College Ready—What Can We Learn from First-Year College Assignments? An Examination of Assignments in Iowa Colleges and Universities

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Abstract

College readiness has several dimensions, but of particular import is readiness to produce scholarly work that meets the expectations of college instructors. Differences from high school and college are well documented in the literature, and this study adds to that body of work by delineating the characteristics of first-year college assignments through a qualitative analysis of college faculty assignment instructions. Three themes emerge from the analysis: information literacy, especially initiating inquiry; academic writing, especially citing evidence in support of a thesis; learner dispositions, especially curiosity, open-mindedness, self-reliance, and perseverance. Findings have implications for high school library programs and high school teachers as well as librarians working with first-year college students.

Introduction

Rarely does discussion of high school education lack consideration of the question, "Are high school graduates ready for college and career?" In fact, a driver for the Common Core State Standards Initiative (CCSSI) has been the concern about college and career readiness of American high school graduates. According to the CCSSI:

> To be ready for college, workforce training, and life in a technological society, students need the ability to gather, comprehend, evaluate, synthesize, and report on information and ideas, to conduct original research in order to answer questions or solve problems, and to analyze and create a high volume and extensive range of print and non-print texts in media forms old and new. The need to conduct research and to produce and consume media is embedded into every aspect of today's curriculum. (CCSSI 2012)

David T. Conley defines college readiness as "the level of preparation a student needs in order to enroll and succeed—without remediation—in a credit-bearing general education course at a

postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program" (2008, 24). The transition from high school expectations to those of higher education is a topic frequently addressed in the literature. To achieve smoother transitions, agencies interested in college readiness express the potential benefits of greater cooperation and communication between high school and collegiate entities, allowing high school teachers to understand better the expectations students must meet upon entrance into higher education. For example, MDRC (Manpower Demonstration Research Corporation), in discussion of the implementation of the Common Core State Standards, recommends:

> Tighter partnerships between secondary and postsecondary institutions at the local level would complement the goals of the Common Core State Standards (CCSS). The Common Core State Standards, the adoption of standardized college and career-ready curricula in schools across the nation, should help address the misalignment of knowledge and skills between high school and college. (MDRC 2013, "What's Next" para. 4)

Similarly, the action agenda for the American Council on Higher Education urges, "Higher education faculty can play a valuable role by collaborating with teachers as they develop new instructional materials, and by helping states and school districts evaluate curricula and instructional materials for alignment with the CCSS" (King 2011).

Such advice to improve communication across the high-school-to-higher-education bridge supports the value of a study that explores college faculty members' expectations of research capabilities of first-year students. The purpose of the current study was to gain insight into expectations these undergraduate faculty hold for students as evidenced by the instructions they provide in student assignments. The voices of the instructors in their own words of advice and direction to students offer authentic, first-hand views of the priorities instructors hold and the expectations they set. The following research questions guided the study:

> What skills and knowledge do instructors in first-year college courses expect of their students when research papers are assigned?

> What assumptions do instructors in first-year college courses make regarding students' skills, knowledge, and dispositions as instructors assign a research paper?

> How does the authentic language of college instructors enrich our understanding of readiness for college research assignments?

Literature Review

Introduction

The literature on college readiness is robust in describing programs to assist students in applying for college, programs targeted at first-generation college students, content knowledge preparation, dual-enrollment programs, and programs to assist in social adjustments to college lifestyle. Responses to concerns about the college transition are detailed in reports of specific programs (see, for example, Conley 2005; Michael et al. 2010; Henrikson et al. 2008; Nunley, Shartle-Galotto, and Smith 2000; Rogers 2010). These programs aim to accommodate the transitional needs of students in various aspects of college life. While research skills are often delineated as part of college preparedness, rarely is instruction in the context of the school library

emphasized outside the library literature. Given the aim of this study, the review of related literature here will focus on academic preparation for success in the first year of college.

Skills and Knowledge for College Readiness

Content Knowledge

Content knowledge is a frequently cited area of concern, as evidenced in the *Reality of College Readiness 2013* report from ACT (the nonprofit organization formerly known as American College Testing); only 25 percent of ACT-tested students in 2011 were reported to have met college-readiness benchmarks in all four subject areas: English, reading, mathematics, and science (ACT 2013).

A consistent perception of inadequate college readiness is expressed in a survey of college faculty reported in the ACT *2012 National Curriculum Survey* in which only 26 percent of responding postsecondary writing, reading, mathematics, and science professors stated that incoming students are "well prepared" or "very well prepared" for college-level work in their respective content areas (ACT 2012).

Deeper Learning

Similarly, drawing on the outcomes of international comparison testing under the aegis of the Organization for Economic Cooperation and Development (OECD), the Alliance for Excellent Education calls for secondary schools to meet the challenge of providing deep learning experiences for high school students as an essential step to better college readiness and global competitiveness (Alliance for Excellent Education 2011).

Such "deeper learning" is described by the Alliance as not only mastering content knowledge, but also thinking critically and applying knowledge to problem solving. This more in-depth perception of academic college readiness suggests a need for skills and knowledge that come under the domain of information literacy through which students develop the skills and dispositions to be critical information consumers and knowledge producers.

Reading to Learn

In its 2011 report on adolescent literacy, the Carnegie Corporation of New York's Council on Advancing Adolescent Literacy addressed the matter of adolescents' information literacy; concern was expressed about the possibility of a misconception: that a central problem in secondary education is "illiteracy." Their report asserted the need for systematic support that focuses less on learning how to read and more on reading to learn across a wide variety of contexts and content.

Such a perspective on reading to learn relates to the concerns of school librarians whose national standards call for a set of skills and dispositions that aim for critical literacy and dispositions of inquiry (AASL 2007). Similarly, the Common Core English and language arts standards include a strand for student learning titled "Research to Build and Present Knowledge" (2010a). This research strand has a high degree of congruence with AASL's standards, as evidenced in the published crosswalk between the two sets of benchmarks (AASL 2012). Both of these documents set expectations for students to learn to gather information from reliable sources, evaluate the information, and apply it to the construction of knowledge.

Critical Research Skills

In many instances, educators make assumptions that by the time they reach high school students have the knowledge and skills they need for information seeking and/or effective research. In fact, in the 2012 Pew research report on how teens engage in research, participating Advanced Placement and National Writing Program teachers expressed the view that students should possess critical research skills upon entering middle schools (Purcell et al. 2012). However, there was lack of clear consensus regarding who should teach such skills. Some of these teachers acknowledged that they did not feel qualified to teach some of these research skills, while others reported that their school's English department takes the lead in developing research skills, and still others suggested that these skills should be taught by all teachers and that librarians might participate in that process.

Among a range of competencies required for college success, David T. Conley (2010) explicitly included the ability to evaluate the credibility and utility of source material and then integrate information into a paper or project. In discussing college readiness, study findings suggest the importance of cross-disciplinary skills, knowledge, and dispositions in addition to content knowledge (Conley and McGaughy 2012). David T. Conley and Charis McGaughy cited, for example, the ability to use appropriate references to support an argument and to evaluate information for credibility and relevance to the question at hand. They also reported on an examination of syllabi in general education courses; this examination indicated the importance instructors place on study skills, critical thinking, and goal setting.

Likewise, in a survey by the Education Policy Improvement Center (EPIC) at the University of Oregon, professors of first-year college courses agreed that Common Core State Standards reflect the knowledge and skills students need to have in their courses (Conley et. al. 2011).

Similarly, in a 2010 statement of concerns about college readiness, the National Center for Public Policy and Higher education stated:

> Even a recognized college-prep curriculum does not ensure the development of the critical thinking skills associated with reading, writing, and math that are necessary for college-level learning. These are fundamental cross-cutting skills needed for college success in all subject areas. And they are skills that college placement or readiness tests expose as insufficiently mastered by most entering students. (National Center for Public Policy and Higher Education 2010, 4)

This policy recommendation went on to express optimism that the Common Core State Standards will emphasize these interdisciplinary skills.

Similarly, Michael Cohen drew lessons from the American Diploma Project, an initiative to help states improve preparation for postsecondary education and careers. One gap in expectations Cohen cited is readiness to engage in college-level research, and he stated that high school graduates must become able to:

> carry out research projects including defining a researchable problem, gathering and evaluating the credibility and validity of data from a variety of sources and producing a written analysis that marshals evidence in support of a clear thesis statement and related claims—skills that are rarely incorporated into high school standards and curriculum for all students (2008, 21).

Necia Parker-Gibson (2001) has asserted that the "Principle of Least Effort" persists as students approach assignments. In proceeding to discuss how students approach research assignments, she

emphasized the challenge of gaining familiarity with the content area at the same time they are learning the tools and process of research. Her assertion underpins the importance of students' developing skills and habits of research so that the intellectual overload she describes is lessened.

Authentic Research Assignments

Some researchers suggest that perhaps high school assignments should become more rigorous. For example, Carol Gordon, in her action research study on authentic research, describes a typical high school research assignment for which students receive a list of proposed topics. She describes such an assignment as an external exercise aimed at teaching students how to write a paper but falling short of teaching students distinctive disciplinary methods of investigation. Her report goes on to describe an action research project engaging students in a rigorous authentic research assignment. She describes the more typical high school research assignment as a reporting exercise and aptly states, "Reporting has masqueraded as researching for so long that the terms are used interchangeably" (1999, 4).

Gordon's assertions are borne out in the findings reported by Anne M. Fields, whose summary of insights from her study of first-year college students stated, "Information was an object waiting to be found" (2005, 544). Fields carried out interviews with ten midwestern university first-year college students. She went on to report that students in her study acknowledged "having to delve slightly more deeply for the academic audience of the professor" (2005, 544), yet they continued to consider with confidence the open Web as first choice for information seeking.

Likewise, Jean Caspers and Steven M. Bernhisel (2005), reporting on assessment of students entering a selective liberal arts college, focused on skills such as selecting appropriate resources, differentiating between scholarly and popular information sources, search strategies for precise searching, and evaluation of found information sources. They found, for example, that these students were likely to be unable to discern which sources of information would be considered scholarly. These students found many Web resources but seemed to lack skills and knowledge to evaluate them critically. Students also failed to demonstrate understanding of research databases or adeptness at using them to locate scholarly information.

Application of Research Findings

While critical assessment of sources of information is one important aspect of the skill set students will need as a component of academic readiness for college, applying their information findings is another dimension of learning necessary for success. However, in a New Jersey study, Ross J. Todd (2012) found these areas were among those least taught by school librarians; 80 percent or more focused on awareness of sources and access strategies as well as ethical use of information; 70 to 80 percent focused on critical evaluation; and only 50 to 60 percent taught the more-challenging and highly individualized tasks such as forming one's own questions about a topic as well as sorting and organizing information and ideas.

Todd's findings affirm earlier findings by Mary Ann Fitzgerald (2004) who reported on three studies of first-year college students' information literacy. While she acknowledges that data were sparse for assessing overall competencies of students arriving in college, she reports that consistent among the studies she reviewed were findings that students have difficulty analyzing and synthesizing information to construct meaning.

Students' Views of Research Process

Regarding students' perceptions of engaging in research, a study of high school students revealed that they typically make one visit to the library for a research project, and in that visit they tended not to seek the help of a librarian (Kovalik, Yutzey, and Piazza 2013). The results of this study affirm Fields's earlier finding that students express a high degree of self-confidence in their research skills.

However, William Badke analyzed the online postings responding to an article in *Inside Higher Ed* titled "What Students Don't Know," posted on Aug. 22, 2011 (<www.insidehighered.com/news/2011/08/22/erial_study_of_student_research_habits_at_illinois_university_libraries_reveals_alarmingly_poor_information_literacy_and_skills>). He surmised:

> "the challenge is that professors rarely see the struggles students are facing and seldom hear the content of librarian reference interviews. Students don't reveal their utter lack of understanding of the research process to professors, mainly because students think they should know this and don't want to be shown up as fools" (2012, 49).

Badke went on to assert that some students will reveal their naiveté to a librarian, but they are less likely to share their questions with their instructors.

Summary

The literature reveals extensive awareness that readiness for college requires students to engage in learning experiences that involve them seeking, evaluating, and integrating information as well as developing reading and writing skills that contribute to construction of ideas and insights. Likewise, the literature suggests that schools are often falling short of graduating students with the level of sophistication required in college-level academic work. The Common Core is seen as one step in the direction of improving student readiness. Yet, there is a call for greater communication to help high school teachers know what skills college instructors will expect students to have when students enter the higher education realm.

Dispositions of College-Ready Learners

Beyond skills for engaging in research, Conley (2007) identified five attitudes and competencies as essential to college academic success: intellectual openness, inquisitiveness, interpretation of data and factual information, problem solving, and precision. Robert Marzano and Debra Pickering's (1997) exploration into habits of mind foregrounds more recent attention to learner dispositions. These dispositions are evident in the National Council of Teachers of English (NCTE) *Framework for Success in Postsecondary Writing*, in which eight habits of mind are targeted: curiosity, openness, engagement, creativity, persistence, responsibility, flexibility, and metacognition (O'Neill et al. 2012). Similar dispositions for 21st-century learning are described in the benchmarks of AASL's *Standards for the 21st-Century Learner* (2007). While these initiatives are under way in national professional associations, Jennifer Fletcher has recently affirmed the importance of such habits of mind for college academic success, but suggested that K–12 "emphasis on developing such habits has lost support in the wake of recent standards and accountability movement" (2013, 52).

In summary, substantial work has been undertaken to examine the skills and dispositions that would benefit students as they enter higher education. Our understanding of expectations can

continue to be refined by examining first-year college assignments to identify prerequisite skills and dispositions that spell success and confidence for meeting such expectations.

Methodology

Qualitative content analysis is a "research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh and Shannon 2005, 1278). An inductive approach, qualitative content analysis draws from purposely selected texts (Zhang and Wildemuth 2009). In this methodology, textual data are collected and condensed into themes or categories that emerge from the data. The constant comparative method enriches themes. Constant comparison is the "systematic comparison of each text assigned to a category with each of those already assigned to that category, to fully understand the theoretical properties of the category" (Zhang and Wildemuth 2009, 311). Hence, the researcher examines the texts through multiple passes ensuring that as new themes emerge, texts already examined are once more surveyed for newly emerged themes.

Sample

Letters of invitation were sent to instruction librarians in twenty-five private and public colleges and universities in Iowa, based on the Iowa Association of College and Research Libraries (ACRL) member list. Excluded were specialized institutions such as chiropractic and osteopathic medicine institutions. Included were all other Iowa ACRL member institutions that grant four-year degrees and offer a general education or liberal arts curriculum. The request asked librarians to solicit from faculty exemplars of assignments "that require information seeking" in courses taken exclusively or predominantly by first-year students.

Responses came from fifteen of the twenty-five invited institutions that cumulatively provided forty-one assignments. Of the eleven private colleges invited, six (55 percent) submitted assignments; of the eleven private universities invited, seven (64 percent) submitted assignments; of the three regents universities, two (66 percent) responded. Table 1 shows the distribution of assignments and types of responding institutions.

Table 1. Responding institutions.

Institution	Type	Assignments
A	Private University	2
B	Private University	1
C	Private University	2
D	Private Liberal Arts College	2
E	Private Liberal Arts College	1
F	Private Liberal Arts College	2
G	Private University	3
H	Private University	3
I	Private Liberal Arts College	4
J	Private University	1
K	Private University	2
L	Private Liberal Arts College	3
M	Regents University	8
N	Regents University	2

O	Private Liberal Arts College	5
Totals	15 institutions	41

Analysis

The intent of this qualitative content analysis was to examine primary source material to ascertain expectations of college faculty for first-year students. By studying the language of the instructor, this study sought to identify expectations through the authentic voice as the instructor addressed the student. Before analysis began, assignments were tagged to mask the identity of the institution. Each entry was coded by academic domain as shown in table 2.

Table 2. Academic domains.

Academic Area	Assignments (n)
Arts and Humanities	20
Science	2
Social Science	10
Interdisciplinary*	9
Total	41

*Interdisciplinary courses were first-year-only transition courses aimed at introducing academic expectations of college to entering students.

All assignments were first read for an overview. During the second reading, each assignment was read for language that revealed a specific expectation for the student. A third reading of each assignment resulted in coding of expectations into three broad categories of information literacy, writing, and learner dispositions.

Textual data from the assignments were placed into tables organized around each category. Patterns were then sought in the quotations and paraphrases from the assignments. Text from every assignment in the study appeared at least once in the categorized datasets. Ultimately, these data revealed an array of expectations these faculty members held for entering college freshmen.

Limitations

According to Yan Zhang and Barbara Wildemuth, "samples for qualitative content analysis usually consist of purposively selected texts which can inform research questions being investigated" (2009, 309). This study is limited to the voices of faculty in the responding institutions in Iowa. These include private four-year colleges, private universities, and public regent universities. Data included only the written instructions and no oral elaborations that may have accompanied the assignments. The size of the population for the study does not afford

generalization beyond similarly situated faculty. Furthermore, qualitative content analysis seeks to produce descriptions and "pays attention to unique themes…rather than the statistical significance of the occurrence of particular texts or concepts" (Zhang and Wildemuth 2009, 309). The essence of the qualitative research paradigm is not statistical significance, but description (Gorman and Clayton 2005). At its heart is language, and in this study, the language of faculty is the focus.

Findings/Discussion

Overview

Every assignment conveyed expectations regarding at least one information-literacy theme; twelve of the fifteen institutions submitted assignments that explicitly included dispositional themes; and thirteen of the fifteen institutions submitted assignments that explicitly included writing themes. Within these three broad categories more-specific categories emerged. These subcategories are listed in table 3.

Table 3. Assignment themes.

Major Theme	Subthemes
Information Literacy	Initiating the inquiry
	Selecting sources
	Searching for information
	Processing information
Writing	Developing a thesis
	Supporting with evidence
	Paraphrasing
	Considering audience
Learner Dispositions	Self reliant
	Curious
	Open-minded
	Planful
	Investigative/perseverant

Information Literacy

Initiating the Inquiry

In these assignments, in most instances, topic selection and focus of investigations were left to the students. Rarely was a list of potential or prescribed topics provided. Instead, most often students had broad latitude. Many assignments stressed the importance of arriving at a topic of personal interest. For example, one instructor advised students to "select and develop a topic that honestly interests you and that you are curious about." Another suggested, "Since you will be working with this topic for a lengthy period of time, think carefully about the topic you select." A third expressed well a common theme, "Your topic can be anything—as long as you find it

compelling and exciting—something you really want to find out about, perhaps something that affects you personally." This open-ended invitation placed responsibility on the student to conceive a topic born out of his or her own curiosity. While in high school these students may have often experienced more prescriptive assignments; now the responsibility to arrive at a topic that would serve them well was on their own shoulders.

Further advice to students urged them to "[s]pend some time exploring a topic of interest to you" or to "research potential subjects" or to "[d]o a literature review on your selected topic and narrow your subject so that you discuss a particular aspect of it." This exploration of a topic contrasts with the often-found approach in high school of requiring students to choose a topic promptly so as to move forward. Yet, long-standing has been Carol C. Kuhlthau's Information Search Process (ISP) model, in which exploration is a crucial stage; the ISP model calls for inquirers to become informed about a topic and accept some feelings of uncertainty as they seek a focus within their general topic (Kuhlthau 2004).

The words of these faculty, encouraging students to spend time in exploration, suggests that high school educators consider strategies to support the uncomfortable feelings that come with the ambiguity of this stage of research, so that students become familiar with the experience of uncertainty and gain confidence that it is a temporary state.

Further, these expectations to arrive at research questions of personal interest are in conflict with the student perceptions of research described by Fields (2005), who described students' perception of research as looking for information "waiting to be found" rather than the sense of discovery inherent in the kind of inquiry these assignments seem to describe.

Information Sources

Not surprisingly, faculty members expressed concern for the quantity, types, and quality of sources. The common faculty concern about the Web is expressed clearly in one professor's admonition: "There are many sources that may be useful for this project. Wikipedia, ask.com, etc. are not among those. You can use Web resources, but they need to be legitimate sources, not online encyclopedias or your cousin's blog." The Pew Research Center 2012 report *How Teens Do Research in the Digital World* reports on findings of a survey of Advanced Placement and National Writing Project teachers. The report affirms the faculty concern about over-reliance on the Web by stating, "Teachers and students alike report that for today's students, 'research' means 'Googling' " (Purcell et al. 2012, 3). This reliance on Web searching stands in contrast to the demands of faculty to use "legitimate" resources.

Many assignments set expectations for "scholarly sources" or "credible sources," leaving the method of determination to the student. Some instructors recommended library databases explicitly or gave students specific criteria to consider in selecting their sources of information. For example:

> Your sources should be scholarly in nature and not simply websites. This means you should be annotating articles from journals and book chapters.
> Answer the following questions:

> Is the author of the information clearly identifiable? Can his/her credibility be established?

> Is the source scholarly/peer-reviewed?

> What is your source claiming (i.e., thesis statement)?

What information does the source present to back its claim? Does it present facts or opinion/anecdotal evidence?

Is the source's claim both timely and relevant to your focused research question?

How does the source help answer your research question?

Is there evidence of bias in the source?

Does it cite references and are they credible?

Does it agree with or contradict your other sources?

Should the source be used in your paper?

These expectations raise the question of students' understanding of credibility of sources, especially in light of the findings of Caspers and Bernhisel (2006), who reported the inability of first-year college students to discern such credibility.

While general advice about sources was often proffered, more typically a few criteria were suggested, such as purpose, authority, timeliness, and scope; the underlying assumption was that students would know how to apply such criteria. Often, an assignment might suggest types of sources such as the direction to reference "at least one book and at least two journal articles" or a more specific direction to include eight types of sources for an assignment in a freshman composition course, namely, "a newspaper article, a book, an Internet source (credible), a magazine from general index, a magazine from specialized index, a report from *CQ Researcher,* a government publication, a specialized reference book." The instructors making these assignments are acting on an assumption that students know how to locate and distinguish each of those types of sources.

These demands for authoritative sources of information hearken back to the assertions of Conley (2010) that students must be able to evaluate the credibility of sources. Such expectations underscore the value of school librarians' cooperating with teachers to develop standards of quality for sources of information through curriculum practices like the pre-college information-literacy research project described by Quill West (2013) in which high school teachers and a high school librarian collaborated to set expectations and carry out instruction aimed at developing information-literacy skills. The project included guided assignment sheets and assessments agreed upon by both teacher and librarian. In a different approach, Kathy Lehman (2013) described a standalone high school course for preparing students for college by developing their information-literacy skills; in this course students engage in research projects analogous to first-year college assignments. Alternatively, Patricia Owen et al. (2010) has offered a checklist of information-literacy skills to be incorporated into the high school curriculum to prepare students for college expectations and help them appreciate what can and cannot be gained from open Web searching.

For students accustomed to being told how many sources were required, many faculty obliged by indicating a specific minimum or a range of expectations such as five to ten sources. Often quantities were offered as advice rather than as requirement; as one professor wrote, "There is not a firm requirement for number of sources, but you need to use more than a couple. In the past, successful papers have cited seven to twelve sources." These estimates assume that students will exhibit self-determination of how much information is enough.

Source citation requirements appear in nearly all assignments. Students are directed to use a standard citation style, and often the style, whether APA, MLA, or Chicago, is determined by the professor. All instructors whose assignments were assessed seem to assume that students know the differences among styles.

Information Processing

Perhaps of greatest import are issues related to processing information. Faculty make assumptions about students' experience in applying found information to an argument or thesis-driven paper or presentation. In one assignment, the professor advised that the paper was to be "more than a report" and that students were expected to engage in analysis. In the advice to students to go beyond reporting, many assignments urged students to minimize direct quotations, setting an expectation that they will process what they read and integrate ideas. For example, one assignment stated, "You should quote the original source only when it is awesome." Others express similar sentiments in discouraging extensive quotations and urging synthesis and application of found information. Mary A. Fitzgerald's (2004) finding that students struggle with analyzing and synthesizing information to construct meaning takes on great importance in the context of these expectations.

In a few instances, students were advised to create an annotated bibliography of their sources as a stage toward a cohesive paper, and definitions of annotated bibliographies were provided in those instances; for example:

> An annotated bibliography is a way to collect and organize research. There are two parts to an annotated bibliography: a citation and a short paragraph that summarizes, explains why or how the source will help your research project, and a sentence or two about how you know the source is credible.

Possibly, for many first-year students, the development of such a bibliography as a step in preparation for writing a paper is novel.

The information-literacy expectations suggest ways in which high school educators might prepare students to meet first-year requirements. One key idea is providing students with more opportunities to explore a subject before arriving at a topic rather than urging immediate selection of a topic. In addition, progressing away from prescriptive assignments over the high school years toward more self-selected topics and questions to be investigated may reduce the shock of needing to find their own queries for college assignments. This shift may involve direct instruction about exploration by introducing to students strategies like beginning with overview resources, browsing the Internet for the purpose of finding a topic of interest, exploring within one's own community, and other ways of piquing curiosity. Finally, providing practice at writing papers that go beyond reporting found information will help students prepare for college-level assignments that call for synthesis and construction of insights and knowledge.

Writing

Thesis Statement

Most assignments submitted for this analysis involve writing a paper. A particularly common theme among these assignments is the thesis. Assumptions abound that students will understand the meaning of a thesis statement. In some cases, students were urged to compose a "working

thesis" and advised that as they delve into the literature their thesis may change. This open-mindedness about thesis may be a new experience for some new collegians. In a few instances, a thesis was described, for example, "Your thesis should make an arguable claim." More often observed is the simple expectation that the paper will express and support a thesis.

Supporting Evidence

Beyond the statement of the thesis, many assignments emphasized the importance of evidence to support the thesis. These students were expected to distinguish between claims and evidence in the form of expert testimony or factual examples in their found information. Of particular import here are advisements to "discuss the relationship among information sources" and to compose text that "makes use of the secondary material you have explored in developing an argument." Where students may have written reports of findings in information sources, using the information purposefully to support an argument is an experience worth having had in high school. Indeed, the Common Core State Standards emphasize skills related to supporting argument.

The notion of integrating findings into a coherent essay appears in several assignments where faculty members made statements like "[A]nalysis relies on close examination of your primary sources," or "All reasons are supported by a sophisticated integration of appropriate and credible evidence" or "[F]or each piece of evidence make sure that the essay explains why it is important, significant, revealing, as well as what it reveals." Conley and McGaughy (2012) emphasized the importance of the ability to use appropriate references to support an argument, and this skill is evident in many of the assignments submitted for this study.

Audience

Writing aims at audience. Often, naïve students think that their audience is their teacher. The faculty members whose assignments were examined ask students to think about their audience. One professor suggested, "Think of your audience as a group of college freshmen who are not very well educated about environmental issues but who believe that human beings can act to maintain and even improve life as we know it." Another said, "Determine your ideal audience. What segment of the population would be most interested in reading your work?"

Product

While the conventional paper is the outcome of most assignments submitted for this analysis, a few asked students for other formats for presenting their work. One assignment directed students to expand a stub in Wikipedia into a full-fledged Wikipedia entry. Another invited students to use presentation software for oral presentation of their findings: "You can use presentation software if you already have experience using it, but since we do not have time to learn how to use such tools in this class, they are not required." Similarly for another course, the invitation was extended for a technology-supported presentation, "Carefully consider visual possibilities. Bring the content of your presentation to life." Interestingly, of the forty-one assignments submitted, only five made specific mention of technology-based presentation of information. The formal research paper appears to continue to be the gold standard in higher education.

Learner Dispositions

Faculty in higher education reveal their commitment to teaching "habits of mind" that they hope will result in lifelong learning. Dan Berrett (2012) has described the work of several faculty who focus attention on such habits or dispositions. He cites curiosity, open-mindedness, and thoroughness among the dispositions he discovered among faculty. Similar behaviors were sought in these assignments.

Curiosity

While skills and knowledge about writing and information-seeking were evident in the assignments, surprising were the learner dispositions that faculty sought in their first-year students. Foremost among those was a disposition of curiosity. Frequently, faculty expected students to identify a topic or issue of personal interest. One professor advised, "Select and develop a topic that honestly interests you and that you are curious about…This is an opportunity for you to learn more about a topic that you have wanted to think about and to figure out your views on the topic or your recommendations for action."

Consistent among faculty admonishments was advice to investigate something that is of sincere interest. Such advice assumes that students have a disposition of curiosity and have had experience with wondering about issues and topics. Such a disposition grows out of opportunities for open-ended exploration and suggests that high school assignments should progressively encourage such curiosity. Such explicit interest in engaging students' curiosity reflects a finding from the 2012 Pew Research study that "some teachers report that for their students, doing research has shifted from a relatively slow process of intellectual curiosity and discovery to a fast-paced, short term exercise aimed at locating just enough information to complete an assignment" (Purcell et al. 2012).

In a literature course in which students would investigate a topic based on novels read, the professor advised, "Spend some time exploring a topic of interest to you. This interest may have been prompted by a long-standing enthusiasm on your part, by your initial reading of the novel, or by your examination of the additional material provided in our editions of the novels." This advice hints at a strategy for high school teachers to encourage students to think about what questions a particular reading suggests to them. The skill of posing a good question may be one to emphasize in this context.

The idea of exploring a topic suggests that such exploration would occur prior to arriving at a focused direction for one's investigation. Such a behavior stands in contrast to the findings of Cindy Kovalik, Susan Yutzey, and Laura Piazza (2013) that most students they surveyed tended to already have a clear focus about their topic before approaching the library. Described as high-achieving, students in the study by Kovalik, Yutzey, and Piazza acknowledged that their thoughts about their topics might change as they learn more. However, this evolution may not be the practice of high school students generally.

Open-Mindedness

Another disposition expressed explicitly and implicitly in these assignments is open-mindedness. As one professor stated, "It is easy to have a reflexive opinion about an issue; it is more challenging to strive to comprehend the various perspectives on that issue and to advocate by respectfully engaging others' views." Similarly, a political science professor asserted, "This assignment is meant to give you an appreciation for competing viewpoints on a given

issue…You need to present arguments on multiple sides of an issue and present the arguments fairly….do not set up one side as a straw man. Give each a fair portrayal."

High school assignments that ask students to express their opinion may serve students well if they are encouraged to consider all sides. This finding has implications for examining bias in information sources, and rather than discounting special-interest resources, learning to acknowledge bias and evaluate arguments presented from various points of view.

Perseverance

Perseverance is implied when students are given an indefinite expectation for the number of sources; the implication is that students will figure out what is a thorough investigation. Sometimes this need is expressed explicitly, as one professor stated, "[T]horough research requires that you look at many, many more sources than you will finally use."

Persistence—the ability to sustain interest and attention to short- and long-term projects—is among the habits of mind an NCTE task force deemed essential for success in college writing (O'Neill et al. 2012). Implementation of the Common Core with attention to the skills and dispositions that support the research strand has potential to advance students' readiness for persevering through challenging assignments in college.

Self-Reliance and "Planfulness"

These college students are expected to recognize when they need help and seek it independently from reference librarians, the writing center on campus, the library website, or the professor. Appreciating the value of consultation with a librarian was not an inherent behavior of high school students, who were found to not readily seek assistance of a librarian (Kovalik, Yutzey, and Piazza 2013). This leaves school librarians with the challenge of determining how to help students learn what a librarian can offer them not only in high school, but beyond.

In a similar vein, students were urged to be "planful." This advice came in gentle counsel stating, "[D]o not procrastinate on this assignment. It will be much easier if you keep working on it as the semester progresses." The advice also came in more-concrete language that referenced deduction of points for late submission, refusal to accept late submissions, and other grade-related warnings.

Parallels with NCTE Framework

These dispositions share much with the NCTE delineation of habits of mind necessary for successful transition from high school to college, as reported by Peggy O'Neill et al. (2012). O'Neill and the other task force members who drafted the NCTE *Framework for Success in Postsecondary Writing* urge high school English teachers to give young writers experiences that develop curiosity, openness, creativity, persistence, responsibility, flexibility, and metacognition. These dispositions can be nurtured when students engage in in-depth inquiry, and school librarians can provide lessons for success.

Recommendations/Conclusions

This study explores assignments in institutions of higher education in Iowa. True to the qualitative research paradigm, no claim to generalizability to all institutions or all faculty in first-

year courses is made. However, the authentic language of faculty in higher education provides insight into the assumptions and expectations these faculty hold for students and opens a conversation for secondary school teachers and librarians to consider the possible curricular opportunities that may enhance college readiness.

Role of School Librarians

Information-Seeking Strategies

High school librarians can play a significant role in preparing students to meet first-year college expectations. Citing expectations of collegiate faculty, school librarians can advocate for instructional time to teach sophisticated information-seeking behaviors. For example, these faculty statements indicate that students need to:

- differentiate between scholarly and popular information sources;
- develop precision search skills that help students filter to the most relevant information for their information needs;
- use various citation styles, based on disciplinary preferences;
- know which types of sources to use for what purposes. Students need to learn about overview sources for background building and exploration as compared to focused, in-depth sources.

Evaluation of Sources

While developing writing competency lies within the purview of the classroom teacher, of particular note in these findings is the importance of supporting argument with evidence. Understanding what constitutes evidence and locating authoritative evidence are competencies that school librarians can help students learn.

School librarians can also help students learn to assess bias and special interest in reported information. In truth, much information carries some bias or is generated and published by a special-interest entity. Students must be sophisticated in using information from special interests honestly and acknowledging apparent bias.

These are among the skills of truly information-literate students, and acquiring these skills will advance students potential as collegians. Learning to apply information to support an argument or to defend a thesis represents an example of the "beyond reporting" that college faculty seek in undergraduate work.

Authentic Inquiry

Perhaps of greater importance, however, is the need found in these assignments for students to practice arriving at their own line of inquiry. To be prepared to "select and develop a topic that honestly interests you and that you are curious about," students need such experiences before they arrive on the college campus. This need suggests that they learn how to explore (to read in print and online for the purpose of background building, not for the purpose of reporting) and how to reflect and wonder what is left to be discovered.

Designing such learning opportunities requires close collaboration with content-area faculty and informed conversation about authentic inquiry. The Common Core State Standards support such experiences in the Research to Build and Communication Knowledge strand in *Grades 6–12 Literacy in History/Social Science, Science and Technical Subjects* where we find:

> **CCSS.ELA-Literacy.WHST.11-12.7** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. (2010b)

> **CCSS.ELA-Literacy.WHST.11-12.8** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. (2010c)

> **CCSS.ELA-Literacy.WHST.11-12.9** Draw evidence from literary or informational texts to support analysis, reflection, and research. (2010d)

Opportunities for Self-Reliance and Perseverance

Another important finding is the notion of self-reliance. These assignments suggest that high school juniors and seniors may need opportunities to work on large-scale research projects and to organize their work strategically. While learners need some guided experiences, they also need to have learned how to independently break down and schedule work for a major project. Perseverance is perhaps the most difficult to teach of the dispositions explicitly expressed in these assignments. Such experiences call for designing assignments that require complex inquiry and setting high expectations for depth of research questions.

Question Generation

High school librarians can work with content-area teachers to design inquiry-based experiences that require students to undertake investigations of questions for which they do not already know the answer. This task may involve teaching how to generate a deep question. A question taxonomy proposed by Madeleine A. Dahlgren and Gunilla Öberg (2001) offers one way to help students toward intellectual exploration beyond fact-gathering. By teaching such a questioning taxonomy, school librarians can help students distinguish between researching and reporting. Discouraging questions Dalgren and Öberg call *encyclopedic*, like "What are the characteristics of the habitat of wombats?" librarians can encourage questions fitting one of the following categories:

> *Meaning-oriented:* How do changes in short-grass prairie habitat affect the animal life that lives there? (understanding of the **meaning** of habitat change)

> *Relational:* What are the **effects** of natural hazards like flooding or wildfire on a landscape?

> *Value-oriented:* What methods can conservationists employ to educate citizens about the **importance** of preservation of public land?

> *Solution-oriented:* What **steps** can be taken to protect wetlands in our state?

Taxonomies of this sort provide students models of research questioning that can take them deeper into research as practice for collegiate paper writing.

Final Thoughts

Too often, high school educators assume that students arrive at high school with all the information skills they need. Indeed this expectation was expressed by teachers participating in the Pew Research study of teens' research in the digital age (Purcell et al. 2012). However, expectations of college faculty indicate a place for developing advanced research skills and nurturing the dispositions of a researcher in a curriculum for third- and fourth-year high school students. School librarians have important skills and knowledge to contribute to such a curriculum.

Works Cited

ACT. 2012. *National Curriculum Survey*. <www.act.org/research/policymakers/pdf/NCS-PolicySummary2012.pdf> (accessed February 19, 2013).

ACT. 2013. *The Reality of College Readiness*. <www.act.org/readinessreality/13/pdf/Reality-of-College-Readiness-2013.pdf> (accessed February 13, 2014).

Alliance for Excellent Education. 2011.*Deeper Learning.*< http://deeperlearning4all.org/about-deeper-learning> (accessed February 19, 2014).

American Association of School Librarians. 2007. "Standards for the 21st-Century Learner." <www.ala.org/aasl/standards> (accessed February 13, 2014).

———. 2012. "Crosswalk of the Common Core Standards and the Standards for the 21st-Century Learner: English Language Arts Crosswalk - Standard 1." <http://www.ala.org/aasl/standards-guidelines/crosswalk/ela/think> (accessed September 22, 2012).

Badke, William. 2012. "What Students Should Know." *Online* 36 (2): 47–49.

Berrett, D. 2012. "Habits of Mind: Lessons for the Long Term." *Chronicle of Higher Education* 59 (7): A1–A6.

Carnegie Corporation of New York's Council on Advancing Adolescent Literacy. 2011. "Time to Act: An Agenda for Advancing Adolescent Literacy for College and Career Success*."* <http://carnegie.org/programs/past-commissions-councils-and-task-forces/carnegie-council-for-advancing-adolescent-literacy/time-to-act/> (accessed February 19, 2014).

Caspers, J., and S. M. Bernhisel. 2005. "What Do Freshmen Really Know about Research? Assess Before You Teach." *Research Strategies* 20 (4)*:* 458–68.

Cohen, M. 2008. "Improving College Preparation: Lessons from the American Diploma Project." *The New England Journal of Higher Education* 22 (5): 21–23.

Common Core State Standards Initiative. 2010a. "Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects <www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf> (accessed February 13, 2014).

———. 2010b. "English Language Arts Standards>Grade 11–12>7"
<www.corestandards.org/ela-literacy/w/11-12/7> (accessed February 15, 2014).

———. 2010c. "English Language Arts Standards>Grade 11–12>8"
<www.corestandards.org/ela-literacy/w/11-12/8> (accessed February 15, 2014).

———. 2010d. "English Language Arts Standards>Grade 11–12>9"
<www.corestandards.org/ela-literacy/w/11-12/9> (accessed February 15, 2014).

———. 2012. "English Language Arts Standards>Introduction>Key Design Consideration."
<www.corestandards.org/ELA-Literacy/introduction/key-design-consideration>
(accessed February 14, 2014).

Conley, D. T. 2005. *College Knowledge: What It Really Takes for Students to Succeed and What
We Can Do to Get Them Ready*. San Francisco: Jossey-Bass.

———. 2007. *Redefining College Readiness*. Eugene, OR: Educational Policy Improvement
Center. <http://files.eric.ed.gov/fulltext/ED539251.pdf> (accessed February 14, 2014).

———. 2008. "Rethinking College Readiness." *New England Journal of Higher Education* 22
(5): 24–26.

———. 2010. "Eligible and Ready for College." *Principal Leadership* 11 (4): 18–22.

Conley, D. et al. 2011. *Reaching the Goal: The Applicability and Importance of the Common
Core State Standards to College and Career Readiness*. Eugene, OR: Educational Policy
Improvement Center. <http://files.eric.ed.gov/fulltext/ED537872.pdf> (accessed
February 14, 2014).

Conley, D. T., and C. McGaughy. 2012. "College and Career Readiness: Same or Different."
Educational Leadership 69 (7): 28–34.

Dahlgren, M. A., and G. Öberg. 2001. "Questioning to Learn and Learning to Question:
Structure and Function of Problem-Based Learning Scenarios in Environmental Science
Education." *Higher Education* 41 (3): 263–82.

Fields, A. M. 2005. "Self-Efficacy and the First-Year University Student's Authority of
Knowledge: An Exploratory Study." *The Journal of Academic Librarianship* 31(6): 539–
45.

Fitzgerald, M. A. 2004. "Making the Leap from High School to College: Three New Studies
about Information Literacy Skills of First-Year College Students." *Knowledge Quest* 32
(4): 19–24.

Fletcher, J. 2013. "Critical Habits of Mind: Exposing the Process of Development." *Liberal
Education* 99 (1): 50–55.

Gordon, C. 1999. "Students as Authentic Researchers: A New Prescription for the High School
Research Assignment." *School Library Media Research* 2.
<www.ala.org/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume21999/vol2gordon>
(accessed February 15, 2014).

Gorman, G. E., and P. Clayton. 2005. *Qualitative Research for the Information Professional: A
Practical Handbook,* 2nd ed. London: Facet.

Henrickson, L. J., et al. 2008. "Senior Year Experience: Challenges and Options. *Education
Digest* 74 (4): 58–62.

Hsieh, H. F., and S. E. Shannon. 2005. "Three Approaches to Qualitative Content Analysis." *Qualitative Health Research* 15 (9): 1277–88.

King, J. 2011. "Implementing the Common Core State Standards: An Action Agenda for Higher Education." American Council on Education. <www.acenet.edu/news-room/Documents/Implementing-the-Common-Core-State-Standards-2011.pdf> (accessed December 31, 2013).

Kovalik, C., S. Yutzey, and L. Piazza. 2013. "Information Literacy and High School Seniors: Perceptions of the Research Process." *School Library Research* 16. <www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslpubsandjournals/slr/vol16/SLR_Information_Literacy_High_School_Seniors_V16.pdf> (accessed February 15, 2014).

Kuhlthau, C. C. 2004. *Seeking Meaning: A Process Approach to Library and Information Services.* Westport, CT: Libraries Unlimited.

Lehman, K. 2013. "Preparing Students for College: Whose Expectations Are We Meeting?" *Library Media Connection* 31 (5): 10–12.

Marzano, R., and D. J. Pickering. 1997. *Dimensions of Learning*. Alexandria, VA: Association for Supervision and Curriculum Development.

MDRC (Manpower Demonstration Research Corporation). 2013. "Improving College Readiness in the Age of the Common Core." <www.mdrc.org/publication/improving-college-readiness-age-common-core> (accessed December 31, 2013).

Michael, Ann E., et al. 2010. "A College Prep Blueprint for Bridging and Scaffolding Incoming Freshmen: Practices That Work." *College Student Journal* 44 (4): 969–78.

National Center for Public Policy and Higher Education. 2010. *Beyond the Rhetoric: Improving College Readiness through Coherent State Policy*. <www.highereducation.org/reports/college_readiness/CollegeReadiness.pdf> (accessed December 31, 2013).

Nunley, C. R., M. K. Shartle-Galotto, and M. H. Smith. 2000. "Working with Schools to Prepare Students for College: A Case Study." *New Directions for Community Colleges* 2000 (111): 59–71. <doi:10.1002/cc.11107>.

O'Neill, P., et al. 2012. "Creating the Framework for Success in Postsecondary Writing." *College English* 74 (6): 520–53. <www.ncte.org.ezproxy.mc3.edu:2048/library/NCTEFiles/Resources/Journals/CE/0746-jul2012/CE0746Symposium.pdf> (accessed February 15, 2014).

Owen, P. 2010. "A Transition Checklist for High School Seniors." *School Library Monthly* 26 (8): 20–23.

Parker-Gibson, N. 2001. "Library Assignments." *College Teaching* 49 (2): 65–70.

Purcell, K., et al. 2012. *How Teens Do Research in the Digital World.* Washington, DC: Pew Internet & American Life Project. <www.pewinternet.org/files/old-media//Files/Reports/2012/PIP_TeacherSurveyReportWithMethodology110112.pdf> (accessed February 13, 2014).

Rogers, L. E. 2010. "Gearing Up for College." *Principal Leadership* 11 (4): 34–38.

Todd, R. J. 2012. "School Libraries and the Development of Intellectual Agency: Evidence from New Jersey." *School Library Research* 15.

<www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslpubsandjournals/slr/vol15/SLR_SchoolLibrariesandDevelopment_V15.pdf> (accessed February19, 2014).

West, Q. 2013. "Information Literacy Cooperation by Design." *College & Research Libraries News* 74 (4): 202–204.

Zhang, Y., and B. M. Wildemuth. 2009. "Qualitative Analysis of Content." In *Applications of Social Research Methods to Questions in Information and Library Science*, edited by B. M. Wildemuth, 308–19. Westport, CT: Libraries Unlimited.

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