently contributed to this product-focused mindset as it is easy to be enamored with the easily created array of media-rich products. This realization now guides my collaborative conversations away from a product focus. After learning about the big concepts and content the teacher is targeting, my next question no longer is "What are they creating?" but a series of questions:

- "What do we really want students to get out of this?"
- "What's in it for them?"
- "What makes this project particularly relevant to this group of learners?"
- "Where/how is critical thinking playing a role in this project?"
- "What is the transferrable skill they will take away from this experience?"

When these bigger questions are answered, then the learning product that evidences this learning is more readily (and more appropriately) determined.

Curricular Implications

To address learning needs we discovered at the system level, we have added highly specific information-fluency benchmarks for every grade level K–12. In the senior high school pre-assessments are now used each fall to gauge how well our learners are hitting the identified information-fluency benchmarks. Data from these pre-assessments is used to revamp instruction as necessary for a grade, class, or individual student. We have also adjusted the scope and sequence of instruction for every class level, better ensuring that our seniors are where they need to be when they begin the capstone project—that they understand research as "primarily a thinking process supported by resources and writing" (Boyer and Kocis-Westgate 2014, 171).

Winning Them Over

While our project emerged from a recognized learning need in our school, most collaborations obviously take place on a smaller scale, often with just one classroom teacher and the school librarian. Secondary school librarians in a brick and mortar setting face the problem of time: time to meet with teachers, begin conversations, and establish the personal relationships necessary for successful ongoing collaborative research projects and team teaching within a limited number of days in the school year.

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While librarians know the importance of integrating information-fluency standards, our potential collaborators are faced with many other objectives to meet. If we look at teachers' professional needs, we can establish the relevance of what we as librarians are doing to help them achieve their goals (not just ours). Knowing the school's overarching mission, individual department goals and objectives, as well as the guiding curricular framework is a crucial first step for winning teacher buy-in.

Review the objectives your colleagues are working toward and consider how these overlap with your own. Start small by sharing great resources for the content area. Teachers are busy; they do not have time to discover all of the great stuff out there. Show off your scouting skills and create supportive digital guides and instruction to support teachers and students in accessing quality resources. Develop digital pathfinders and text sets before they ask because they may *never* ask! Finding and sharing resources is basic marketing of the library program and your talents! Show teachers how working with a school librarian and mixing library resources and learning objectives with theirs benefit students and boost learning.

Nurturing partnerships through simple conversations about what's happening in classrooms also provides clues to what a teacher or particular class needs. Information-fluency needs may go unrecognized. For example, in our initial collaboration, we began by looking at shortcomings in previous research projects. Nearly every one of the issues raised by the teachers could be traced back to essential information-fluency, organizational, or foundational reading skills students were lacking. These skills then became critical targets in our project redesign.

Achieving a heightened level of collaboration that goes beyond just introducing resources or teaching a skill and becomes one of codesign and codevelopment of instructional events also demands that the librarian exhibit instructional capital. Teachers deserve equal instructional proficiency in their potential partners. Librarians need to take co-ownership of learning events and successes as well as failures. When the time comes to work with a colleague's classes, be sure to bring your "A" game. Demonstrate your instructional talents along with your tech savvy by creating engaging learning events that the students find relevant and teachers appreciate. During our senior project, the school librarian and teachers collaboratively present most lessons. We share the responsibility for evaluating student work with assessments we codesigned or codeveloped. This approach helps learners see the equal importance of and connections between their information-fluency, reading, thinking, and writing skills. When teachers see librarians as this type of partner, the stage is set for ongoing professional collaborations. An additional benefit is that we are modeling the collaborative workplace for students as they witness team teaching and our consistency in goals and scoring. Collaboration brings transparency to our work.

What's Next

While Kutztown's small collaborative team set out to change one school project, we ended up transforming our practice to one that is highly evidence-based. Taking an instructional-design approach not only looks at broad standards and objectives but also allows us to target specific student needs. Using data from pre-assessments and scoring rubrics across projects I am more capable of determining if transfer is really happening from one learning event to the next. This type of data across projects and grade levels helps us clarify our goals each year and gives us evidence to justify shifts we need to make in instruction and assessment.

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A huge advantage of this cycle of data collection and assessment is that it makes clear what students really do or do not need in regard to instruction, allowing us to further personalize the inquiry process. During the 2014–2015 school year I experimented with using a digital badging system within Moodle. Badges represent student certification in various research skills such as using OPACs, evaluating resources, using digital curation tools, documenting sources, taking effective notes, using mind-mapping tools for visualization of information, using social media for research, etc. Instruction challenging students to apply each of these skills is available online. Students are awarded each badge when they have successfully demonstrated the skill by meeting the challenge specific to that skill.

The badging system was tested with a small group of seniors who could work at their own pace to achieve various benchmarks. The dual goals for this class were to complete all of the skills by a certain date and to apply these skills directly in their actual research project. Some of the students were surprised at how difficult it was to motivate themselves to complete the skills and independent research without a teacher constantly pushing them to meet deadlines. These learners came to the realization that this level of independence was more like the experience they will have in a few months when they are college freshmen.

This experiment was a major eye-opener for our team as we realized that while we are arming students with strong research and writing skills, we are not fully preparing our learners for the heightened degree of independence they will need to be successful in college. To begin to address this need, we will be using my badging system in our Student Research Project Moodle course for our Advanced Placement students in the coming school year. These learners will be tasked with working independently on information-fluency skills for research, documentation, curation, evaluation of information, the use of social media for research, and mind-mapping skills. They will be able to work on developing these skills from the start of the year up until the teacher sets the research project assignment. The badges will represent students' having demonstrated their qualification to conduct their senior research. We'll see how this plan works. Stay tuned!

Winning the AASL award was a signal that we were going in the right direction for empowering our students to be truly college-ready as skilled and ethical researchers and critical thinkers. Ongoing collaboration will ensure that we continue to offer them highly relevant and engaging learning experiences.

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