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Literacy in the 'In-Between Spaces' of Community Colleges:

Interstitial Practices in Developmental Reading and Career Technical Education

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Executive Summary

This report presents information on a study that was undertaken at three community college sites. The study was designed to answer the following research question: "What constitutes college-level text-readiness?" The study design involved two simultaneous threads of data collection: one for career technical education (CTE) courses, and one for developmental reading (DR) courses.

Both qualitative and quantitative methods were used in this investigation, with data sources including an online faculty survey, classroom observations, faculty and student focus groups, and course artifacts. Data analysis involved individual reviews of all data from within each data source, and a full data analysis that triangulated findings across all data sources.

Based on the data collected and analyzed in this study, eleven key findings emerged:

1. **Differences in class formats:** DR classes generally followed what might be considered traditional GE/liberal arts-style course formats with discussion as the primary mode. By contrast, CTE courses followed lab/shop and application-foci.

2. **Differences in text types:** DR courses used multiple texts across a variety of text types; the majority of texts were workbooks, novels, and some instructor-designed compilations of GE content. By contrast, the CTE faculty usually made use of a single traditional (for CTE) textbook that was used primarily as a resource or reference, or for immediate use in application of the course content or lab/shop experience.

3. Differences in course content: According to DR faculty, the vast majority of the DR instruction throughout the semester focused on reading and study strategies, to include text organization and structure, vocabulary-development, note-taking approaches, and strategies for dealing with graphics and visuals in text. CTE faculty also reported including strategy instruction, but the depth and timing of the instruction ranged based on the strategy type. The majority of the CTE instructors focused on covering the content of the assigned reading material in class or via alternate sources (workarounds).

4. Text differences across the areas: One key finding that emerged from the systematic text analyses was that text type, complexity, and usage practices were vastly different between DR courses and CTE courses. In addition to genre differences, CTE course text samples frequently scored at higher Lexile text measure scores than did the DR course texts. Students viewed these required course texts as being both information source and an unnecessary expense. The texts examined in the study included more than traditional texts, though. For example, for CTE courses, they included a camshaft in auto, a drip bag and mannequin in nursing, and the help feature of a software program in industrial technology courses. Texts were used in very different ways across these areas, as the text usually formed the basis for the class discussions in DR courses whereas it was the specific content/information in application that formed the crux of the CTE lab/shop-based foci.

5. Faculty expectations of student text-readiness: Both DR and CTE faculty reported having expectations that most students should be able to navigate and comprehend text independently at the outset of their specific course or for college reading in general. However, both faculty groups (DR and CTE) also reported that most students were

unready for college literacy practices, and reported making adjustments to their instruction as a result. In short, faculty are holding and acting upon two contradictory expectations simultaneously. Students recognized the increase in literacy expectations from high school to college, noting especially the lack of class-based preparation for the exams in college, the sense that students are held responsible for their own work in college, and the increased amount and difficulty of reading in college.

6. **Faculty assumptions about student attitudes about reading:** Both DR and CTE faculty perceived students' attitudes toward reading as generally negative. Both sets of faculties noted some differences in attitude across different populations of students, and provided specific student characteristics and demographics to explain these differences. Both groups of faculties made adjustments in their courses based on their perceptions of students' negative attitudes (as well as the perceived lack of text-readiness). Despite a widespread faculty assumption that students don't read, students' responses were split on whether they read or not, with more than half of student survey respondents indicated that they read more than 75% of the required reading, and only a very small minority—just three who responded to the question—reported reading *none* of the assigned reading.

7. **Use of workarounds in CTE:** Because of the importance placed on content knowledge, CTE faculty tended to provide alternate sources of information (workarounds), including PowerPoint slides, instructor-prepared lecture notes, and study guides. CTE faculty made it clear that *how* information was acquired was less important than *that* it was acquired. Other stated reasons for the workarounds included faculty assumptions of low literacy competence on the part of their students at the course outset as well as expectations that students would hold negative attitudes of reading.

8. Variation with instruction on disciplinary/professional literacy practices: DR faculty reported that they attempted to prepare students for the varied literacy demands across GE core disciplinary contexts. DR faculty did not include discussion of specialized language and literacy processes such as those enacted within CTE areas. Although three-fourths of CTE faculty reported providing some reading instruction, the majority did not directly address how experts in their respective fields read or utilized texts, a central tenet in disciplinary approaches to literacy. Students reported that instructors provided such instruction across the semester or not at all. However, students generally provided indication that they were aware of differences in literacy practices across disciplines and areas.

9. Conceptualizations of literacy: Although CTE faculty were aware of literacy differences across disciplines/professions, they still tended toward more traditional notions of literacy instruction wherein literacy is a generic, monolithic construct. Rather, "literacy" for the DR instructors was the generalized type to be found within the traditional GE areas. Consequently, this type of instruction in DR resembled traditional, generic approaches to literacy instruction, rather than a more contemporary disciplinary literacy model. Students understood the act of reading as the execution of skills that, once mastered, will help them get to meaning. They also acknowledged the need for speed in reading, and the limited strategies they controlled in what they believe to be best practices for that particular need at that particular moment. Students reported a range of views on text usage, including the use of the text to help structure or sort out a potentially confusing or poorly organized lecture, the use of the text as an authority, and the deliberate decision to not use a text that is perceived as not valuable.

10. Status of DR on campus: DR is perceived as isolated on campus, and DR faculty reported that their courses are not valued within the campus community. However, it was encouraging that only a small minority of DR faculty reported not knowing much about the literacy practices in next-level courses. It was also encouraging that three-fourths of CTE faculty respondents knew about DE courses, though they did not know much about the specifics of the DR coursework on their campus, including what was taught in the courses.

11. Goals for DR: The CTE faculty respondents expressed the need for students who were enrolled in DR to exit the courses with the competencies needed to successfully read and learn from highly technical texts. In this way, DR is expected to bridge the gap between the perceived reading abilities of the students and the levels of literacy required for the next-level instructors' courses. Specifically, a number of the CTE faculty respondents wanted the DR faculty to be aware of the reading load in CTE classes and the complexity of the assigned readings.

Three specific implications from this study's findings are reported, one for each of three audiences: instructors, institutions, and the field of DR. Seven recommendations for future practice, future research, and future scholarship are presented:

1. Promote and maintain greater communication across programs.

2. Develop contextualized reading courses.

3. Consider CTE traditions in SLO-development.

4. Conduct "Reality Checks."

5. Study individual CTE fields.

6. Work toward theory-development that extends Disciplinary Literacies into the realm of technical and professional literacies.

7. Critique existing power structures and the associated privileging.

Table of Contents

List of Tables

List of Appendices

Appendix

Literacy in the 'In-Between Spaces' of Community Colleges:

Interstitial Practices in Developmental Reading and Career Technical Education

In recent years, the issues surrounding college and career readiness have become major concerns for the various stakeholders nationwide (e.g., Achieve, 2017; ACT, 2015; AIR, 2015). Current scholarship and educational policy, prompted by the P-20 reform movement, have led to careful examinations of students' readiness levels as they have transitioned from high school to college (e.g., Achieve, 2017; Conley, 2007; National Center for Public Policy and Higher Education, 2010; Vandal, 2010) or high school to career (e.g., Achieve, 2017; Barnett, 2016). Generally speaking, the scholarly focus on post-high school readiness has been limited to the areas of traditional General Education (GE) and transfer tracks. And, although there is a considerable literature base that explores career and workforce readiness in a high school-to-workplace pipeline, far less attention has been paid to postsecondary career technical education (CTE) contexts, commonly situated within two-year colleges.

Further, despite the emphasis on issues of readiness, and particularly on preparing PK-12 learners to be ready for postsecondary education, remarkably little attention has focused on what to do when learners arrive at college not ready. This is particularly true for the reading and literacy demands that are required after the transition from high school to college. Historically, learners who required additional literacy support through their transitions into college were enrolled via placement testing into developmental reading courses (DR), an intervention that still exists, despite growing concerns over its efficacy. However, without a research base on the literacy practices specific to CTE contexts, it is impossible to develop DR interventions that appropriately scaffold students enrolling in CTE programming. Indeed, the literacy community has not been particularly attentive to literacy demands and practices in community college CTE

contexts. In fact, current innovations of the past decade, such as I-BEST, have come from

outside the literacy field (Jenkins, Zeidenberg, & Kienzl, 2009a, 2009b; Wachen, et al., 2010;

Wachen, Jenkins, & Van Noy, 2011; Wachen, Jenkins, Belfield, & Van Noy, 2012; Zeidenberg,

Cho, & Jenkins, 2010).

The In-Between Spaces of CTE and DR

As noted, the career-readiness focus of the college and career readiness movement has

largely been limited to high school-to-workplace situations, and therefore does not include the

in-between space of coursework focused on career tracks, or CTE, which is typically housed

within community colleges, and includes conferring both certificates and degrees in technical

and professional fields (i.e., nursing, criminal justice, welding, business, culinary arts, etc.).

Unfortunately, CTE areas are not held in high prestige, at least not compared to the GE areas.

This is not a new phenomenon, of course, as Grubb et al. (1999) have noted: "transfer and

academic education have been the most prestigious missions" (p. 98). Given past trends toward

the marginalization of CTE (Crawford, 2009; Grubb, et al., 1999; Rose, 2012), it is not

surprising that little is known about literacy practices within CTE curricula at the postsecondary

level. However, given state and federal mandates for college completion (i.e., 60 x 25 and Goal

2020; see Lumina, 2009, 2012) and assessment of college and career readiness mandates (such as

the Every Student Succeeds Act, ESSA), improvement of student success initiatives and

completion of CTE certificates and degrees have recently emerged as focal areas (Zhang &

Oymak, 2018). Specifically, the current federal administration has reauthorized the Perkins Bill

in order to increase emphasis on CTE and workforce training (Riddell, 2018; Tesfai, 2018). The

Perkins Act governs and funds CTE at both the postsecondary and the secondary education

levels. At the postsecondary level, Perkins has also been legislated as a core partner in the

workforce area, to include one-stop job centers under the Workforce Innovation and Opportunity Act (DeRenzis & Wilson, 2016).

As with the privileging of GE areas over CTE ones, the national fixation on college-readiness has focused on introductory GE/transfer-focused coursework, to the exclusion of pre-credit coursework. This exclusion includes Developmental Education (DE) courses that aim to help support students' transitions into the rigors and demands of postsecondary contexts. There has been an increase in research and policy conversations related to DE over the past 15 or so years; however, these conversations have largely been focused on *reduction* or *eradication* of these courses and supports. Developmental education, then, and more particular to the present study, Developmental Reading (DR), is situated in an uncomfortable in-between space, just as is CTE.

Even beyond the in-between spaces of both CTE and DR, there exists the well-worn "second-class" status of these fields (Crawford, 2009; Rose, 2012). Indeed, practitioners and researchers in both of these broad fields are well aware of their respective prestige gaps within higher education's pecking order. And, not surprisingly, students, too, feel the stigma of their associations with these areas. For the present study, these often-perceived "less-than" attributes served as a guiding backdrop.

Study Background

This study sought to better understand the literacy needs and practices that students encounter in their CTE courses as well as the literacies they might experience in DR courses. In addition, the study sought to synthesize instructors' understandings of the literacy demands of their courses. The approach adopted for this study was informed by recent research on alignment of literacy instruction within General Education (GE) and Developmental Reading (DR)

coursework (Armstrong, Stahl, & Kantner, 2015a, 2015b, 2016; Armstrong & Stahl, 2017; Stahl & Armstrong, 2018). Through that body of work, it became evident that DR professionals need to better understand the literacy needs of their students in their next-level CTE courses. But such alignment-checking and communication are simply not part of current practice (Armstrong & Stahl, 2017; Stahl & Armstrong, 2018). In sum, motivated by the need to better understand CTE literacy practices, and coupled with the desire to inform DR curriculum and instruction accordingly, the purpose of this study was to explore the transitions in literacy practices that students must navigate in their precollege-level DR courses and their introductory-level CTE courses.

Theoretical Perspectives

The impetus for this study was driven by a constructivist perspective of literacy that is informed by socio-linguistic and socio-cultural theories of language (Gee, 1996; Lea & Street, 2006; Street, 1995). From this perspective, and specific to academic purposes, literacies are complex, dynamic social practices situated within and dependent upon disciplinary values, models, and norms, as well as learner schemata. The context-specific nature of academic literacies is generally not explicitly taught, neither in high schools nor in colleges. Thus, we value the need for explicit modeling and apprenticing for learners new to academic literacy practices in the community college, whether they are placed into DR courses or GE/CTE coursework. If the theoretical goal of Developmental Education instruction is to provide access to higher education, and, specific to DR coursework, access to the various disciplinary modes of literacy, then DR courses must be informed by and predicated upon the actual literacy practices expected of students in their future or next-level courses.

In addition to this more global philosophical underpinning, four key assumptions, best framed by the following guiding perspectives, inform this study's design, and our analysis and interpretation of data: lifespan literacy development, disciplinary literacies, functional literacy, and positioning theory. Each will be discussed briefly in turn below.

Lifespan Literacy Development Perspective

This study was heavily influenced by a lifespan literacy development perspective. Specifically, we rely upon Alexander's (2005, 2006) position that we are always developing as readers and learners. In short, from this perspective, learners require focused literacy support across their lives, not just in the primary grades. Expanding on this assumption to a specific focus on the postsecondary level, a fundamental assumption driving this study is that beginning college students are faced with a number of transitions (personal, social, cultural, and academic, to name only a few), not the least significant of which is a literacy transition to the academic literacy practices and expectations of higher education (Armstrong, 2007). For many students, this literacy transition becomes an enculturation process that involves discovering—and then adopting—the appropriate literacy conventions of multiple discourse communities (e.g., Jolliffe & Brier, 1988; Rafoth, 1988). Students are thus forced to "invent the university"—to "learn to speak our language, to speak as we do, to try on peculiar ways of knowing, selecting, evaluating, reporting, concluding, and arguing that define the discourse of our community" (Bartholomae, 1985, para. 2; see also Bartholomae & Schilb, 2011).

Disciplinary Literacies Perspective

This study was also informed by a contemporary perspective of Disciplinary Literacies (DL), which focuses on the particular ways of reading, writing, thinking, and learning within various disciplines, and how learners are apprenticed into these disciplines (e.g., Lee & Spratley,

2010; Moje, 2008; Shanahan, 2009; Shanahan & Shanahan, 2008, 2012; Shanahan, Shanahan, & Misischia, 2011; Spires, Kerkhoff, & Graham, 2016). Essentially, the DL premise is this: we read, write, think, learn, and communicate differently in different academic disciplines and professional fields. Particularly important to the present study is our assumption that disciplinarity entails extending the construct to include professional and career technical areas such as nursing, engineering, horticulture, etc.

Functional Context Approach

This study was further informed by a functional context approach, which calls for development of a curriculum that focuses literacy on a real-world context. A functional context approach facilitates students' learning within the instructional setting and encourages transfer of learning to situations beyond the course itself (e.g., Goldberg, 1951; Roueche & Roueche, 1993; Shoemaker, 1960; Sticht, 1975a, 1975b, 1997; Sticht, Armstrong, Hickey, & Caylor, 1987). More recently under The Workforce Innovation and Opportunity Act, integrated education and training models provide literacy activities concurrently with career technical training in specific occupational clusters (Hirschy, Bremer, & Castellano, 2011; Zeidenberg, et al., 2010).

Positioning Theory

This study was also informed by positioning theory, as originally articulated by sociologists Harrè and Langenhove (1999). As a description of social actors interacting within a given context, positioning theory points out the relative power differentials between actors, where intrinsic power is related to position. However, rather than referencing physical positions, such as jobs descriptions or actual roles, positioning theory (PT) works within discourse analysis to frame discursive positions for actors with presumed and socially shared beliefs and attitudes about individuals within contexts. Several researchers using PT have made application to

education situations (e.g., Anderson, 2009; Bullough & Draper, 2004; McVee, Baldassarre, & Bailey, 2004; McVee, Silvestri, Barrett, & Haq, 2019). In this study, we make the case that what can be analyzed for individuals within a system can also be investigated for systems and institutions. Therefore, we posit that the professional fields associated with both CTE and DR, being in-between spaces, are amenable to analysis from a perspective of PT.

Review of Literature

Although many areas of scholarly literature are tangential to this study's focus, there are two that are directly applicable to the present research: literacy demands across the postsecondary level and CTE literacy supports at the college level.

Research on Postsecondary Literacy Demands

Prior work on the topic of literacy demands and expectations at the college level tends to be historical in nature in that it suggests where the field was an academic generation ago (e.g., Burrell, Tao, Simpson, & Mendez-Berrueta, 1997; Carson, Chase, Gibson, & Hargrove, 1992; Chase, Gibson, & Carson, 1994; Cohen, 1982, 1987; Grubb, et al., 1999; Maaka & Ward, 2000; Orlando, Caverly, Swetnam, & Flippo, 1989; Richardson, Fisk, & Okun, 1983; Richardson, Martens, Fisk, Okun, & Thomas, 1982; Sartain et al., 1982). The majority of this prior work has focused on faculty reports of what was assigned and what students could and could not accomplish, though some prior research had focused on the specific types of reading and writing demands at the college level. For instance, Richardson, et al. (1983) found little evidence of extensive reading and writing demands and even less evidence of critical literacy expectations in one community college (see also Cohen, 1982; Richardson, Martens, Fisk, Okun, & Thomas, 1982).

More recently, the National Center on Education and the Economy (NCEE) (2013) released a report detailing what it means to be "college ready" in community college settings. Through a study of the literacy expectations in eight of the most commonly pursued program areas across seven community colleges, the investigators found, similar to the work of Richardson et al. (1982; 1983), that "the reading and writing currently required of students in the initial credit-bearing courses in community colleges is not very complex [n]or cognitively demanding" (NCEE, 2013, p. 2). More specifically, the report details the reading complexity of the texts used (typically 11th-12th grade-level estimates) and the observation that the high failure rates in most of the observed courses provided an indication that students were not prepared to even handle texts with precollege reading grade-level estimates. Also, the authors observed that "instructors typically make limited use of the texts they assign and use many aids (e.g., PowerPoint presentations, videos, outlines, flashcards) to help students" (p. 2), or what the authors of the report referred to as "workarounds" (p. 3).

In addition, findings from a doctoral thesis focused on students transitioning from DE toward college completion (Maggs, 2011) extended those of Richardson, et al. (1982; 1983). Maggs' study examined students' academic self-perceptions and compared those to faculty perceptions of students' academic preparation.

In the most recent work along this line of research, Armstrong, et al. (2015a; 2015b; 2016) and Armstrong and Stahl (2017) sought to determine what it means to be college-text ready based on the literacy demands, practices, and expectations in introductory-level (or entry-level) General Education (GE) courses at one community college. The research investigated the following guiding question: how, and to what extent, are the DR courses adequately preparing students for the reading expectations of the introductory-level GE courses? In the study, the GE

courses were the ones for which DR courses served as prerequisites. Three component investigations were conducted: one on the text practices and expectations as observed, one on the faculty perspectives, and one on the student perspectives. Data sources included text analyses, classroom observations, faculty surveys and focus groups, as well as student surveys and focus groups. The findings from these investigations pointed to a literacy mismatch between DR and GE courses in terms of the text types and difficulty levels, the purposes for the text, and the text-associated tasks and learning foci. Furthermore, it was found that GE faculty in that study tended to use text-alternatives (workarounds) to deliver content rather than to provide explicit instruction on text-navigation. In response to the original guiding question, the findings of that body of work suggested that there was not any widely accepted definition of college-text ready at the study site.

Prior to this more recent collection of studies, the bulk of the work related to text expectations at the college level is primarily of historical value and limited to reports of what students could and could not do at the time. And, the vast majority of this work focused on GE contexts, not on CTE. One exception is noteworthy, however. In an extensive study of what was termed "occupational education courses" in California community colleges, Grubb et al. (1999) delineated the various instructional approaches with CTE contexts, noting especially the "extensive and sophisticated literacy practices" involved (p. 119). However, beyond this one exploration—now nearly 20 years old—there simply isn't a body of literature to draw from in order to better understanding of what constitutes college-text ready in CTE.

Research on Literacy and Learning Supports for Postsecondary CTE

The literature from the field of college reading and learning assistance has been less than robust in its coverage of the theory, research, and practice associated with CTE across the past

fifty years. Most of the work identified in the DR literature tends to be from the past century.

Unfortunately, actual research on programs has also been meager. Broderick and Dennis-Rounds

(1982) undertook a survey of learning assistance centers from California community colleges to

determine the services available to students in vocational-technical tracks. They found that 80%

of the respondents generally did not differentiate between academic programs and vocation-

oriented programs in services provided to students. Schallert, Meyer, and Fowler (1995) reported

on an investigation designed to discover the nature of students' interest and involvement with

text, their perceptions of the importance of reading to academic pursuits, the content that they

found to be most interesting, and whether or not the text was associated with one's major.

Students were drawn from three groups: nursing/biology/nutrition, communications/journalism,

and business/advertising/marketing majors.

Aside from research reports, there exists a descriptively oriented body of literature that

deserves mention. Related to instruction, Helm (1973) reported on a funded program designed to

train technical field instructors to integrate vocabulary instruction into their classes, and Kindle

(1982) presented five independent instructional modules on the specialized vocabulary found in

vocational/technology courses that could be employed in learning skills centers. Stasz (1983)

also discussed the use of problem solving/reading modules focused on prereading activities,

comprehension, and problem solving for occupational reading in the carpentry, auto mechanics,

welding, and food services fields. Anderson (2002) covered a program design for supporting

business students along with a corresponding case study and an evaluation guide that drew upon

her adaption of Gee's (1998) eight constructs for working with "at-risk" college students,

including a low affective filter, situated practice, automaticity, functionality, scaffolding, meta-

awareness, critical framing, and transformed practice.

In the years leading up to and within the last decade of the 20th century, articles emerged that focused on medical fields. Helm and McDonie (1974) covered the reading, tutoring, and counseling services provided to students in the colleges of Allied Health, Dentistry, Medicine, Nursing, and Pharmacy at the University of Kentucky. Cervi and Schaefer (1986) described a curriculum at two universities that focused on reading, writing, and reasoning skills for health science majors with a particular emphasis on building skills for greater achievement on professional examinations such as the MCAT, the DAT, or the OCAT. Hacker and Schaefer (1988) presented the design, implementation, and evaluation of a postbaccalaureate program covering test preparation and science courses for students desiring to gain entrance to a medical school. Smukler and Kramer (1996) described a partnership between the Academic Resource Program and the Department of Nursing at a small liberal arts college designed to develop "at-risk" nursing students into self-directed, independent learners. The project employed course-embedded workshops, peer-tutoring services, individualized learning contracts, reading guides for academic texts, and academic counseling. Finally, Sakamoto and Woodruff (1992) investigated the relationship of learning styles (Myers-Briggs Type Indicator and the Learning Preference Inventory) and student achievement in a problem-based learning curriculum from a medical school.

Whereas individuals in the postsecondary and adult literacy fields have been associated with the classic work on workplace literacy (Diehl & Mikulecky, 1980; Mikulecky, 1982; Sticht, 1975a), there are those college reading and learning assistance professionals who described their endeavors in designing reading/learning programming for industrial workers (Long, 1987), state employees (Ilika & Longuion, 1977), armed service personal (Griffith, 1999; 2000), builders and contractors (Longman, Atkinson, Miholic, & Simpson, 1999) among others. Schumann (1992)

went in a different direction when she incorporated a workplace learning experience as a culminating activity in a traditional study skills course.

Of particular interest, in undertaking a hand search of each issue of the Developmental Education (DE) and learning assistance journals, where we expected to encounter reading and learning programming for CTE students, there were no articles identified on the topic since the mid-1990s. Yet with the growing interest in providing reading and learning strategy instruction to CTE students, Adams and Leininger (2017) recently released a text for CTE instructors designed to assist them in incorporating literacy-oriented instructional techniques and strategies such as integrated vocabulary, productive talk, and disciplinary literacies into their classes.

In the past decade, literacy programming specific to postsecondary CTE has been reported in technical reports, dissertations, and journals from outside the literacy field. An embedded model drawing upon the construct of contextualization to promote the transfer of literacy skills emerged in the Washington State Community and Technical College System (Hamilton, 2013). Known as the Integrated Basic Education and Skills Training Program, or I-BEST, this CTE-focused model integrates basic skills instruction within professional or occupational coursework through a team-teaching approach. Designed as an acceleration approach, students no longer move through a sequence of DE courses before enrolling in certificate or degree courses.

Within the I-BEST plan, one faculty member delivers the technical content of a CTE course while another paired faculty member delivers the contextualized basic skills instruction in mathematics, composition, reading, and/or English language to be applied directly within the content area. Furthermore, student motivation with such an instructional model appears to be higher than in a traditional stand-alone DE course, no doubt because the content leads to the

mastery of a career focus. Research with I-BEST suggests its value as a reform model (Jenkins, et al., 2009a, 2009b; Wachen, et al., 2010; Wachen, et al., 2011; Wachen, et al., 2012; Zeidenberg, et al., 2010).

Recently, researchers at the National Research Center for Career and Technical Education (NRCCTE) applied the Math-in-CTE framework (Stone, Alfred, & Pearson, 2008) research results to career-based literacy instruction in CTE. Lesson development began with the CTE objectives to identify the literacy demands of the CTE area. Using an experimental design, CTE instructors were randomly assigned to either a control group or an intervention group, which partnered a literacy instructor with a CTE content expert. Together, they mapped the CTE curriculum to literacy strategies and developed lesson plans, usually executed by the CTE instructor. In addition, interviews with 22 instructors were analyzed to discover instructors' perceptions on literacy. Findings showed that students in the intervention group gained a deeper understanding of the technical terminology and content in the CTE texts, making the texts more manageable to students (Park, Santamaria, van der Mandek, Keen & Taylor, 2010).

Finally, Cooper (2014) conducted case studies of three community colleges in California that were participating in the Trade Adjustment Assistance Community College Career and Training Grant. Having undertaken semi-structured interviews, focus groups, observations, and a content analysis, a cross-case comparison driven by five research questions focusing on embedded remediation was completed. Four themes emerged from this inquiry:

1. The importance of communication among faculty and with students and administrators.

2. The need for trained tutors who provide supplemental learning both within and beyond the classroom setting.

3. The significance of professional development to assist faculty in the paradigm shift of

course redesign so as to include embedded remediation.

4. The importance of collaborative learning for faculty and students.

Beyond the college reading and learning field, some work of a more theoretical nature

has been emerging in celebration of what are often considered more 'vocational' areas. For

instance, Crawford's (2009) book on the morality and art of mechanical work, though not

academic in scope, has brought attention to the all-too-common prejudices about professions that

involve working with one's hands. Rose (2004) likewise explored the intellectual demands of

"working-class people" in the workplace, with case studies ranging from a waitress to a plumber

to a welder and a hair stylist. Similarly, Majors' (2015) ethnography of an African American

hair salon called attention to language and literacy practices that are both culture and place-

bound. More recently, Rose (2012) argued for eradicating the social stigma that continues to

divide "academic" study and the "trades." These studies of such diverse foci point to the

demands of individual work niches, and also collectively point to a re-positioning for the

importance of the work accomplished there.

Situating the Study within the Existing Literature

In short, although much past research has provided a catalogue of literacy demands and

expectations in the GE and transfer areas, far less exists specific to CTE. And, although a few

more recent studies do exist, they do not make attempts to cross-check for literacy alignment

from DR, nor do they offer insights into current DR or CTE practices.

Throughout all of these areas of the literature that touch upon intersections of CTE and

literacy (including language and learning), very little attention has been paid to the specific

literacy practices within community college CTE contexts. More specific to the focus of this

study, no scholarship exists that simultaneously investigated the in-between literacy spaces of CTE and DR, and no research has more specifically examined the literacy transitions involved in moving from DR into introductory-level CTE contexts.

Study Design and Methods

The current study was designed to incorporate both qualitative and quantitative data sources and analysis approaches. The design reflects the need to gather information from a large number of faculty and students (via a web-based survey instrument) as well as more focused, in-depth information from smaller samples (via focus groups). This study was driven by the following research questions:

1. What constitutes college-level text-readiness?

2. What are the text-expectations, including text types, tasks, and goals?

   a. In developmental reading (DR) courses?

   b. In career technical education (CTE) courses?

3. How do these text-expectations align across the DR and CTE courses?

Two parallel and concurrent tracks of systematic data-gathering and review were involved in this study (one for CTE courses and one for DR courses). In the sections that follow, the study will be further broken down into four inquiries. The first three inquiries are based on the perspectives and information gathered from the three constituency groups included in this study: DR faculty/staff, CTE faculty/staff, and students. The fourth inquiry focuses on the texts involved in these courses. Before offering the results of these inquiry areas, we first detail critical study background information, including sites, participants, and data collection and analysis methods that spanned inquiry areas across the entire study.

Study Sites

This multi-site research project involved three relatively contiguous community colleges in a Midwestern state. This was a deliberate attempt to gather information from a variety of two-year institutions (e.g., rural, suburban, urban, each with diverse populations and institutional missions). It should be noted that each institution identified focal CTE areas of particular interest to them in advance of data collection (Site 1 identified business, criminal justice, culinary arts, industrial management technology, and nursing; Site 2 identified automotive, business, computer science networking, electrical engineering, and nursing; and Site 3 identified business, collision repair technology, computer information systems, horticulture, manufacturing technology, and materials management processes). Thus, CTE was defined by the institutions themselves.

Participants. Participation in this study was entirely voluntary, and all participants signed informed consent forms. There were two primary participant groups included in this study: faculty/staff and students. Faculty/staff participants were both full and part-time, with many part-time CTE instructors holding additional full-time positions of employment within their CTE specializations beyond the campus community (e.g., a part-time criminal justice instructor serving simultaneously as a police officer). Students were primarily, though not exclusively, first-year students, but ranged in terms of their traditional/non-traditional student status, as many were recent high school graduates and just as many were returning from family, military, or workplace endeavors for additional credentials.

Data Collection Procedures

Data sources, across all three constituency groups (DR faculty, CTE faculty, and students) included surveys and focus groups. In addition, textbooks for all courses were included

as a data source. Data collection procedures were comparable for each type of data source, across all study sites, focal tracks, and constituency groups.

Survey procedures. Survey data were gathered from participants through the use of revised and updated versions of Simpson's "Academic Literacy Questionnaire" (Simpson, 1996; Simpson & Rush, 2003), which were adapted for online use through Survey Monkey (see Appendices A, B, and C for these protocols). These protocols were differentiated across constituency groups (i.e., Appendix A was the protocol for DR faculty; Appendix B was the protocol for CTE faculty; and Appendix C was the protocol for students). Across constituency groups, survey items prompted responses to questions on text usage, reading expectations, course assignments, assessment practices, the relationship to text assignments, course lectures and the relationship to text assignments, as well as perceptions of reading preparation and associated attitudes on reading. Most questions were presented in a multiple-choice format, although several allowed for respondents to produce individualized responses.

Focus group procedures. The focus groups used semi-structured group interviews (Campbell, et al., 2013). Only two of the three institutional sites allowed for focus groups. To provide initial structure for each of the 45-60-minute focus group sessions, the researchers developed general questions (see Appendices D, E, and F for these protocols). These protocols were differentiated across constituency groups (i.e., Appendix D was the protocol for DR faculty; Appendix E was the protocol for CTE faculty; and Appendix F was the protocol for students). Follow-up questions were included based on the responses to the more general questions.

Classroom observation procedures. In addition, class sessions across the three study sites were observed to determine the extent to which course texts were being referenced and

utilized in the target CTE and DR areas. Across the three study sites, a total of 11 DR and 28

CTE class sessions (across multiple fields and professional program areas) were observed to

gather information on text usage in a typical class period. An observation instrument designed

for this project was used for the classroom observations; *The Text Usage Classroom Observation*

Checklist (Appendix G) gathered information on how texts were being referenced, explained,

and/or incorporated during observed class sessions.

      Textbook analysis procedures. Much of the work with text readability, for both

research and practice, has been aimed at early grade levels, though a few readability and content

analyses of college developmental reading texts (Armstrong, Stahl, & Lampi, in press; Keetz,

1978; Schumm, Haager, & Leavell, 1991; Williams, 2013; Wood, 1997) and of college-level

texts (Cline, 1972-1973; Stahl, Brozo, & Simpson, 1987) have been completed. However,

combined or comparative analyses of DR and CTE course texts have not been identified in the

extant literature across the last three decades.

      The data set for the textbook analysis portion of this investigation included a total of 47

required texts across 25 different courses (see Appendix H for a listing of all texts and their

associated courses). Because we observed multiple sections of some courses, and some sections

tended to use the same texts (especially in DR), only 25 unique course titles were involved. The

procedure was consistent across all texts and courses, as will be described in the sections that

follow.

      Each text was prepared for analysis through a consistent five-page sampling process. This

process sampled from required course textbooks in the following way. First, the first full page of

text (not the introduction or preface, but the first page of content) was copied. Second, the last

full page of text (not the appendix or references or glossary, but the last full page of instructional

content) was copied. Third, based on the first and last pages of content, we computed the number of content pages in the book (e.g., if the first page of content was on page three, and the final page of content was on page 103, there were 100 pages of content). Next, with a total for content pages, we next computed the 1st, 2nd, and 3rd quartiles. In our example, for 100 content pages, the quartiles would be page 25, page 50 and page 75, respectively. Again, if any of these pages was not text-based (e.g., there were images, bulleted lists of learning objectives for chapters, or workbook exercises), we skipped ahead to the next page of text. We then formatted these samples to prepare them for the analysis software by removing any images or graphics, page numbers or running headers, etc.

Data Analysis Procedures

What follows are data analysis procedures for each type of data source, across all study sites, focal tracks, and constituency groups.

Survey analysis. For the analysis of the responses to the survey questions, basic descriptive statistics were calculated using SPSS, including frequency counts of respondents selecting particular options. There were also open-ended questions. For this analysis, open coding (Glaser & Strauss, 1967) was utilized in the following manner: first, members of the research team analyzed the survey responses individually at least twice to identify macro-level themes. Secondly, once patterns were identified, axial coding was employed to make connections across and among the macro-level themes and subsequently to collapse similar themes. Following in-depth examinations and discussions with the entire analysis team, any disparities were reduced and intercoder agreement (Saldaña, 2013) was strong.

Focus group analysis. All audio recordings of the focus groups were transcribed in full by either a graduate assistant or a member of the research team, and later verified for accuracy by

a different member of the research team. Each member of the analysis team independently analyzed these transcripts individually at least twice using open coding procedures. Then, the research team discussed broad-level topics, and then returned to independent coding work with a set group of broad-level topics. After comparing initial themes, the analysis team collectively analyzed the transcripts again with the purpose of collapsing any overlapping patterns and themes. Following several additional rounds of coding and collapsing codes, overarching key themes were identified on issues related specifically to DR and student text-readiness at these three institutions. As with the analysis of open-ended survey questions, intercoder agreement (Saldaña, 2013) was sought through extended conversations with the entire research team. Next, one member of the research team compiled all codes and tallied the frequency for each code. Following the open coding process used for each focus group transcription, the analysis team pulled the primary coding themes into a central list and then went back through all transcripts and identified representative statements to include in this central list.

Observation analysis. Following each observation, the *Text Usage Classroom Observation Checklist* was reviewed and checked for consistency with the observer's fieldnotes. For each course, when a syllabus for the respective course was provided by the instructor, we also reviewed the syllabus for text usage and referencing. Finally, all *Text Usage Classroom Observation Checklists* were tallied as members of a common group with the goal of identifying any patterns and themes.

Textbook analysis. The textbook analysis procedure was consistent across all texts and courses, as will be described in the sections that follow, and included a text-type categorization and a Lexile text measurement analysis.

Text-type categorization. To begin, a holistic analysis was done to determine the general types of texts being used across different instructional areas and disciplines. Eight overall categories of text types were identified through this informal analysis: traditional textbooks (T), content handbooks/references (CH), technical manuals (M), technical workbooks (TW), vocabulary workbooks (VW), basic reading skills workbooks (RW), compilations/readers (C), and novels (N).

Lexile text measure analysis. Following the sampling procedure described previously, each page sample was analyzed through the Professional Lexile Analyzer available at http://www.lexile.com/analyzer/. Traditional readability indices such as Flesch-Kincaid or Gunning-Fog Indices tend to correspond with a grade-level estimate, which has some limitations (see Flippo, Armstrong, & Schumm, 2018; McKenna & Stahl, 2009). More recently, however, the Lexile Reading Framework has become the more popular choice for readability analyses, in part because of its ability to measure both text readability and reader level with the same measuring system (e.g., Williamson, 2008). It should be noted, though, that Lexile text measures rely on syntactic and semantic text characteristics just as the traditional readability indices do. In the case of Lexile text measures, both length of sentences and frequency of words are measured. Thus, Lexile text measures are highly correlated with most traditional readability measures (Williamson, 2008; Wright & Stone, 2004). Given the increasing prevalence of Lexile text measures in the scholarly literature, this was the measure used for text analysis. Lexile text measures are reported on a scale of BR (Beginning Reader) through a high score of 2000L. All scores are indicated as Lexile text measures through the inclusion of the L at the end of the score.

Results

In attempts to focus on the particular perspectives of the key stakeholders involved, the results of this study will be presented as four discrete inquiries across all three community college sites, with the first three inquiries focused the three constituency groups with data collapsed across sites: one for DR faculty, one for CTE faculty, and one for students. The fourth inquiry focused on the texts involved across course contexts and sites. Following explanations of each of these four inquiries we offer a cross-inquiry discussion, implications, and recommendations for future research and practice.

Inquiry 1: Developmental Reading (DR) Faculty Perspectives

The purpose of the first inquiry was to provide additional depth and breadth in answering the first and third research questions, from the perspectives of the DR faculty: "What are the text-expectations, including text types, tasks, and goals?" and "What constitutes college-level text-readiness?" Data were collected from DR faculty using two sources—an electronic survey and focus groups. Both of these data collection methods followed the protocol also established for the second and third inquiries. In this section, we describe the results of the faculty survey and the faculty focus groups for DR faculty.

DR faculty survey. A link to the survey on Survey Monkey was sent to each of the DR instructors at the targeted institutions. A total of 20 DR faculty members, both full and part-time, across the three sites responded to the survey. For the DR instructors, we asked them to focus on a DR course that they regularly taught. Within this context, we asked these participants to respond to questions that dealt with text usage, reading expectations, course assignments, assessment practices, course lectures, and their perceptions about learners' reading abilities and attitudes.

DR faculty survey results. What follows are the key results from the survey, organized thematically into four broad categories: course and text contexts, expectations regarding students, instructional foci, and perceived student challenges with text. Because most of the questions allowed for respondents' selection of multiple answers, the number of responses will not always add up to the total number (n=20) of DR faculty respondents. Also, respondents were not electronically forced into answering all questions, so we also report the number who skipped for each question.

Course and text contexts. First, we requested that DR faculty provide information on the format of the selected target course and then list the number and types of texts used in that course. The 20 DR faculty members who responded across the three sites identified the predominant format for the identified course as *discussion* (n=6) followed by *lecture* (n=4) with both *laboratory* and *problem-solving* formats being identified by two respondents each (six DR faculty respondents skipped this question). For reading materials, the majority of faculty respondents (n=13) indicated that *multiple texts* were assigned to the students. Roughly a quarter of the instructors (n=4) assigned only a *single text* (three DR faculty respondents skipped this question).

To gain an understanding of the breadth of textual material assigned in the target course the faculty were asked to identify which of 11 different sources were utilized in that course. These are now presented in descending order of responses: traditional DR texts (n=17), web-based resources (n=9), newspaper/magazine articles (n=9), novels or monographs (n=8), PowerPoint slides (n=8), computer software (n=8), study guides (n=5), lecture notes (n=5), essay collections (n=3), scholarly journal articles (n=3), and instruction manuals (n=1). In addition, respondents were given the option to add a different type of text; four additions were made:

short stories, non-fiction novels, collections of discipline textbook chapters, and a rhetorical reader.

Although there was some variety in the types of texts used for required reading, the predominant type was a *traditional DR textbook*. All queried instructors used a required textbook. Half of the instructors chose to use a novel, and the same number (half) chose web-based resources. So, although all made use of a textbook, many also added supplemental texts.

Expectations regarding students. We asked about faculty expectations of when students should undertake reading tasks (three respondents skipped this question). The faculty favored students completing their reading *both before and after class sessions* (n=10). Yet, some (n=7) thought that reading materials was necessary only before a class. Next, they were asked the volume of reading they required of their students. Here the responses varied widely. It was found that six of the faculty expected students to read at least 31 pages per week, while another four respondents set the average requirements across the term at 21-30 pages per week. Three instructors selected 11-20 pages per week, and a like number (n=3) picked the option for 10 or fewer pages per week (four respondents skipped this question).

The next item also dealt with expectations faculty held for the students in DR courses, this time focusing on the amount of time students should devote to preparing for class whether it be reading, studying notes, or undertaking other assignments. Again, there was a range of expectations. Six faculty members expected students to spend 5-6 hours in course preparation per week, while five other respondents expected 3-4 hours and another four individuals thought 1-2 hours a week was appropriate. Only two individuals thought students should be involved in preparation for seven or more hours per week (three respondents skipped this question).

The next question asked instructors about their expectations for learners' independent comprehension (i.e., understanding) of the assigned readings. Half of survey respondents (n=10) indicated they should comprehend the assigned texts independently "most of the time," while four selected "occasionally," and just two indicated "rarely." Only one respondent expected students to always understand the material on their own (three respondents skipped this question).

The next item on the survey requested that the respondents describe the extent to which text material was incorporated and then explained in class lectures at least 75% of the time, providing further insight on instructors' expectations of students' independent processing of text. Here, the largest group (n=8) indicated that they do this activity "most of the time," with five responding "always," and four noting "occasionally" (three respondents skipped this question). Similarly, the next question sought to determine whether the DR faculty respondents discussed the organization and structure of the assigned texts as part of class lectures. A majority of the respondents (n=10) indicated that they discuss text structure and organization throughout the course, whereas another seven of those responding indicated that they cover such content only at the beginning of a semester (three respondents skipped this question). In a related matter, the respondents were asked whether they referenced the assigned text with teaching strategies such as quoting from text, directing students to specific passages, and reading from the text. Seven individuals did such during most class sessions. Six individuals reported doing so every class meeting, and four instructors reported doing this on an occasional basis (three respondents skipped this question). Table 1 summarizes the results of the DR survey in the category of faculty expectations for students.

Table 1: Developmental Reading Faculty Expectations for Students' Reading

Instructors' Expectations	Frequency	No Response
When to read	Before **and** after class n=10 Before class n=7 After class n=0 No recommendation n=0	n=3
Number of pages	31 or > n=6 21-30 n=4 11-20 n=3 < 10 n=3	n=4
Time spent reading, outside of class	7 or >hrs/wk n=2 5-6 hrs/wk n=6 3-4 hrs/wk n=5 1-2 hrs/wk n=4 0 hrs/wk n=0	n=3
Independent comprehension	Always n=1 Most of time n=10 Occasionally n=4 Rarely n=2	n=3

Instructional foci. The direction of the survey next turned to instruction provided in the DR courses. Instructors were asked whether they explicitly addressed strategies for reading course texts. As might be expected, a majority (n=16) of those responding noted that they provided such instruction throughout the semester. A single instructor selected the option of "only at the beginning of the semester" (three respondents skipped this question). The next question focused on teaching strategies for learning new vocabulary. As with instruction on reading strategies, a vast majority of the instructors (n=14) taught students vocabulary throughout the term. Three teachers covered such instruction only at the start of the term (three respondent skipped this question).

With the growing interest in disciplinary literacy in the field of literacy studies, we were interested in whether the respondents taught their students to read like an expert in different content fields. The responses varied in that the largest number of respondents (n=9) reported that they covered such instruction throughout the semester. A lesser number (n=5) reported not

covering this topic at all. Two respondents reported covering the topic at limited points in the term (four respondents skipped this question).

We then asked the members of these DR faculties the degree to which instruction on reading and utilizing graphical information or visual aids (which might be found in texts across many fields, and most certainly in CTE texts) was delivered. A majority (n=12) reported teaching how to use graphical information throughout the semester. A smaller percentage (n=2) cover the topic when a test is approaching. A single individual reported covering reading textual graphics at the start of the term, and still another reported that the topic was not addressed (four respondents skipped this question).

Study strategies were next on the survey, with notetaking from course texts as the first topic of concern. For notetaking, 17 of the respondents noted that notetaking was an instructional focus throughout the entire course (three respondents skipped this question). Also related to study strategies was instruction on preparing for class tests. This topic is covered throughout the term by 14 of the respondents. A much smaller number (n=2) reported that they only cover the topic at the point when a test approaches (four respondents skipped this question). Table 2 summarizes the results of the DR survey in the category of DR faculty instructional foci.

Table 2: Developmental Reading Faculty Foci for Students' Reading Strategy Instruction

Instructors' Foci	Frequency	No Response
Textbook-reading strategy instruction	All semester n=16 Prior to testing n=0 Beginning of semester n=1 Not addressed n=0	n=3
Vocabulary strategy instruction	All semester n=14 Prior to testing n=0 Beginning semester n=3 Not addressed n=0	n=3
Expert-reader strategy instruction	All semester n=9 Prior to testing n=1 Beginning of semester n=1 Not addressed n=5	n=4
Graphic and visual information strategy instruction	All semester n=12 Prior to testing n=2 Beginning semester n=1 Not addressed n=1	n=4
Notetaking strategy instruction	All semester n=17 Prior to testing n=0 Beginning of semester n=0 Not addressed n=0	n=3

The next two questions were concerned with formative and summative assessment within the targeted DR courses. The course content that was evaluated via quizzes and tests was reportedly drawn from the class texts and class lectures in 13 of the cases. By contrast, the focus was on the content in the course text for four respondents (three respondents skipped this question). The respondents were then asked what course components were assessed and comprised the final course grade. These are listed in descending order from the most common element: written quizzes/tests (n=16), in-class activities (n=15), homework (n=15), participation (n=12), papers (n=10), attendance (n=9), and presentations (n=6) (three respondents skipped this question). Table 3 summarizes the results of the DR survey in the category of DR faculty approaches to student evaluation.

Table 3: Developmental Reading Faculty Practices for Students' Evaluation

Assessment	Source of the Content Assessed	No Response
Formative	Both text and lecture n=13 Course text n=4 Class lecture n=0	n=3
Final/Course Grade	Written quizzes/tests n=16 In-class activities n=15 Homework n=15 Participation n=12 Papers n=10 Attendance n=9 Presentations n=6	n=3

Perceived student challenges. The next two questions sought to obtain information on the faculty perceptions of students' challenges with course mastery. First, the instructors were prompted to consider the following: "On the basis of my interactions with students, I would say that the challenges they generally face are… (check all that apply)." We now present the responses in descending order: being aware of college text expectations (n=16), spending enough time studying outside the class (n=15), doing assignments regularly (n=14), seeing relationships among ideas (n=13), attending class sessions regularly (n=13), preparing for tests (n=12), taking effective notes during class (n=12), taking effective notes while reading (n=12), asking questions (n=12), having background knowledge on the subject (n=12), understanding/remembering vocabulary from the text (n=9), translating/understanding text language (n=8), and finally being an effective test taker (n=7) (three respondents skipped this question).

Along the same lines, the respondents were asked to identify "Of the above, which three are the most serious and most commonly interfere with students' success in your course?" The following list indicates the students' challenges that were thought by instructors to be of the greatest concerns: attending class sessions regularly (n=11), doing assignments regularly (n=10), being aware of college text expectations (n=10), and not spending enough time studying outside

of the class (n=7). All of the other options received fewer than four responses. Table 4

summarizes the results of the DR survey in the category of DR faculty perceptions of student

challenges.

Table 4: Developmental Reading Faculty Perceptions of Students' Challenges

Source of Challenge	Challenges	No Response
Student challenges	Awareness of text-expectations n=16 Study time n=15 Completing assignments n=14 Synthesis of ideas n=13 Attending class n=13 Text preparation n=12 Notetaking during class n=12 Notetaking while reading n=12 Asking questions n=12 Background knowledge n=12 Vocabulary n=9 Understanding text language n=8 Test-taking skills n=7	n= 3
Situational interference	Attending class n=11 Completing assignments n=10 Study time n=7	N/A

DR faculty focus groups. The focus group procedure called for the use of semi-

structured group interviews. To provide initial structure for each of the 45-60-minute focus group

sessions, the researchers developed general questions to guide the discussions; these questions

were specific to the constituency group, as indicated in Appendices D, E, and F.

DR faculty focus group results. Following coding and analysis of all DR faculty focus

group transcripts, five overarching key themes were identified and agreed upon by the research

team on issues related specifically to DR and student text-readiness:

1. DR faculty have specific expectations of what students can and should be able to do

    with text at the outset of their course and/or as they begin college.

2. DR faculty perceive students' attitudes toward reading as being generally negative.

3. DR faculty make adjustments in their courses based on their perceptions of students' text-readiness and attitudes.

4. DR faculty report that they do attempt to prepare students for the varied literacy demands across contexts, but also acknowledge that they have a limited knowledge about next-level course literacy practices.

5. DR faculty report that the DR courses are not valued on campus.

Each of these themes will be detailed below.

Theme 1: Expectations for students at the outset. DR faculty reported having specific expectations of what students can and should be able to do with text at the outset of their course and/or as they begin college; for the DR instructors, this ranged from specific grade-level reading expectations to specific comprehension practices.

For instance, one instructor made a specific distinction between students at two different levels of DR: "Our 0800 level of students [the lowest level DR course at this institution] are reading somewhere between the sixth and eighth grade level. The 0900 students are somewhere between [grades] nine-ten-eleven, then there's power readers are kind of ten-eleven-twelve." Similarly, another instructor specified that "I expect them to be at least at an eighth-grade level of reading and understanding." Another instructor noted, "I think it's pretty self-explanatory. We give an outline syllabus as to what's expected—each week the work that's expected."

Others had opinions about the literacy experiences students should have had prior to beginning the DR course:

I would expect that our students, even the 0800s, would have had experience with reading longer texts independently. But that is not always the case. And, I would expect that they would have some feeling for reading, an emotional connection. And I don't find—

with very few exceptions— I don't find that to be true. Although sometimes when we

ask students what have you read most recently, somebody will tell me the Jodi Picoult

novel that's eight hundred pages long, but they don't identify themselves as a reader

in terms of the academic atmosphere.

Other instructors focused more on the non-cognitive expectations they held: "If I was a student

that tested into that class itself I would be very afraid, because I would have probably been

hiding for a long time my reading issue, or I would have been in a really small class with very

few students where we did everything together… everything where maybe it was read out loud."

The stated expectations also included non-reading academic and social literacies as well.

For instance, one instructor reported that "We expect them to come in with some type of basic

computer knowledge."

Another instructor commented that students ought to have more of an awareness of their

placement into the DR course: "I expect them to understand why they have been placed in a DR

class, and I would expect them to be able to tell me why they thought they did get in there."

Similarly, one DR instructor commented about the lack of metacognition with respect to reading:

"We have many, many students who cannot think about their own thinking. They just have never

done that. And that student who comes up and says, 'I read this whole chapter, and I didn't

understand a word.'"

Other expectations included being able to get organized, understanding written

task/activity directions, taking notes while reading, identifying main ideas and supporting details,

specific vocabulary expectations, and reading speed. Although these anecdotal observations

range widely, a common assumption seems to be that students should be able to do the work of

the DR course.

Theme 2: Student attitudes toward reading. DR faculty perceive students' attitudes toward reading as being generally negative. Some of these came as summary statements of how faculty perceive their students' attitudes toward reading: "Hate it. Sucks!" and "Reading is pointless" and "I don't like to read." This also had influence on students' perceptions of the class itself: "I don't need this class. I can read fine" and "There is a barrier that they feel; they all had A's, and now they sit in those classes and have to repeat it." Other instructors indicated this was more of an issue of unwillingness to participate: "I would say some of them the attitude is if I can get by without doing that, I will."

Representative comments reflect a mismatch in understanding of what reading is or is not: "We come up against a lot of resistance from students just because reading to them means something completely different than what reading means to us." One instructor noted,

> It's difficult to differentiate poor attitude from perceived deficits: They know they are deficient, but if they can get help then they know they can get moving on. The 090 students that I have are struggling: They are struggling with vocabulary; they are struggling with finding main idea, so they are really having a difficult time. They are even struggling with the technology in the program.

DR faculty cited prior academic literacy instruction experiences as the cause for student attitudes:

> From my experience in the local high schools, I think the whole thought or their method is I am going to give my students a PowerPoint and cover the basic ideas of the chapter, and then we are going to test. So, there's really no thought pattern, so students have to watch the PowerPoint slide, study that PowerPoint slide, and that is the reading. I think that's what they consider reading.

On a similar note, several DR faculty respondents noted that these prior educational experiences have not held students to an appropriate standard: "They have that block in them because here they are, eighteen years of age, and they've been either walked through or pushed through […] in the back of my mind I want to help these kids as much as possible. But I also know that they are at their Waterloo." Or, students' prior educational experiences directly impacted their attitudes: "They will say things like, 'well I've always been a bad reader,' and 'my elementary teacher said I couldn't read.' And the one girl I spent all semester convincing her that just because your third grade teacher told you had a hard time with reading doesn't mean that you still do."

Theme 3: Instructional adjustments. DR faculty reported that they make adjustments in their courses based on their perceptions of students' text-readiness and attitudes. First, one instructor noted significant programmatic adjustments, for example: "We divide our classes into three sections because some of the people are not able to keep up with the pace, to finish the whole course."

Another instructor commented more specifically on the assumptions driving the faculty text-selection process: "They [students] can't possibly learn how to study; they can't pass a test; they can't understand, because everything is important to them or nothing is important. That is their learning difference." This instructor went on to note that texts were intentionally chosen with those assumptions in mind in attempts to support these perceived student deficits.

Also, as a result of their assumptions of what are perceived as deficiencies, these DR faculty described instructional approaches that much of the field deems as an outdated basic skills model. For instance, "And then I had them bring in a textbook for their career, and then I tied learning skills that day together with it, and they had to look at their textbook and figure out how they'd use their particular learning style to take notes or do something with it."

Similarly, "We have had the same reading textbook for years. Since I've been here, it's been Langan [a discrete-skills reading text]. Thirteen years."

Theme 4: Next-level and disciplinary literacy preparation. DR faculty reported that they do attempt to prepare students for the varied literacy demands across disciplinary and professional contexts: "It's like the outline versus using a map or a cluster [various methods of graphic organizers for information], and we'll talk about OK if you were taking this in you know history classes versus a math class versus an English class." Often, that context-focus is generic, however: "Every skill that they learn in that reading book is a skill that they can use in their career or every other class."

These faculty also acknowledged the limitations, given the lack of cross-campus communication, of their understanding of next-level expectations: "It's hard to say in history you're going to need this kind of, because I don't know what the history teachers are doing." Similarly, one instructor commented,

> I think I'd be interested to find out how do the Gen Ed teachers teach reading in their
>
> classes? So how does a math teacher make sure that the students know how to read their
>
> math textbook? And science, and I'm thinking of those areas in particular because I think
>
> many times people in humanities might do that a little more than people in the sciences.
>
> Again, I think it would be what are their expectations, and do they make those
>
> expectations clear in the beginning? Because, do they just assign a text and that's it? And
>
> you just move on and just assume you know it? That is what I would want to know.

Another instructor reported: "I would be the first to argue our curriculum is not preparing students for college-level courses. So I don't think what we're doing is working. I mean, I don't know that they're ready for college-level text even after they leave 091 [the highest-level DR

course at that institution]." To combat this, DR faculty reported asking students to bring in textbooks or printed chapters for use in their DR courses. However, they also noted that this was unmanageable.

       Theme 5. Valuing of DR courses. DR faculty reported that the DR courses are not valued on campus: "Even others on campus, including administrators, hold such views: there is a philosophy that, you know, the students have a right to fail." Or, similarly, "but I have to be honest with you, our President has said that at public meetings that you know to get them out of those dump courses."

       Other DR instructors focused more on the larger educational context and issues with stigma of DE:

> I think we call it the wrong name. When you say 'developmental reading,' it turns a lot of kids that don't need to be turned off. You know they think it sounds like a slow reading class, and I run across so many kids that absolutely cannot read well. But they don't want to take a developmental reading class.

According to faculty, even students perceive the classes as unimportant: "they're surprised that they're placed." However, several faculty noted that these attitudes sometimes change and morph into a recognition that this is new information: "Once you start talking about specific strategies that you need to use, to read the textbook, to read something […] 'Why wasn't I taught this?' 'Why am I 18 years old and now finally learning this?' That's what I kind of get, you know almost like a resentment." Similarly, "They leave high school, and they think, like, I have my diploma, so that automatically qualifies me to be a college student, so now you are telling me 'No.'" Also, "once they kind of get on board with what the class is about, and you know, for some it is review, and others, they are hearing it as they have never heard it before."

The concerns raised by DR instructors was not limited to a devaluing of the DR courses, but also a devaluing of the reading faculty themselves. For instance, one faculty member noted being excluded from important conversations on campus: "I think there are a lot of discussions they go on that should have a reading person at them that they don't ever." Some faculty also hinted at a possible tangential reason for the devaluing of the DR courses, and, more specifically, attempts to remove DR prerequisites on the GE courses: "there are content-area professors who say I am afraid if we really are strong with having a reading requirement, that my enrollment will be affected. I would rather have them come and struggle at least. And that sounds very self-serving on that person's part." Table 5 summarizes the five major themes drawn from the DR faculty focus groups.

Table 5: Developmental Reading Faculty Focus Group Themes

Theme	Definition from Text of Report
Theme 1: Expectations for students at the onset	DR faculty expectations of what students can and should be able to do with text at course beginning.
Theme 2: Student attitudes toward reading	DR faculty perceive students' attitudes toward reading as being generally negative.
Theme 3: Instructional adjustments	DR faculty make adjustments in courses based on perceptions of students' text-readiness and attitudes.
Theme 4: Next-level and disciplinary literacy preparation	DR faculty attempt to prepare students for the varied literacy demands across disciplinary and professional contexts.
Theme 5: Valuing of DR courses	DR faculty report that the DR courses are not valued on campus, even stigmatized.

Overall, these five themes provide much insight into DR faculty text-expectations, instructional approaches and foci, and knowledge of CTE instruction on their own campuses. What follows next is a discussion over all data in the first inquiry, on DR faculty.

Inquiry 1 discussion. Based on the data collected and analyzed surrounding the DR courses on these three campuses, a general description begins to emerge. First, based on DR

faculty reports, their classes tended to follow more traditional GE formats with discussion being more prominent than laboratory and problem-solving in class. Also, a majority of these instructors required using multiple texts across a variety of text types, but with a core text in each class being a single, traditional DR textbook. From the responses to reading assignments, it is clear that instructors expected students to read, most often before *and* after class. It makes sense that instructors would have students read before class; however, it also calls up the question of what or how content will be addressed in class if the students have already read the material. Further, it begs the question of why class is needed in the first place if it is simply a space to repeat what students were to read outside of class in advance, which may be the case given the amount of time devoted to making reference to the text. In terms of the content of the DR courses, the vast majority of the instruction throughout the semester focuses on reading strategies, text organization, text structure, vocabulary, study strategies, test-preparation strategies—all of which are to be expected for such courses.

DR faculty reported having specific expectations of what students can and should be able to do with text at the outset of their course and/or as they begin college. For the DR instructors, these expectations ranged from specific grade-level reading expectations to specific comprehension practices. The responses to queries about expectations for students' independent comprehension indicated that the DR faculty respondents expected such comprehension most of the time. The fact is that many instructors would want their students to be independent comprehenders, and faculty said as much about their expectations in both the surveys and the focus groups. This is a laudable expectation, but one that is puzzling given the nature of the DR course as a support for developing reading comprehension for postsecondary contexts. Indeed, many of the responses tended to focus on students being unready for college literacy practices,

which is interesting as there did seem to be an underlying assumption that students should be able to do the work of the course in which they are enrolled to learn this very skill set.

In addition, although DR faculty report that they do attempt to prepare students for the varied literacy demands across next-level contexts, when prompted, respondents tended to focus on traditional GE courses (math, history, science, etc.). This, of course, does not reflect specialized literacies such as those in CTE areas.

One interesting finding had to do with the prevalence of instruction on 'reading' graphics, especially given that visual information processing, as distinct from alphabetic text, is becoming more important with the burgeoning of web-based digital texts that are often multimodal in nature. What is not clear from our survey data is the type of graphical information the instructors claimed to have addressed, and whether there is any alignment to the types of complex visuals that are often encountered in the CTE area texts.

Interestingly, as noted in the responses to the final two survey queries, all the more common responses regarding students' most serious challenges dealt with attitudinal rather than cognitive issues. Indeed, all of the frequent challenges listed in response to that final question were motivational or habitual in nature. Further, DR faculty report making adjustments to their curriculum and instruction based on their perceptions of students' lack of preparedness and poor attitudes. That the adjustments reported tended toward simplifying or lessening course expectations is especially troubling in a situation like DR that has a function of helping students to transition to college-level literacy practices.

Affective issues also arose in conversations surrounding DR's 'place' on campus, as well. DR faculty reported that the DR courses are not valued on campus by other faculty, by students, and by administration. Part of the issue may be the very nature of the course—that is, the goal of

exiting students from the developmental niche. There is also the competitive nature of enrollment, however (if students are required in prerequisite DE courses, they are not enrolled in other content courses). However, the lines of communication do not appear to be unidirectional, and it became clear, too, that DR faculty have limited knowledge about next-level course literacy practices. Much of these findings are consistent with the existing general devaluing of developmental education mentioned at the onset.

Inquiry 2: Career and Technical Education Faculty Perspectives

The purpose of the second inquiry was to provide additional depth and breadth in answering the first and third research questions, from the perspectives of the CTE faculty: "What are the text-expectations, including text types, tasks, and goals?" and "What constitutes college-level text-readiness?" Data were collected from CTE faculty using two sources—an electronic survey and focus groups. Both of these data collection methods followed the protocol also established for the first and third inquiries. In this section, we describe the results of the faculty survey and the faculty focus groups for CTE faculty.

CTE faculty survey. A link to the survey on Survey Monkey was sent to each of the CTE instructors at the targeted institutions. A total of 102 CTE faculty members, both full and part-time, across the three sites, responded to the survey.

CTE faculty survey results. What follows are the key results from the survey, organized thematically into four broad categories, which ended up being similar to the categories identified in the DR faculty results: course and text contexts, instructional foci, perceived student challenges with text, and DR preparation prior to CTE courses. Because most of the questions allowed for multiple answers, the number of responses will not always add up to the total

number (n=102) of CTE faculty respondents. Also, respondents were not electronically forced into answering all questions, so we also report the number who skipped each question.

Course and text contexts. We first asked the CTE respondents to provide information on the number and types of texts used in their respective target CTE course. The majority of faculty respondents (n=48) indicated that the primary source of reading material required in their courses was a single textbook, whereas 37 assigned multiple texts. Only one respondent reported that no text was required (16 respondents skipped this question).

When respondents were next asked to delineate all the types of texts assigned most (n=77) noted they assigned traditional texts, but they also indicated that they relied on sources found on the Internet (n=49) as well study guides (n=35), computer-based texts (n=30), their own lecture notes (n=30), scholarly journals (n=24) and mass media (n=20) as required readings. Few faculty respondents (n=8) made use of trade books or assigned novels (n=3). Not surprisingly, PowerPoint slides were employed by 63 of those responding to the query (18 respondents skipped this question). Other responses that were written in included court decisions, case studies, and instructor-developed handouts.

In order to gather information on expectations related to students' reading, the next question asked respondents to specify when students were expected to do the required reading: responses were in advance of class sessions (n=47), after class sessions (n=5), or both before and after class sessions (n=28). Another six respondents reported that they do not make any recommendations to their students (16 skipped this question). Instructors reported that they deliver these recommendations primarily via the course syllabus (n=45), or in class in a handout (n=9), or verbally in class (n=33) (22 respondents skipped this question).

Next, we asked for information regarding how much reading faculty assigned to students per week. The faculty responses are listed here in ascending order of number of pages: less than ten pages per week (n=16), 11-20 pages (n=25), 21-30 pages (n=26), and a drop-off at 31 or more pages per week (n=19) (16 respondents skipped this question). Students learned of such expectations from the instructors in class sessions (n=38) or via the course syllabus (n=35) or a handout (n=11) (22 respondents skipped this question).

We then asked CTE faculty respondents to identify how much time they expected students to spend preparing for their target course outside of class time. This could involve reading, studying their text or notes, or doing other class preparation. The data obtained demonstrate that 34 of the faculty respondents expect between three and four hours per week of outside preparation, while 19 expected learners to dedicate at least five or more hours a week in course preparation. However, some instructors expected far less, as 29 indicated that they expected between one and two hours of out-of-class time per week, and one faculty member even reported expecting zero out-of-class time spent (19 respondents skipped this question). Faculty members made such expectations clear to learners primarily in class sessions (n=55) although 21 conveyed the expectations via a syllabus and another seven reported handling this in a class handout (24 respondents skipped this question).

The next question asked these instructors about their expectations for students' independent comprehension of assigned readings: "I expect students to be able to understand on their own the concepts from the assigned textbook." Of the respondents, 33 indicated they "occasionally" expect this of students, another 33 noted "most of the time," a smaller group (n=12) indicated "rarely," and a much smaller group (n=8) voiced that they always expected students to understand the textual information when encountered (16 respondents skipped this

question). This expectation was generally delivered verbally in class (n=58) and to a lesser extent in the syllabus (n=18) or via class handouts (n=10) (21 respondents skipped this question).

Table 6: Career Technical Education Faculty Expectations for Students' Reading

Instructors' Expectations	Frequency	No Response
When to read	Before **and** after class n=28 Before class n=47 After class n=5 No recommendation n=6	n=16
Number of pages	31 or > n=19 21-30 n=26 11-20 n=25 < 10 n=16	n=16
Time spent reading, outside of class	7 or > hrs/wk n=8 5-6 hrs/wk n=19 3-4 hrs/wk n=34 1-2 hrs/wk n=29 0 hrs/wk n=0	n=19
Independent comprehension	Always n=8 Most of time n=33 Occasionally n=33 Rarely n=12	n=16

Instructional foci. We asked faculty members about the extent to which text material was incorporated into class lectures: "I explain the vast majority (over 75%) of concepts from the text during my lectures." In this case 33 indicated that they "always" provide such explanations, with 32 indicating they do this "most of the time," 12 noting "occasionally," and only nine selecting the "rarely" option (16 respondents skipped this question). Along a similar track, the next question aimed to determine whether faculty discussed "the textbook's organization and structure" with students during their class sessions. A majority (n=46) indicated that they discuss the texts' structures throughout the term. Another 31 respondents indicated that they deliver such training at the beginning of the semester, and one reported only doing this around test time. Only six do not provide such instruction (18 respondents skipped this question).

The focus of the next seven items in the questionnaire asked the faculty members to delve into the degree to which literacy instruction was embedded within the delivery of content. When asked whether strategies for reading the course texts were explicitly addressed, the vast majority of the respondents reported that they provided strategy training to at least some degree, with 31 doing such throughout the entire semester, and 37 doing such at the start of the semester. Only 14 selected the response "not at all," and just two noted that such instruction only occurred in preparation for a test (18 respondents skipped this question). The next query continued along the same track but with a focus on vocabulary instruction tied to text. The responses differed from the previous item in that 51 of the instructors delivered such instruction throughout the term. The option for instruction being delivered at the beginning of the term was selected by only 10 of the faculty respondents. Interestingly, 21 of the respondents selected the "not at all" option, and just two reported providing such instruction only near test time (18 respondents skipped this question).

Given our assumptions about the importance of disciplinary literacies, the instructors were also asked whether they directly addressed with the students how experts in their respective fields would read text. The greatest response was to the "not at all" option (n=38), 30 reported that they focused on the practice throughout the semester, 15 covered the topic/practice at the beginning of the course, and just one reported doing such work only near test time (18 respondents skipped this question). The research team was equally interested in whether these CTE faculty directly referenced the class texts during class sessions by quoting from text, directing students to passages, or reading from text. Those instructors responding selected options in the following descending order: during most sessions (n=34), occasionally (n=21), during every session (n=18), and rarely (n=11) (18 respondents skipped this question).

This stream of questions next focused on the related area of reading and learning strategies with the first query dealing with whether instructors addressed the taking of notes on the information encountered in the assigned text(s). In response 48 of the CTE instructors who responded selected an item suggesting that they approached the topic throughout the semester. A lesser number (n=17) covered notetaking at the start of the semester. A slightly larger group (n=19) did not cover any strategy instruction, and no instructor covered this material just at test time (18 respondents skipped this question).

The next item in the questionnaire asked whether the respondents spent instructional time training students how to comprehend and utilize information presented through graphics or visual aids presented in assigned texts. Given the importance of such materials in CTE fields, it was not surprising that 69 of them attested to delivering such instruction throughout the duration of the semester. Ten respondents selected the "not at all" option, just one reported doing such only around test time, and four noted doing such only at the beginning of the semester. (18 respondents skipped this question). Table 7 summarizes the findings relevant to CTE faculty reported instructional foci.

Table 7: Career Technical Education Faculty Foci for Students' Reading Strategy Instruction

Instructors' Foci	Frequency	No Response
Textbook-reading strategy instruction	All semester n=31 Prior to testing n=37 Beginning semester n=2 Not addressed n=14	n=18
Vocabulary strategy instruction	All semester n=51 Prior to testing n=2 Beginning semester n=10 Not addressed n=21	n=18
Expert-reader strategy instruction	All semester n=30 Prior to testing n=1 Beginning semester n=15 Not addressed n=38	n=18
Graphic and visual information strategy instruction	All semester n=69 Prior to testing n=1 Beginning semester n=4 Not addressed n=10	n=18
Notetaking strategy instruction	All semester n=48 Prior to testing n=0 Beginning semester n=17 Not addressed n=19	n=18

A final aspect of studying pertains to test and quiz preparation. When asked whether they directly addressed how students should prepare for such course-based assessments, 56 of the CTE respondents claimed to provide such direction throughout the whole course. Twenty-one of these instructors addressed test preparation at the time a test approached; four noted doing such only at the beginning of the term; and three noted not doing such at all (18 respondents skipped this question).

So as to determine the content covered on course tests and quizzes, the instructors were requested to note the source of materials upon which test items were based. The CTE respondents selected items in the following order: both course text and class lectures/discussions (n=63), course text(s) (n=12), and class lectures/discussions (n=8) (19 respondents skipped this question).

Our interest in the role of reading and studying in the CTE class comes full circle with a query on what factors lead to the assignment of the final course grade in each respondent's chosen target course. The respondents had the opportunity to select as many as eight options. The responses are now listed in descending order: written quizzes or tests (n=78), homework (n=59), attendance (n=43), course participation (n=40), in-class activities (n=39), papers (n=30), presentations (n=30), and lab/shop, kitchen projects (n=28) (18 respondents skipped this question). Table 8 summarizes these results.

Table 8: Career Technical Education Faculty Practices for Students' Evaluation

Assessment	Source of the Content Assessed	No Response
Formative	Both text and lecture n=63 Course text n=12 Class lecture n=8	n=19
Final/Course Grade	Written quizzes/tests n=78 Homework n=59 Attendance n=43 Participation n=40 In-class activities n=39 Papers n=30 Presentations n=30 Lab/shop/kitchen projects n=28	n=18

Perceived student challenges. We asked CTE faculty about their perceptions of student challenges with course content mastery. First, respondents were prompted to consider the following: "On the basis of my interactions with students, I would say that the challenges they generally face related to reading and studying text are… (check all that apply)." The most common challenge for students as identified by 60 of those responding focused on students spending enough time studying outside of class, followed by feeling that students needed to be aware of college level expectations (n =50). The other challenges that were identified are presented here in descending order: doing assignments regularly (n=41), seeing relationships among ideas (n=40), asking questions (n=39), taking effective notes during class (n=38),

58

attending class sessions regularly (n=36), preparing for tests (n=35), understanding/remembering vocabulary or terms from text (n=31), taking effective notes while reading (n=29), being an effective test taker (n=28), and finally having background knowledge of the subject (n=26) (18 respondents skipped this question).

Next, faculty respondents were asked to identify "Of the above, which three are the most serious and most commonly interfere with students' success in your course?" The results essentially provide credence for the responses obtained for the previous question. The items selected for this query paralleled the order in which the items in the previous question were reported with a factor of plus or minus one place. Table 9 summarizes these results.

Table 9: Career Technical Education Faculty Perceptions of Students' Challenges

Source of Challenge	Challenges	No Response
Student challenges	Awareness of text-expectations n=50 Study time n=60 Completing assignments n=41 Synthesis of ideas n=40 Attending class n=36 Test preparation n=35 Notetaking during class n=38 Notetaking while reading n=29 Asking questions n=39 Background knowledge n=26 Vocabulary n=31 Understanding text language n=8 Test-taking skills n=28	n=18
Situational interference	Study time n=49 Awareness of text-expectations n=30 Completing assignments n=26	N/A

DR preparation for CTE. We were also interested in the perceived positioning of DR instruction in the three institutions, from the perspectives of the CTE instructors. This prompted us to ask the CTE faculty members about their familiarity with DR courses/programs. There were three options from which respondents could choose. Forty-seven individuals were aware of

the courses. Twenty-one respondents knew of the course and curriculum. Only 15 individuals responded that they were totally unfamiliar with the respective DR program on their campus (19 respondents skipped this question).

We concluded the survey with an open-ended question: "What would you like the faculty who teach DR to know about text expectations in the course identified on this survey as you teach it?" Forty-seven CTE faculty members responded to this question (53 respondents skipped this optional open-ended question). Responses were either given as a statement about the role of text and learning in the target course or as a recommendation for topics or goals for DR courses. In either case, whether a statement was an implicit recommendation (as with the former) or an explicit recommendation (the latter), there were implications for curriculum and instruction for those course sections serving CTE students. Open and axial coding procedures (Glaser & Strauss, 1967) as well as intercoder agreement among the research team members (Saldaña, 2013) were implemented for this analysis.

In order to be ready to enter into the training sequence for a career, respondents felt that students needed to possess a certain foundation of reading/learning competencies. Several respondents focused upon these competencies and often tied them to specific attitudes of practice. First, we provide a few examples that were offered in the manner of problems, which represented the largest number of responses:

- "Poor reading skills and poor record of reading anything in preparation for class is a serious impediment to their progress. This is a rule rather than the expectation."
- "Today's students don't read as much for enjoyment; they have had limited success in the past and bring those fears with them here. Reading for comprehension is a problem for a significant number of students."

A few positive statements were provided:

- "I do not believe most students have a problem with reading."

- "My students won't be involved in DR. They are the top students in our high school."

Even so, it was clear, based on the responses, that the single most common perception for student inhibitions is their perceived lack of literacy competence.

Ever so closely related to the competencies and attitudes that students bring with them to the CTE classes are those recommendations the faculty directed either explicitly or implicitly to the DR faculty. First, we look at responses focused on mastering technical terms, which are also related to those later presented under the technical reading and the complexity of text themes. Examples include the following:

- "Words can have meaning specific to class content. Linking one idea to another can greatly impact an ability to understand a subject."

- "Students need to key in on vocabulary not just by definition but in application as well."

The instructors commented more broadly on reading competencies that should be mastered in DR courses, prior to arriving in a CTE course; the following exemplify this theme:

- "It is important for students to be able to extract information from the text material to be ready to discuss in class."

- "I expect my students to be able to use the textbook as a reference tool…I prefer my students use their text to reinforce concepts discussed in class."

In short, CTE faculty noted that students should be able to use the text independently at the introductory CTE level, in order to gain content, including key vocabulary. The respondents also expressed the need for students enrolled in DR to exit such programming with the competency to successfully read and learn from technical text. In this case, as we see from the following

examples, it appears that respondents were focusing on a type of text unlike what is prevalent in GE courses, and hence, those assigned in DR programs. Examples of responses include the following:

- "Reading level needs to be where students can read and understand technical publications. This is a very technical course."

- "Students need to be aware of strategies for learning and understanding technical terms and concepts."

- "I'm sure the reading expectations vary widely among vocational programs. Paralegal is reading intensive…We can't teach basics. Our time is short with our students. We need to move them into reading legal texts from the beginning."

A number of CTE faculty respondents wanted the DR faculty to be aware of the reading load in CTE classes and the complexity of the assigned readings. Comments on reading load focused on the number of pages assigned per week: "Required weekly reading assignments are generally 20-30 pages with new terms and definitions pertinent to understanding the material within the text." Statements based on readability estimates captured assumptions that the CTE texts should be readable for students:

- "If I am correct, the reading level of the textbook is at a 5th-6th grade reading level."

- "Texts are written at a 9th-10th grade reading level."

In other cases the complexity was described more generally, but with an emphasis on the difficulty of the texts, rather than the perceived ease:

- "My texts are bachelor's and master's level."

- "They know the high level of nursing textbooks."

Instructors also made comments about the teaching of study/learning strategies within DR courses, making explicit recommendations for DR faculty:

- "Students would benefit from knowing how to take notes as they read and how to reflect on what they have read, then study those notes to form questions and participate in class discussions about the assigned reading."

- "Stress taking notes from reading and class lecture to tie the two learning concepts together."

- "They [students] need to know how textbooks are organized and how to annotate the text."

CTE faculty focus groups. The focus group procedure called for the use of semi-structured group interviews. To provide initial structure for each of the 45-60-minute focus group sessions, the researchers developed general questions to guide the discussions; these questions were specific to the constituency group, as indicated in Appendices D, E, and F.

CTE faculty focus group results. Based on the results of our analysis of the faculty focus group transcripts, five overarching themes emerged, which overlapped considerably with the five overarching themes identified in the DR faculty focus group analysis. Each of these themes is explained below.

1. CTE faculty presented specific expectations of what students can and should be able to do with text at the outset of their course and/or as they begin college.

2. CTE faculty perceive students' attitudes toward reading as being generally negative. They did note, however, some differences in attitude and readiness for college across different populations of students.

3. CTE faculty make adjustments in their courses based on their perceptions of students' text-readiness and attitudes.

4. CTE faculty seem to have a sense of literacy differences across contexts.

5. Faculty across CTE areas have limited knowledge about the DR coursework.

Theme 1: Expectations for students at the outset. First, CTE faculty presented, when prompted, specific expectations of what students can and should be able to do with text at the outset of their course and/or as they begin college. Generally, this involved the ability to read something independently out of class and understand it, as exemplified in the following comments:

- "My assumption […] is that the students have at least a baseline ability to read and comprehend this [text]."

- "My answer to this actually has been […] trying to force them to go in—and this is what I think is important—the chapter to look at and to summarize in your own words, you know, what it is saying, which I think has been successful. I'm happy with that, and then we are able in face-to-face sessions to go beyond that."

- "The assumption that you make […] that they can read and comprehend the material, sometimes it's a big assumption, I think, and I'm not sure what the answer is for that."

Often responses were less about *text*-literacy knowledge and more about general *being-a-student*-literacy knowledge (i.e., THAT one is supposed to read, or THAT one is supposed to listen and take notes). These comments took the form of aptitudes that students should have in order to complete college course tasks. Many of these comments reflected the internal states or dispositions of the students. For instance, one faculty member commented,

The first thing that I would say is an understanding that work has to be done outside of class and that material should be read when assigned, before class. It's assigned before class in order to get them to engage in any activities that are based off the reading. And there is an expectation, I think, that if someone is college ready for reading they understand that already. You shouldn't have to tell them that.

Some of these calls were for fairly sophisticated self-regulation and metacognitive awareness for students' comprehension:

That's another thing, if you have an opportunity to use the book, then use it. And I think that part of my expectation is not only will they read it, but they'll look at any questions that are at the end, like review questions and see if they know those review questions. And then there's critical thinking questions on their own that they would use those resources that are available. A lot of the text, and ours included for this class, we have PowerPoint for the texts online, and we have a link to the author's site that has a speaking PowerPoint. So I expect that they don't know, or if they're having difficulty reading and understanding, that they would…(and I introduce them to those resources) that they would use those resources. And I expect if they don't understand something they would ask questions.

In addition to such concerns about what students should know or be able to do with text at the introductory CTE level, faculty also provided insights on students' affective strengths and weaknesses, but centered these more on student characteristics and demographics. And while CTE faculty recognized that texts had varying degrees of difficulty, they were not clear about what to do with this variance when it impacted their instructional success.

Theme 2: Student attitudes and variation across characteristics and demographics. The CTE faculty in this study reported that they perceived students' attitudes toward reading as generally negative. They did note, however, some differences in attitude across different populations of students. For instance, one fairly common understanding—initially as a distinction between daytime and evening students—was that faculty noticed differences in attitude between students of "traditional age" and "non-traditional age" for college, as the following comments exemplify:

- "I think it is all over the board you know, and especially in community college we have students at all ages, all levels coming with different interest levels."

- "You know we have everything from a student coming right from high school that has less life experience and education experience than, say, someone that is a career-changer. I mean, I have had students that have had master's degrees and grad classes. Their concept about text material and reading, it's very different from the 18-year-old students coming in. And this is always a challenge. I think community college is a very diverse kind of population."

- "So on the days I'm getting a younger crowd during the day, and my stuff at night was all re-education (people looking to change what they do). And those older people— students—want to be there; they're looking for a job."

- "What I find, you know, I try to be as open-minded as I can, but it always plays out that the students that are the most engaged and the most joyous to have in classes are adult students, because they truly want to be here. And I have some of those adult students that have contacted me prior to my classes started saying 'can you tell me the course material?' Tell me what we're going to do because we don't always follow the book

verbatim or maybe we do this chapter versus this chapter. I want to read ahead. I want to

be a prepared."

Similarly, the CTE faculty noted differences between students whose first language is English

and those who are English Language Learners (ELLs—note that CTE faculty regularly used a

different term, ESL), as the following exemplar comments illustrate:

- "Now some are ESL. But in all fairness, most, I would say most ESL students do better

  than the average foreign-race-in-the-U.S. person [sic] who speaks English from day one."

- "They'd go to the tutoring and ESL tutoring and go; I mean they'd work really hard, and

  most of them would pass. Now, I can't say, you know, statistically, because I don't have

  the percentages in front of me, but a large majority of them would pass because they

  worked really hard."

- "But in order to address issues of their ESL and to encourage them and point them to the

  right resources in the right place and the reading lab. I did have one student who had a lot

  of difficulty."

- "They are struggling obviously with vocabulary; there is a lot of work and things like

  that, but they will ask a lot of questions. Now you talk about, in terms of a student, I think

  they're very studious-type students. So they're going to at least put effort into the work.

  They're going to try."

Some CTE faculty made even finer-grained distinctions between the affective issues related to

international students and U.S. ELL students:

- "But the international students tend to be really focused. But ESL students born and

  raised here have quite a bit of difficulty, and they're not as eager to ask for help and that

  was the reason for that learning community base with ESL."

- "Last semester I had a student who was a foreign exchange student, and so then she was in my class, but she was even categorized as a different number, and I could do different things. I didn't have to, you know, count like every single thing for her you know. It was that kind of a balancing act, and it was a unique situation but with a foreign exchange student and English obviously is her second language. She was very good at it, and she was taking it more for enrichment."

- "In terms of groups, I would say that the international students generally are very hard working and really are trying to make the most of this opportunity. They are grateful to be here, like I said, generally speaking and are wanting to do it. They're wanting to excel. So I see that attitude really often in the international students. I see a lot of English students—and business students too—but mostly English for international students."

Theme 3: Instructional adjustments. As a result of their perceptions of students' text-readiness and attitudes, faculty reported making adjustments to the literacy requirements within their courses. One specific change made frequently was to the type of text used in the course, especially the inclusion of PowerPoints and lecture notes:

- "A lot of the text, and ours included for this class, we have PowerPoint for the texts online, and we have a link to the author's site that has a speaking PowerPoint."

- "We've created PowerPoint slides for the students. So you know if they have their technology they can look over the slides. Sometimes if you see the slide form, it's easier to understand, so they have to be encouraged to read that."

It should be noted, too, that many of these PowerPoints were highly and strategically referenced, to the inclusion of cross-referencing directly to the required course text. In addition to reporting

these and similar instructional adjustments, the CTE faculty in this study discussed literacy differences across contexts.

One reason that emerged for these faculty adapting their instruction to incorporate workarounds is the importance of content knowledge for the purposes of *application.* Indeed, one culinary arts faculty member explicitly commented on the differences in purposes for using text in GE areas versus in CTE areas: "I think it probably would be… and it can be done a little bit differently […] for someone heading to our Gen Ed degree and transferring to get something in the liberal arts education. Because it is different…we are looking to actually…everything I do is to apply, apply, apply in real life."

Indeed, across the CTE areas, this emphasis on the primacy of application as the goal was echoed:

- "You've got to be able to apply it, not just recite it."

- "So really more of a hands-on approach about like what will actually be done and how that would get done in taking stuff from text material and then talking about how this will apply. That kind of thing—in real life, how do you use this information to be successful?"

And so whether students get the necessary information and content from the text—or somewhere else (lecture, PowerPoints, lecture notes, study guides) is less important than getting the information so it can be applied:

I'm telling them [students] day one we're going to have to have a binder next class I'm going to put you in an organizational pattern because I don't think they've had to do this. And again...what I do... I definitely have well-defined PowerPoints ... to go with that. And ... I'll go with both methods for the people that are better visually looking at the PowerPoints they can print out my PowerPoints ahead of time […] So... I kind of give

those two options. And it definitely coincides with key concepts of the textbook. […] So I want them to be able to add material from a reading with that. And then making sure they're understanding how to apply it more and more.

Theme 4: CTE faculty conceptions of literacies. The CTE faculty seemed to have some understanding of literacy differences across contexts. As it was a clear focus of the study, faculty were asked about the extent to which they provided instruction on field-specific literacy practices (whether they teach students to read like a professional in their own field). Interestingly, CTE faculty perceptions of workplace literacy and the differences between academic and workplace literacy ranged widely. There were also comments that indicated a more general or universal understanding of workplace literacy needs:

- "My big thing is, you know, that the knowledge base with communication in written and verbal skills and, of course, further learning which includes reading of texts."

- "Because if you if you can't read at a certain level how are you going to work in that field?"

And, in general, the CTE faculty acknowledged how important reading is in the workplace and as a professional in the field:

- "Reading is so important because if you know how to read you can teach yourself anything. And I said you can learn. I said you think about people. I said you know right now if you think having a piece of paper with a degree stamped on it is going to get you to keep you a job; it may get you a job because you're not going to keep it or move up if you can't read."

Also, CTE faculty—speaking as professionals in a particular field—provided insights on how texts are used or what literacy practices look like, both in the CTE classroom and in the workplace:

- "When we get into the culinary courses it's [the text] reference for what we do. The way that the culinary courses are set up is the students are assigned the reading material. We discuss it in the course. Usually we have handouts and lectures, and then the instructors do demonstrations based on the material in the course and then the students produce. So, if they didn't start on the front end and doing the reading then that whole process does not work."

- "When I was hiring people as an employer of a manufacturing facility, you have specific requirements for your employees because of—I don't know if you have heard of TS qualifications, QS qualifications, and ISO—ISO, TS, and QS are the big three—it's automotive. I came from an automotive environment, major manufacturer for them. So they have to be able to read, write, and comprehend (employees) at the seventh or eighth-grade level because when the auditor comes around and says, 'What do you do for a job?' They're trained to go over to the document and say 'Here's what I do,' and that guy's going to say 'Explain this to me.' (The lady or the man). And they will say, 'This is what I do.' And they'll be able to read this thing to say, 'This is how I do it, and this is what I do'. So that was the very first thing."

- "So now getting back into the school issue. Being that they're from a technical field like we are, they have to be able to read blue prints, understand blue prints, understand what they are, and how to read them. There is reading involved, and a lot of math involved. It's more the comprehension kind of thing. So my expectations of my students would be that

they will be able to read, write, and comprehend English. Because when they get in the manufacturing field, those three things are going to be staring them in the face—ISO, TS, or QS—when they go in. And that's going to be one of the requirements in a lot of cases in manufacturing—because from us we refer them to manufacturing jobs. So that's what they are expected to be or to know when they leave us. That's what I would be expecting of them."

- "If you're in a machining environment, you should be able to take that text into anything and utilize it. For whatever. There's a lot of tables and reference material—speeds and feeds, and things like that. Not only do I have handouts but that's also in the text. So that they can refer to the text for whatever."

- "When you get to [courses] 103 and 104 that is when you are depending on that textbook. 108 and 109, I introduce other types of machines—we're getting into different kinds of work-only devices. Then, 109, I introduce them into grinding and that is when they will be looking at their text. And when it gets into something new, then they will be referring to their text. With 108, you hand them a print and say go to work."

The complexity of certain discipline/area-specific texts is noted, specifically with references to visual and image-based texts. An interesting idea that emerged from this grouping is the use of text as a reference, and especially the continued use, over several courses in the culinary arts:

- "So, they go to CL 102, which is Food Production 1, and then there is Food Production 2, 3, and 4, and all those classes use the exact same textbook."

There were also similar comments from a metallurgy course instructor:

- "The textbook that we have applies to almost every course that we do except for metallurgy [study of metals] or metrology [study of the science of measuring tools]. As a

student I would expect that that textbook is my reference material to what I am going to

be doing for the next two, three, or four years, depending on whether they are full-time

students or part-time students or whatever. And this is my reference manual. It's what

I'm going to be going through, and I can refer to this for whatever I need."

Despite this clear recognition of the importance of texts—and of reading—it was also evident

that CTE faculty didn't always agree on the types of texts that should be required. This seemed,

at least in part, to stem from the institutional mandates for textbooks in these courses. For

instance, in response to student complaints about textbook requirements in a criminal justice

course, one instructor responded, "So I always tell them [students], I just say, until I get a

directive from the president of the college saying I don't have to use the book, this is what we're

doing."

Several instructors talked about textbook-adoption decisions, and acknowledged that the

particular text chosen is decided at the program/department level:

We get to pick, as teachers…there's a couple of different representatives for textbooks

that come around and they say "this is the textbook." And we all know what we've got

and that was picked years ago [...] And if they come up with something new, they'll say,

"this is the newer textbook; what do you think?" And we'll give them our opinion of it

and sometimes it's a good thing and sometimes it's not. And if it's not, we just say,

"we're not interested." If it's something we're interested in, we tell [our department

chair], and the whole department has to be in on it. It can't just be one teacher saying,

"Yeah I like that book." You know, we have five different teachers that we're dealing

with, so we all have to review it and say thumbs up or thumbs down.

We also got to hear from those who were not involved in the decision-making at the program/department level:

> And the thing that always upsets me is that the new edition is a minor change from the previous edition; so why are we changing? And then there's times where you find the textbook that's good, and then it changes to a new edition, and it's just not as good any more. You go to a different textbook, and then sometimes, like the one class that I'm teaching, they [others in the program/department] chose another textbook, that I liken to kind of a coffee table book. It's actually for my police service class. It's very thin, got a lot of pictures, very colorful, very easy to read, but you can't drill down on anything. And it's like something you'd…It's like a magazine.

Further, what became clear is that many CTE instructors had mixed opinions of the requirement for textbook usage. This translated into their reported practice, as well, as they acknowledged being highly selective about what text content was included and what was omitted:

- "As far as the textbook, I kind of explain this to everyone at the beginning of the semester as well. I say that there are certain things in the texts that I'll pick out, say out of chapter 1, so start right at the beginning of chapter 1, that I'm going to be going over the parts I choose are important, what I want to get across as far as the objectives of the class. Other stuff that I blow past, that I don't even touch on it."

- "I figure we require it as a program to get the book, so we're going to use it. Because at the end of the semester I hear about it in my evaluations how they [students] have to pay for a $200 book, and they never even opened it up. So, I make sure with the questions they have to get into the book and read it in order to answer the questions."

Changing focus, the final theme had more to do with the DR instruction than on CTE literacy

practices.

Theme 5: Awareness of DR coursework. Faculty across CTE areas reported having

limited knowledge about the DR coursework, and one instructor perceived student enrollment in

it as protected or confidential information: "I know that there are reading classes and things like

that. What my students do is none of my business." Further, the CTE faculty commented about

the "silo-ism" at work, and the divides between CTE and other areas in the college. This

sentiment came up multiple times, as in the following example: "You have been to building O.

We're totally not academic. Almost everything over there is technical. Very technical. OK, so

what happens on this end—in the buildings where we are now—really…other than the

engineering part…doesn't really affect us one way or the other."

Table 10: Career Technical Faculty Focus Group Themes

Theme	Definition from text of report
Theme 1: Expectations for students at the onset	CTE faculty had assumptions about what students can and should be able to do with text at course beginning.
Theme 2: Student attitudes and variation across demographics	CTE faculty perceived students' attitudes toward reading as being generally negative, but notes differences across populations.
Theme 3: Instructional adjustments	CTE faculty made adjustments in courses based on perceptions of students' text-readiness and attitudes.
Theme 4: Faculty conceptions of literacies	CTE faculty perceptions of workplace literacy and the differences between academic and workplace literacy ranged widely.
Theme 5: Awareness of DR coursework	Faculty across CTE areas had limited knowledge about the DR coursework.

Table 10 summarizes these findings. Overall, these five themes provide much insight into CTE

faculty text-expectations, literacy practices, and knowledge of the same and of DR instruction on

their own campuses. What follows next is a discussion over all data in the second inquiry, on

CTE faculty.

Inquiry 2 discussion. CTE faculty reported that they usually made use of a single traditional (for CTE) textbook that tended to be used primarily as a reference for content knowledge and for application purposes (in labs, in shops, etc.). Several CTE faculty commented that they included such a textbook because it was mandated by the college. In addition to, and in some cases instead of, using that textbook, alternative sources were utilized. Indeed, because of the perceived complexity and specialized language in these texts, CTE faculty assumptions of students' lack of literacy competence, and the devaluing of institution-required textbook adoptions, almost all of the instructors reported developing their own alternative sources, or workarounds, including computer-based texts, mega notebooks, and PowerPoint slides. Indeed, as one automotive instructor commented, the required textbook he was mandated to include contained material that was "nice to know." The workbook and PowerPoints that he himself developed for students contained all the material that was "need to know," making the text itself superfluous. Similarly, at one of the study sites, the introductory-level Nursing course had more than $500 of required textbooks on the syllabus; however, the primary course text (daily use) was an extensive instructor-compiled notebook. Deciding where to obtain the information valued within the particular course contexts thus becomes one of the valuable learning paths in the course.

Indeed, CTE faculty expected students to be able to read something independently out of class and understand it, which, in many ways contradicts the reported heavy reliance on workarounds. However, given the primacy of content knowledge for application, CTE faculty clearly valued students getting the content knowledge more than actually reading the text. Perhaps for that reason, in addition to offering workarounds, the majority of the instructors

reported covering the assigned reading material in class. If the same material is presented in class, from the students' perspectives, the question is whether there is a functional reason for completing the readings. Further, CTE faculty perceived that students lack literacy competence and hold negative views of reading, and, frankly, don't do the assigned reading. If, in fact, students in CTE courses don't read, is that because they really do lack the competence needed to navigate such texts, or is it because there is no need to read as faculty 'cover' the material anyway?

It should be noted that the CTE faculty are acknowledging the need for reading, and, in fact, do value it, even if not in the form of a college-mandated textbook. As evidence, three-fourths of CTE faculty reported providing some reading instruction in their courses. Specifically, we found it reassuring that a large majority of the CTE instructors directly taught visual comprehension strategies, as the content fields rely heavily on illustration and other graphic information. What was surprising, however, is that a majority did not directly address with the students any specialized ways of comprehending and composing texts as experts in a field might do.

Most of the CTE instructors reported that they expected students to read assignments before class. We want to propose another way of looking at this pattern. It is assured that the students have challenges meeting the reading expectations. Indeed, the CTE instructors consistently related this difficulty. It is also the case that most instructors "covered" the assigned reading in the classroom presentations and lectures. We wonder about reversing the order of these events. If the instructor presented new information, the content of the lecture, as a preview for the reading, we suspect that the students' reading (after the lecture) would make more sense to them, would connect text information with lecture information (just as it should in the reverse

order). It is also possible that during the introductory lecture or presentation, the instructor could easily teach students strategic reading approaches (marginal gloss, notes, etc.) as well as mention the specific disciplinary or professional reading techniques that assist in comprehending the text. The other realization is that when students read before class, and then hear the same information in a lecture, they may deduce that they don't need to read if the information will be provided in lecture. In contrast, during a preview lecture, an instructor can direct the reading so that it accomplishes specific comprehension targets in the subsequent reading.

The most common challenge for students as identified by CTE faculty focused on students spending enough time studying outside of class. A second challenge reported by the CTE faculty was also dispositional in nature: students needed to be aware of college-level expectations. However, the next three are at least somewhat strategic, and amenable to instruction: seeing relationships, asking questions, and taking notes. It was clear that the single most common perception for student inhibitions is their perceived lack of literacy competence. In order to be ready to enter into the training sequence for a career, respondents felt that students needed to possess a certain foundation of reading/learning competencies. Several respondents focused on these competencies and often tied them to specific attitudes of practice. Interestingly, the CTE faculty had much to say about differences in attitude and perceived readiness for college work across different populations of students.

Finally, it was encouraging that three-fourths of respondents knew about the DR courses on their campuses, even though most did not know specifics about the DR coursework. Nonetheless, much insight was provided, as the CTE respondents expressed their expectation that students enrolled in DR exit such programming with the competency to successfully read and learn from highly technical text. And, toward this end, a number of faculty respondents

wanted the DR faculty to be aware of the reading load in classes and the complexity of the assigned readings.

Inquiry 3: Career and Technical Education Student Perspectives

The purpose of the third inquiry was to provide additional depth and breadth in answering the first and third research questions, from the perspectives of the CTE students: "What are the text-expectations, including text types, tasks, and goals?" and "What constitutes college-level text-readiness?" Data were collected from students using two sources—an electronic survey and focus groups. Both of these data collection methods followed the protocol also established for the first and second inquiries. In this section, we describe the results of the student survey and the student focus groups.

Student survey. All of the students enrolled in the CTE programs from two of the three study sites were sent an e-mail requesting that they respond to an instrument distributed via Survey Monkey (as the third site was going through major institutional changes at the time, we were unable to collect student data). A total of 154 students responded to the survey. Of the 154 respondents, 76 were full-time students and 77 were part-time students (one respondent skipped this question). Of the total number of respondents, 40 participants reported being within their first 12 hours of coursework, whereas from the other end of the credit-earned continuum, 29 students had already earned more than 60 college credits (an additional 85 respondents reported credit hours earned at various points between 13 and 60 hours). In addition, nearly two-thirds of the participants (n=100) reported having completed all their earned credits at another institution, preceding their current school of enrollment. Still, 27 of the student respondents had earned 61 or more hours at other institutions (an additional 27 students reported credit hours earned elsewhere in the range of 13 and 60 hours). Interestingly, when prompted to identify that other institution,

the largest number were local universities, rather than other area community colleges, as might be expected. However, nearly as many (n=25) who chose to write in an institution named out-of-state or online institutions as named in-state institutions (n=31).

In terms of student goals, more than half of the respondents (n=80) planned to earn an associate's degree and then transfer to a four-year institution; 36 planned to earn only an associate's degree; 14 were aiming to earn a certificate only; seven planned to take classes, not earn an associate's degree, and transfer to a four-year institution; and only three of the respondents were enrolled in coursework but not working toward a degree objective or certificate (14 respondents skipped this question).

Student survey results. What follow are the key results from the survey, which are organized thematically into three broad categories: student understandings of faculty text expectations; student perceptions of text-based instruction; and, for a much smaller sub-group of student-respondents, perceptions of their DR preparation. Because most of the questions allowed for multiple answers, number of responses will not always add up to the total number (n=154) of student respondents. Also, respondents were not electronically forced into answering all questions, so we also report the number who skipped for each question.

Student understandings of faculty text expectations and practices. We first asked respondents to provide information on the number and types of texts used in their respective target course. Of the respondents, 68 indicated that instructors assigned multiple texts while 53 noted that the instructor assigned but a single text for the course (only one respondent suggested there was no required reading in the target course; 32 respondents skipped this question). When the students were asked to expand upon the types of texts encountered in the target course, 108 respondents encountered traditional textbooks, 42 read journal articles, 30 read newspaper or

magazine articles, 12 read trade books, 10 reported reading novels, another 10 reported reading collections of essays, and 13 respondents read instruction manuals. Respondents indicated that instructor-designed sources were also used. Among the largest groupings were the following: instructor text/lecture notes (n=82), PowerPoint slides (n=90), and instructor study guides (n=53). Technology and digital resources were also encountered as 56 reported reading web-based sources, and 38 noted that they encountered software or web-based instructional programs (34 respondents skipped this question).

In order to gather information on expectations related to students' reading, the next question asked respondents when the instructor expected them to do the required reading. Responses follow: in advance of class sessions (n=73), after class sessions (n=8), both before and after class sessions (n=32), or there was no recommendation from the instructor (n=9) (32 respondents skipped this question). Students noted that their instructors' expectations for reading assignments were primarily given in the course syllabus (n=77) while the next most frequent instructor approach pertained to verbal assignment in class (n=33); seven respondents indicated getting this information through a handout or other written mode beyond the syllabus (37 respondents skipped this question).

Next, we asked for information regarding how much reading faculty expected of students. The responses ranged widely, but a vast majority of students (n=105) responded that they were expected to read 10 or more pages per week, with only 17 respondents indicating a reading load of less than 10 pages per week. It was observed that 40 specified a reading load in the target course of 40 or more pages per week (32 respondents skipped this question). Again, we found that the syllabus is where reading load is delineated (n=76) followed by verbal instructions in class (n=30) or handouts (n=11) (37 respondents skipped this question).

One interesting point is that 32 of the respondents reported that they actually read 100% of the assigned reading each week, with 31 reading between 75% and 100% of the assigned reading, and a combined total of 59 reported reading anything less than 75% of the assigned readings (indeed, a very small minority—only three—reported reading none of the assigned reading) (32 respondents skipped this question).

On a related note, we asked respondents to identify how much time they were expected to spend preparing for their target course outside of class time. The largest response categories were as follows: 32 reported that they assumed their instructor expected them to prepare 3-4 hours each week while 27 noted the expectation was 5-6 hours of study per week, five thought the expectations was more like 7-8 hours of study, and another 38 reported that they believed their instructor expected them to prepare more than eight hours each week. There were 17 students who perceived this expectation to be only 1-2 hours of study, and an additional three students who claimed that the expectations for out-of-class study was zero (32 respondents skipped this question). These expectations were reported to be primarily presented in the syllabus (n=57) or in class sessions (n=50) or in handouts (n=5). It should be noted that a few students also opted to write in that the instructor utilized all of the methods (42 respondents skipped this question).

A final query within this category sought to determine the learner's understanding of the expectations held by each respective instructor for independent mastery of concepts and ideas presented in course texts. Of the respondents, 33 felt that their instructors believed it was always the learners' responsibility to comprehend and master text selections independently, while 52 responded that it was there most of the time, and 29 felt it was occasionally a requirement. Only eight held the belief that the instructor did not believe that students needed to independently master the content within the texts (32 respondents skipped this question).

Student perceptions of text-based instruction. We asked respondents to specify the amount of time their respective instructor spends in class explaining the information found in the assigned text. Of the respondents, 52 reported that their instructor explains the vast majority (over 75%) of the textual information in the text during class. Another 44 of student respondents reported that their instructors explain the text information most of the time, followed by 17 reporting the instructor provides an explanation of text material on occasion, and only seven of the learners reported that the instructor rarely covered the key concepts, ideas, and materials from text during class sessions (34 respondents skipped this question). In taking this line of inquiry a step further, the learners were asked whether the instructor for the course directly referenced the required text(s) in class by quoting from it, directing students to particular passages, or reading specific passages to the class. Overall such activity on the part of the instructors seemed to be a regular occurrence as 42 of the respondents noted that this practice was done during every class session, and 37 reported the instructors undertook such actions during most class sessions. Only 15 selected the option *rarely,* and 24 responded to the *occasionally* option (36 respondents skipped this question).

The next group of questions prompted student respondents to reflect on the type of text-based instruction occurring in their target course, as well as the timing of this instruction. For instance, among the most interesting response categories, 82 reported that their instructor explained the textbook's organization and structure throughout the entire semester, whereas 10 reported this did not happen at all. Another 18 noted that this instruction happened only at the beginning of the semester, and another eight students reported text structure instruction only before a test (36 respondents skipped this question).

When asked whether and at what point instructors discuss strategies for reading the course text, 70 reported that such instruction went on throughout the duration of the semester, whereas 21 noted that such instruction occurred only at the beginning of a semester, or only at test time (n=7), and then 20 said such training did not occur at all (36 respondents skipped this question). When asked whether and at what point instructors discussed strategies for learning new vocabulary found in the course text, 70 reported that such instruction went on throughout the entire semester, nine reported this only occurring at test time, eight reported it only at the semester's beginning, and 31 said it did not happen at all (36 respondents skipped this question). Finally, when asked whether and at what point instructors taught students how to read like an expert in the field, 60 reported such instruction was offered throughout the semester, eight responded that such was offered only at test time, seven reported this only occurred at the beginning of the semester, and 41 chose the *not at all* option (38 respondents skipped this question).

Moving beyond traditional reading expectations and instruction, the survey included several questions that focused on study strategies. The students in the sample were asked the degree to which the instructor from the target course addressed note taking on the content presented in the assigned texts. Of the respondents, 78 reported that the instructors addressed this skill across the entire semester while other respondents reported that the training was provided at the beginning of the semester (n=15), when an examination was approaching (n=8), or not at all (n=16) (37 respondents skipped this question).

The next item focused on whether the instructor provided training on how to read and deploy information as presented in graphics and visual aids found in texts. The students' responses were somewhat similar to those found with the previous item as 86 of the learners

shared that such instruction was provided throughout the duration of the course. Only 11 noted that instruction was provided as the beginning of the semester, while nine pointed out that it happened with the coming of a test, leaving 12 stating that such instruction did not happen in the class at all (36 respondents skipped this question). The final study strategy-oriented item addressed whether instructors provided guidance in test preparation. Once again, the majority of the respondents (n=74) replied that such instruction was provided through the semester. A sizable number of the students (n=24) conveyed that instructors provided such guidance at the time of a test, and far fewer (n=9) noted this instruction only occurred at the beginning of the semester, or not at all (n=11) (36 respondents skipped this question).

Related to the instruction delivered that was associated with text mastery and studying were challenges students faced with regards to reading and studying in the target course. Students were asked to respond to a list of 13 potential difficulties by selecting the three top challenges each student faced in reading and studying the course content. These responses are provided in descending order of the students' selections: preparing for tests (n=54), spending enough time studying (n=48), being an effective test taker (n=35), understanding/remembering vocabulary or terms (n=29), taking effective notes in reading (n=29), seeing relationships among ideas (n=28), having background knowledge (n=27), translating/understanding text language (n=23), taking effective notes in class (n=23), doing assignments regularly (n=20), asking questions (n=15), regularly attending class (n=10), and finally, being aware of college level expectations (n=6) (43 respondents skipped this question).

So as to come full circle from the initial queries asked of the students, two questions focused on content associated with tests and final grades in the course. When asked what of the course content was the focus of quizzes and tests, 92 of the respondents noted that tests focused

on the class readings along with the content of course lectures/discussions, whereas 29 noted the focus was exclusively on class discussions, and only 23 noted the focus was exclusively on the text (36 respondents skipped this question). The student-respondents were asked next to select from eight options each for those assignments and tasks associated with the course's final grade. The responses are now given in descending order: quizzes and tests (n=98), homework (n=64), attendance (n=53), participation (n=45), in-class activities (n=35), assigned papers (n=35), laboratory or shop projects (n=27), and presentations (n=25) (43 respondents skipped this question).

To gain a degree of depth on the topic, we asked student-respondents an open-ended question: "If you could make any recommendations to the instructor of this course about how to help you read and study more effectively in this course, what would they be?" As might be imagined, there was much variation in the content and scope of the recommendations provided, but the greatest number focused on instructional presentation of content in class sessions, as the following exemplars illustrate:

- "PowerPoint slides provided from the textbook manufacturer aren't good as actual outlines of notes provided by the teacher."

- "Make the tests more based on the lecture and not on the readings, because we have to try to teach ourselves the material when we read on our own. Although in your lectures, you explain the material, and that really helps me better."

- "I would like my instructor to use different colors when she writes important concepts on the board."

- "Allow us to receive lectures through e-mail when we miss a class."

Students also provided recommendations that pertained to reading and studying the text. Several examples follow:

- "Help us identify the most important concepts in the reading to study best for."

- "Have fill-in-the-blanks type of worksheets that coordinate with the textbook. That way the student is reading the text as well as thinking about the material and doing the homework."

- "Lose the book. Let's just talk about the 'need to know material' in class…Teachers rarely use the textbook let alone refer to it."

- "I would suggest that the instructor should reference certain pages within the textbook in order for us to remember how to solve a certain problem."

Other recommendations tended toward specific course/teacher evaluations, technology use in course delivery, and instructor mentoring in support of student success; although these were interesting, they were beyond the scope of this study.

DR preparation. Of the 116 respondents who answered the question related to their experiences with DR, only 47 students responded that they were currently or previously enrolled in a DR course. Of those 46, 25 students indicated that the preparation received in that DR course was "excellent," 16 reported that the DR course prepared them "moderately," and five noted that the DR course prepared them "minimally" (another three responded "I don't know").

We asked this sub-group of respondents "If you could make any recommendations to the staff who teach DR classes about how to improve the DR courses, what would they be?" These responses ranged from the very positive ("Nothing, I liked how everything was clear and consistent throughout the course") to several critical commentaries on the level of rigor. One exemplar critique is as follows: "I did not belong in that class; it was way too easy for me, and I

was not challenged at all." Other respondents provided specific instructional suggestions such as "Take time and talk to the kids and see how they are doing" or "[We should have] read more instead of doing vocab and Reading Lab" or "Better focus on personal weaknesses."

Student focus group. The focus group procedure called for the use of semi-structured group interviews. To provide initial structure for each of the 45-60-minute focus group sessions, the researchers developed general questions to guide the discussions; these questions were specific to the constituency group, as indicated in Appendices D, E, and F.

Student focus group results. After a final review of all transcriptions, with the goal of collapsing initial themes, six of the 12 themes initially identified in the student transcripts were found to be related to reading and learning, and thus warranted further discussion. Each of these themes is explained below:

1. Assessment practices in college are more challenging than in high school.

2. College requires more individual responsibility than in high school.

3. Students were aware of disciplinary and contextual differences.

4. Students perceived reading expectations in college to be much higher than in high school.

5. Students conceptualized reading as a set of skills.

6. Students viewed texts as being both an information source and an unnecessary expense.

Each of the six themes will be briefly contextualized, based on a synthesis of the students' responses, followed by representative examples from the transcripts of students' comments.

Theme 1: Assessment practices in college are more challenging than in high school. According to students, assessment in their college courses is ongoing, even weekly. It is often

based on a unit of text that has just been covered in class, such as a chapter. This possible weekly testing was contrasted by the students with high school assessment, which they saw as more cumulative, or based on longer units of study, such as a themed unit: "They (high school) set off a solid month to at least a couple weeks to study and go over everything again. Here it's, all right, we just finished chapter sixteen and two weeks or a week and a half have everything's coming at you."

Another difference from high school assessment noted by the students was the lack of class-based preparation for the exams. In high school, class time is devoted to reviewing and/or studying for an exam:

> At my high school when you had a quiz or a test or something like that, you did like a full overview over the whole chapter regardless if it was in the test or not. Here a lot of the time they'll tell you, ok study this specific part or this specific part, and so you know what to focus on rather than having to go over the entire thing.

Whereas, readying for a college exam was seen by the students to be their sole responsibility: "you have to really, really adjust the way you study […] no one's really going to prepare you for it."

It should be noted that whereas we specifically asked students to discuss their experiences with literacy in CTE realms, the students who were enrolled in DR tended to respond specifically with DR in mind. In particular, in their comparisons to high school this was evident. For instance, students noted that reliance on text-based information for their DR exams might allow/cause them to wait until just before the exam to do the required reading from the text. So that rather than re-reading as a study technique for the exam, the students were first encountering the information in preparation for the exam. Overall, though, the major concern

expressed by the students was the sudden shift from scaffolded, high school class-based preparation for exams, to college where exam readiness and preparation are expectations for students alone. Most of the students called for supportive accommodation in test preparation across all their college courses, not just CTE and DR.

Theme 2: College requires more individual responsibility than in high school. The second theme students reported was how they attended, prepared for, and participated in class, including their realization that the college academic context itself causes them to assume individual responsibility:

> College. I mean it's to me it is kind of like a business …they have a set number time and there it's you do your own thing […] you don't have a teacher who will actually find you and make you bring up your grade if you're not doing too much. So you really have to take initiative and take a book home, read it if you're not understanding it, take initiative to come in during their office hours, get the help you need. And if you don't do that, I mean, you're going to struggle.

So, two contributing factors, life complexity and being an independent agent in courses, caused these students to face what one called a "struggle." As with assessment, students contrast the situation in college (independence) with that of high school (seen as "hand holding"). This sense of responsibility may cause the students to take coursework more seriously. But, of course, students noted that some don't take college seriously. Some offered what seemed like axioms for college success: listen, go to class, read the book, be an adult. These assets are accorded special status and were seen to create an individual. The following are example comments:

- "When it's your responsibility, you take it a lot more seriously."

- "You need to listen. And you have to be an adult. Like you can't be close-minded. You have to be open-minded to what they say. Because I have a cousin who will sit there and watch me annotate and be like "that's stupid.""

- "You have to overcome everybody. Because if you don't, you're going to probably do the same stuff as what you did in high school in college … try your hardest. Just because they call you a nerd, just do it. It's for your own benefit."

- "Take it serious. Be strong...I remember my experience as a freshman. I thought I was all cool. The right people. But, no, at the end you're going to be by yourself, and your family is just going to be your only support. …So just be strong. And just have in mind that high school is going to pass in the blink of any eye. And you just have to stay focused."

The major theme about attitude expressed by the students in the focus group settings was the sense of individuals being responsible for their own work in college. Again, this was contrasted with hand-holding in high school. It appeared as a big shift for these students.

Theme 3: Students were aware of disciplinary and contextual differences. Comments from the students revealed a common comparison between science and English courses, where sciences required more study time and required specific types of language use as part of the course (e.g., Business Communication). Consistently, students were aware that "it depends upon the class." It also depended on the instructor, where in some cases, the students felt pressure to "know every single thing," which caused them to see college academic work as a very different (and more difficult) endeavor than high school: "I cannot compare the study in high school and in college. Because here is more pointed."

Indeed, even the nature of contrasting labs (for instance, differences between mechanical and scientific labs) was discussed:

With the lab classes, there's a thin manual that goes through the different welding processes […] you're working out of that manual for […] half the semester […] you'd read a little bit about what you're going to process for the next day; the teacher will discuss and put on the board the pertinent information you need to know (settings on machines and what kind of electrodes to use) and what you're doing (a t-joint or a lab joint). And so, it was it different than biology, which was all classroom. Well, biology has a lab too, but it was more classroom.

Another aspect of the contrasted content was the whether it was self-instruction or instructor-mediated content. Self-instruction in a welding lab was conceptualized by one student as "get(ing) something in your head about the procedure of doing something." Independent work entered this formulation with "then you do it, and you do it again, and you practice until you're more proficient at it." Content was also reserved for later use in specific texts for later reference in professional contexts. Likewise, content was also related to similar work experiences. The lack of choice in reading assignments (not good) was contrasted by the students with courses that offered students choices in required reading (good).

Theme 4: Students perceived reading expectations in college to be much higher than in high school. A fourth theme found in students' comments had to do with their awareness of the requirements regarding reading assignments. Students' perceptions of reading in college were that it was "harder" and "different" from reading assigned in high school: "I think you do double than what you did in high school. Because it's the amount of hours you have to put into school, (as) a full time student." Certainly, college was seen as requiring more reading: "We were

expected to read and understand between three and four articles each week. To me that seemed like a lot more than I expected."

Another difference noted was that in high school, there was talk about reading. In college, by contrast, students noted, one just reads. Specifically, humanities courses required larger than expected amounts of reading, whereas in marketing, "there isn't hardly any reading." Students acknowledged that reading material before class was the general expectation, and that class work merely clarifies what should have been learned through their independent reading: "It's actually expected that you have the chapter read before you can come to class and that everything is just touching base making sure you understand concepts, not necessarily learning from them. You're just clarifying what you should already be learning yourself."

According to these student-respondents, some classes required reading every chapter in the required text, whereas other courses seemed not to require any reading. Also variable was the students' use of the information they acquired from reading. Practical, real-life examples in texts were more memorable than isolated facts, which tended to disappear. Others saw reading as a challenge between students and the instructors, a "gotcha" to be executed at test time. Expectations for a casual learning atmosphere were met with demanding instructors with "too many assignments." Some students stopped taking the required text to class because it was never opened by the instructor.

The major finding from students' perceptions of instructors' reading expectations is the commonly held understanding that reading in college is harder, more time consuming, and certainly different from reading experienced in high school. Further, the variation regarding text dependency for information in classes was surprising. Students' intended use for the information

acquired while reading was most often related to upcoming tests. Again, this was not an unusual or surprising finding.

Theme 5: Students conceptualized reading as a set of skills. When students talked in the focus groups about their college reading, it was frequently conceptualized as a set of skills. Students mentioned main ideas and supporting details and found their connection helpful to understanding what was being read. Reading was also seen as picking up a greater number of words at a time, as well as component number of syllables, that were realized through clapping them with the reader's hands. Skimming through large amounts of assigned reading was seen as a productive skill, with repetition helping memory for the information. Both comprehension and reading speed were desirable skills, even in the same sentence: "brush up their comprehension and speed, because you don't need you take that course all over again, but you need to brush up on it."

The main finding from our analysis here was that students understood the act of reading as the execution of skills that would help them get to meaning—within the field of literacy, this is considered a bottom-up, or skills-based perspective on reading. Students' simultaneous consideration of comprehension and speed in the same sentence is an interesting paradox, as the focus on pace may prevent students' reading for understanding.

Theme 6: Students viewed texts as being both an information source and an unnecessary expense. In this category of commentary, students referenced the object, the text or textbook, or other required reading source for the course, as well as other ancillary readings for the course. Texts could be articles provided by the instructor, with the expectation that the students read them. These types of texts were seen by students as less formal, and more enjoyable:

"The readings I'm doing (from articles) … I am enjoy(ing). Textbooks, I don't find those enjoyable to read, so it's kind of different."

Student-respondents commented that textbooks were expensive, a burden to purchase, and a burden to carry around (to class): "Just paid like forty-eight bucks and (I) keep carrying on with it. That is all you do."

Being able to reference information from required texts is part of course instruction, and an expected competence for the students. This was seen by one student as possibly anachronistic, when in a library field trip, students were required to complete a citation for encyclopedia, references that were seen by the student as out of date. Required books were perceived as easy reading, and courses that teach students how to productively use text features for individual learning were viewed by students as helpful. Some required texts were hands-on, even recipe-like. Books, required for classes, are sometimes not used in the class, however, and that was a source of contention. Students reported the use of adjunct study guides. These were seen as "textbook lite," with less information. Because information was missing, students were "forced" to find it in the required text: "There was a study guide, but it was different; it wasn't in-depth, and there was much more reading. You had to get more from the text in her class."

Because class presentations by instructors often skip around, students used the organization of the text to help structure or sort out a potentially confusing lecture: "Bookwise, we don't know where we are. But we have to study from the book." We found an interesting relationship between students, their assigned texts, and the imagined intentions of their instructors. Texts operated in this mix somewhat independently, as ultimate information source, as structure for the whole course, as a treasure trove of information students must mine and master. Aside from their unassailable authority for information, the use value of some required

texts is questionable, when students reported not even opening them. Even as hyperbole,

students' perceptions that some texts were not meaningful is important.

Table 11 summarizes these results. Overall, these six themes provide much insight into

student text-expectations, literacy practices, and knowledge of the same.

Table 11: Student Focus Group Themes

Theme	Definition from text of report
Theme 1: Assessment practices in college are more challenging than high school.	Assessment is ongoing, weekly. It is often based on a unit of text that has just been covered in class, such as a chapter.
Theme 2: College requires more individual responsibility than in high school.	College academic context itself causes students to assume individual responsibility.
Theme 3: Students were aware of disciplinary and contextual differences.	Students' awareness of the possible differences between the processes and content in different academic and/or CTE subject areas.
Theme 4: Students perceived reading expectations in college to be much higher than in high school.	Students' perceptions of reading in college were that it was "harder" and "different" from reading assigned in high school
Theme 5: Students conceptualized reading as a set of skills.	Reading was frequently conceptualized as a set of skills.
Theme 6: Students viewed texts as being both an information source and an unnecessary expense.	Student-respondents commented that textbooks were expensive, a burden to purchase, and a burden to carry around, yet they also noted that they served as an information source, as structure for the whole course, as a treasure trove of information students must mine and master.

What follows next is a discussion over all data in the third inquiry, on CTE students.

Inquiry 3 discussion. For the most part, students reported information about reading in

CTE and DR that paralleled what the faculty reported, though student reports tended to be a bit

more inflated. For instance, a majority (n=68) of students noted using multiple texts in their

courses, but a slightly smaller group (n=53) reported using only a single text; of these texts, most of them were traditional textbooks, but students also noted the heavy use of PowerPoints, lecture notes, and instructor study guides as texts. Students reported that strategy instruction across the board, from vocabulary to note-taking to visual literacy to test-preparation, occurred only sometimes in their courses. Students also noted that the course syllabus was a primary source of information on the expectations of the course, though some instructors also used other modes including handouts and verbal explanations to convey some information.

Students' perceptions of reading expectations in college were that reading was "harder" and "different" from reading assigned in high school. Student-respondents commented fairly frequently on differences between high school and college literacy and learning, including differences that impacted their approach to texts. For instance, students noted the lack of class-based preparation for the exams, which caused them to wait until just before the exam to do the required reading from the text. Rather than re-reading as a study technique for the exam, then, the students were first encountering the information in preparation for the exam. Similarly, the major theme expressed by the students in the focus group settings was the awareness of being responsible for their own work in college. Again, this was contrasted with what respondents saw as "hand-holding" in high school. It appeared as a big shift for these students. It is not too far a stretch to compare this tension to K-3 "learning to read" and grades 4+ "reading to learn," followed by CTE contexts being "reading to do." Also, such comparisons were not just limited to the educational level; student-respondents also compared course contexts, discussing differences in literacy practices and expectations between courses. In particular, English and science courses were compared, with science requiring more study and more reading.

One very interesting finding from our analysis is that the students seemed to understand the act of reading as the execution of skills that will help them get to a meaning; this is what many in the reading field might consider a bottom-up perspective. This same perspective also seemed to translate to a desire for linearity in the course content. Because class presentations by instructors often skip around, students use the organization of the text to help structure or sort out a potentially confusing lecture; further, they seemed frustrated when such a structure could not be imposed by the text.

However, many contradictions were embedded in the responses when viewed from a literacy lens. For instance, the combination of dual goals of comprehension and speed in the same sentence is an interesting paradox, as the focus on pace may prevent students' reading for understanding. Similarly, the desire for instructors to provide the important points or specific text areas as opposed to having to know "absolutely everything" for the whole semester was repeatedly mentioned by the students. Yet, students largely reported doing most, if not all, of the reading.

Inquiry 4: Texts

In the fourth and final inquiry, we looked at the use of texts across course and campus contexts. This entailed both a textbook analysis as well as classroom observations focused on determining the actual use of texts within a classroom context.

Text analysis. A total of 49 required course texts were analyzed across 24 separate courses (seven of which were DR courses, while the remaining 17 were CTE courses). In this section, results of each type of text analysis previously described will be reported, starting with the genre analysis, followed by the Lexile score readability results.

Text type analysis and results. In order to get a sense of the types of texts used in various courses, each text was identified as being a traditional textbook (T), a manual (M), a content-field handbook or reference guide (CH), a compilation of shorter text excerpts (C), a novel (N), or one of three workbook types: a technical workbook (TW), a reading workbook (RW), or a vocabulary workbook (VW). No other distinct categories were identified for text type (content and other disciplinary differences aside). Each text and text type is listed in Appendix H along with the associated course.

The vast majority of required texts were traditional textbooks (n=22), with other selections in descending order as follows: novels (n=6), vocabulary workbooks (n=5), compilations (n=4), reading workbooks (n=5), manuals, (n=3), technical workbooks (n=2), and content-field handbooks (n=2). To put this in perspective, a look at the course types is first necessary. Of the seven DR courses, all used reading and vocabulary workbooks, compilations, and novels, with only one requiring anything resembling a traditional textbook. Further, all novels in the DR grouping were traditional, narrative novels, which were distinctly different from the more traditional textbooks represented in the introductory-level CTE course texts. By contrast, of the 17 CTE courses, none used novels or compilations, and only two used technical workbooks, which, even though they were classified as workbooks, held very little resemblance to the reading and vocabulary workbooks used in DR.

Beyond the required, traditional, written texts in the CTE courses, we identified a number of other artifacts that, for all intents and purposes, were being used in ways strikingly similar to traditional, written texts: a camshaft in auto, a drip bag and mannequin in nursing, and the help feature of a software program in industrial technology courses. These 'texts' were the tools for application in the CTE courses, were 'read' in ways similar to traditional, written texts. This was

exclusive to the CTE courses, however, as no such analogue was identified in the DR courses. In short, the text types being utilized in the DR courses are strikingly different in form from those being required in the introductory-level CTE courses, and, the purposes for using texts are equally striking in their differences.

Lexile text measure results. Appendices I and J provide the range and mean Lexile text measure scores for each text analyzed, grouped by course (Appendix I is DR, and Appendix J is CTE). Because of the nature of workbooks as having sparse stilted or halting language, a Lexile text measure analysis is inappropriate for those text types. Although most of the workbooks did contain short excerpts (ranging from 75 to 1000 words) of text from varied content areas, the texts were by and large comprised of practice exercises such as fill-in-the-blanks and matching activities. As previously described, for each text, five sample pages were analyzed to produce a Lexile text measure for each sample, yielding a range of text measure scores. Once this was completed, mean Lexile text measure scores were calculated across those five samples.

For the 24 total DR texts, because so many were reading or vocabulary workbooks, and instructor compilations, only 15 texts were appropriate for analysis through the Lexile Professional Analyzer. The Lexile text measure results for DR course text samples (see Appendix I) ranged considerably from a low of 420L (a novel) to a high of 1380L (in the same novel). In ascending order of Lexile text measure means (again, means were calculated across five sample pages within each text), the DR texts scored as followed: 714L, 750L, 814L, 814L, 814L, 814L, 926L, 930L, 968L, 986L, 1160L, 1160L. What is important to note is that none of these mean scores are at or above a 12th grade estimate, even though such a readability would likely be the expected level by the end of the final semester in DR, as these courses and course sequences are the final stop before college-level coursework at these institutions. These scores

suggest that the DR texts currently in use at these three sites for DR have Lexile text measure scores that tend to be closer to the upper ranges of middle school and the lower ranges of high school.

For the 25 total CTE texts, only the two technical workbooks were deemed inappropriate for analysis with Lexile text measure scoring, leaving 23 texts for analysis. The mean Lexile text measure results for CTE course text samples (see Appendix J) ranged from a low of 966L to a high of 1374L.

Given that all CTE courses included in this investigation were introductory college level, readability estimates of at least more than a twelfth grade are to be expected. The majority of the Lexile text measure score means were at 1100L or above, loosely indicating an eleventh grade approximation.

In addition to this text analysis, our investigation of the curricular context also included classroom observations intended to provide further insight as to whether, how, and to what extent texts were used in classroom settings. This aspect of the investigation is described, and results reported, in the following sections.

DR classroom observations of text usage. While observing the DR courses, the researchers completed an observation protocol (see observation protocol in Appendix G) and recorded fieldnotes, which aimed to include the researchers' interpretations of the text-based commentary or activity, but not necessarily exact quotations (for this reason, in excerpts and exemplar that follow, quotation marks are not used). Across all three sites, a total of eight DR classroom observations were completed.

A first observation point regarded the course text was "The Instructor's copy of the course text(s) is in within view." For 6/8 observations, the text was in view. A second point on

the classroom observation protocol asked if the text was directly referenced. In 7/8 DR observations the text was referenced. In general, the context or impetus for the text referencing had to do with a particular assignment, as the following notes illustrate:

- As necessary for the vocab assignment

- Let's look at chapter 15 all of us

- For homework

A third point on the observation protocol asked whether the texts were held up or displayed for the students. Seven of eight DR instructors displayed texts. Item four on the class observation protocol inquired whether or not a reading assignment was made. Six of eight DR instructors made reading assignments during this class observation.

Item five asked observers to look for text organization and structure as pointed out by the instructor. Four of eight DR instructors referred to text structure. More specifically, item six on the observation protocol asked for observers to record instances of explanations of text structure. Three DR instructors of eight were observed doing so. In at least two of the DR courses, the text structure was described because the text was a custom instructor-designed text with non-linear page numbers (or no page numbers in one case).

Item seven asked for observations of strategy for reading/studying the course text(s) was mentioned, explained, or modeled. For the DR instructors, 4/8 did so, with the following notes offering exemplars:

- Context clues—talks about how to approach putting a word into context

- For implied main idea, you have to go back and find support so as to make an inference

- Signal words help in finding major and minor details

Three of eight DR instructors were observed conducting class lectures that were text-based or text-driven, as directed in Item 8 of the observation protocol. Item 9 directed observers to class discussions and whether they were text-based or text-driven. Six of eight of the DR instructors were observed giving lectures that appeared to be text-based. Item 10 on the observation protocol directed the observers' attention to class homework and whether it appeared to be text-based or text-driven. For seven of the eight DR instructors the class homework was text-related.

Item 11 asked about the use of more than one text for the observed course. Six of eight DR instructors used more than a single text. Item 12 inquired about the use of multi-modal texts, including online texts. Of the eight DR instructors who were observed, two used multi-modal texts, or spoke about doing so. These multi-modal texts were publisher-developed online reading-support programs, rather than other types of digital texts, as the notes below demonstrate:

- Computer program, Reading Plus

- Online readings through Townsend Press website and uses Reading Plus

The next four items on the protocol looked for student behavior regarding class reading and texts. Item 13 asked if the course text was directly referenced by students, which was only the case in two of the DR classes observed. Item 14 asked if the text was displayed by the students; this was not observed in any of the DR class sessions. Item 15 on the observation protocol focused on whether students asked questions about text content; this was observed in one of the class sessions, during a small-group activity. Finally, item 16 asked if students responded to instructor questions about content with text content; this was observed in five of the class sessions.

CTE classroom observations of text usage. While observing CTE courses, the researchers completed an observation protocol (see observation protocol in Appendix G) and recorded fieldnotes, which aimed to include the researchers' interpretations of the text-based commentary or activity, but not necessarily exact quotations (again, in excerpts and exemplar that follow, quotation marks are not used). Across all three sites, a total of 30 CTE classroom observations of text usage were completed, and an additional eight observations were completed in DR classrooms.

CTE observation results. In the observation protocol, a first observation point regarded the course text and specifically asked observers using the observation protocol "Is the Instructor's copy of the course text(s) is in within view." For 19/30 observations of CTE class sessions, the text was in view. A second point on the classroom observation protocol asked if the text was directly referenced. In 28/30 CTE observations the text was referenced, though the method of referencing varied, as revealed in the following excerpts:

- need to read the text

- reading the text will get you through this

- text is a reference

- read each chapter in advance of class

- good book for an overview

A third point on the observation protocol asked whether the texts were held up or displayed for the students. Although 11 of 30 CTE instructors displayed texts, their methods varied as revealed in the following excerpts:

- goes over text and components, flipping through it

- introduced book and held it up to show that students' book looks different and why (custom text, costs less)

- to be used at every class session

- held up text when introducing it on syllabus

Item four on the class observation protocol inquired about whether or not a reading assignment was made. Fourteen of 30, or almost half, of the CTE instructors made reading assignments during this class observation. Item five asked observers to look for text organization and structure as pointed out by the instructor. Five of 30 CTE instructors referred to text structure with the following comments as representative:

- pointed out structure

- key terms and abbreviations, boxes embedded in text

- vocabulary text, explains how structure check works

- announced structure as a custom text with different chapters

More specifically, item six on the observation protocol asked for observers to record instances of explanations of text structure. Only one CTE instructor of 30 was observed doing so.

Item seven asked for observations of strategy instruction for reading/studying the course text(s) being mentioned, explained, or modeled. For the CTE instructors, 11/30 did so, as is revealed in the observers' comments:

- References headings/subheads, stops and looks at self-evaluations, covers the case study in each chapter, covers the applied information

- Objectives are set up as action-oriented

Nineteen of 30 CTE instructors were observed conducting class lectures that were text-based or text-driven, as directed in Item 8 of the observation protocol and revealed in the following comments recorded by the observers:

- topics-based course with lectures and discussion to follow topics

- yes, all three chapters included in the lecture; advises to expect a test tied to the study guide

- syllabus to be used in every session (outline) used in class, the content applies to various topics, used in food preparation

- PowerPoint lecture from publisher, section A of book, read it, quiz to follow, take notes

- entire lecture on textbook reading provided

Item 9 directed observers to class discussions and whether they were text-based or text-driven. Twelve of 30 of the CTE instructors were observed giving lectures that appeared to be text-based, as the following observer comments reveal:

- would appear to be the case vocabulary work on content dyads p. 8, covers first chapter, various points, p. 9

- appears to be based on the syllabus and text

Item 10 on the observation protocol directed the observers' attention to class homework and whether it appeared to be text-based or text-driven. For 12 of the 30 CTE instructors the class homework was text-related, as the following comments reveal:

- appears that students journal about topics in the text chapters (or a supplementary text)

- does not give much in the way of homework, students do the study guides

- homework in class, will read, discussion, followed by demos, and then students make the demonstrated item

- workbook assignments go with reading chapters, tests are based on workbook assignments

- assign pp 15-24 choose two questions and answer submit questions and answers

Item 11 asked about the use of more than one text for the observed course. Eleven of 30 CTE instructors used more than a single text, as supported in the following observational comments:

- 3 texts, practice chapters, simulation model

- single textbook - instructor says he will provide PowerPoints and other handouts – single class text used across four courses

- text, workbook, DVDs, PowerPoints, and handouts

- excerpts from multiple texts in the custom book, and other excerpts and articles to be required reading

Item 12 inquired about the use of multi-modal texts, including online texts. Of the 30 CTE instructors who were observed, 22 used multi-modal texts, or spoke about doing so.

- video clips shown in class, multiple references made to that text in discussion/lecture

- noon business report, look at online, Forbes, Twitter, what is happening

- discussion of D2L, limited use, but will post articles for student use

- read blueprints (more complicated and precise across semester), learn the various tools

- there is a PowerPoint covering content from the text authors, video used to support content of text, also one for height, weight, temperature, pulse - reading plus, see syllabus, computers are in room

The next four items on the protocol looked for student behavior regarding class reading and texts. Item 13 asked if the course text was directly referenced by students. The following are notes recorded that illustrate this observation:

- in small group activity, students were directly pointing to/pointing out text information creating their group posters

- students asked about when text would be used

- after class student asked about how text would be used

Item 14 asks if the text was displayed by the students. The following comments record this behavior:

- student held up text and asked if that was the correct text

- most students have book open as well as binder with notes/handouts, they look at pages as related to lecture

Item 15 on the observation protocol focused on whether students asked questions about text content. Several did so, as revealed by the following comment:

- should clip on the review be the topic before the first test?

Finally, item 16 asked if students responded to instructor questions about content with text content. This did happen as revealed in the following comments:

- student responds by quoting from previous lecture notes

- students respond to various items with 3 pages of vocabulary context clues

    Inquiry 4 discussion. Overall, these results provide much insight regarding the actual texts and their usage in DR and CTE courses across these three community college sites. The results of the various text analyses as described in the previous sections provided several important insights about the DR course texts, the CTE course texts, and the patterns and deviations—at least with respect to text types and practices—between the two groups.

    First and foremost, texts are vastly different in DR courses and CTE courses. In addition to text-type differences, the Lexile text measure scores were also different, with more of the CTE

samples scoring at *higher* Lexile text measures than the DR course texts. More directly, the highest few DR text scores were closer to the lower text scores in the CTE courses. Although some difference in what is broadly conceived of here as text readability or complexity is to be expected between developmental-level courses and college-level ones, the differences between the two groups' scores does not seem indicative of a scaffolded curricular progression with students experiencing purposeful levels of text difficulty en route to their CTE courses.

Further, the content and style of many of the DR course texts (including the traditional textbooks) was predominately workbook-like material. Given that the CTE course texts did not include such material, but rather far denser informational and technical text, it does not appear that the texts chosen for the DR courses are scaffolding students toward the types of text expectations they will experience at the next level of coursework, at least within the CTE realms.

Integrative Findings across Four Inquiries

Following the completion of analysis within each inquiry area, we then looked across data sources for areas of convergence and divergence. To begin, we looked across the three constituency groups associated with this study. Table 12 provides a comparison of all three groups with respect to select basic text-expectations. It should be noted that whereas all three groups were explicitly asked to focus on a single target course in the survey, it became clear that student-respondents tended to respond more generally (college reading expectations in general). So whereas we assume that DR faculty explicitly and only responded with DR courses in mind, and CTE faculty explicitly and only responded with CTE courses in mind, students may have had in mind a DR, CTE, or GE course driving their responses.

Table 12: Comparison of Text-Expectations across Constituency Groups

Instructors' Expectations	DR Instructors' Expectations	CTE Instructors' Expectations	Student Perceptions of Instructors' Expectations
When to read	Before **and** after class n=10 Before class n=7 After class n=0 No recommendation n=0	Before **and** after class n=28 Before class n=47 After class n=5 No recommendation n=6	Before **and** after class n=32 Before class n=73 After class n=8 No recommendation n=9
Number of pages	31 or > n=6 21-30 n=4 11-20 n=3 < 10 n=3	31 or > n=19 21-30 n=26 11-20 n=25 < 10 n=16	31 or > n=53 21-30 n=14 11-20 n=38 < 10 n=17
Time spent reading, outside of class	7 or > hrs/wk n=2 5-6 hrs/wk n=6 3-4 hrs/wk n=5 1-2 hrs/wk n=4 0 hrs/wk n=0	7 or > hrs/wk n=8 5-6 hrs/wk n=19 3-4 hrs/wk n=34 1-2 hrs/wk n=29 0 hrs/wk n=0	7 or > hrs/wk n=43 5-6 hrs/wk n=27 3-4 hrs/wk n=32 1-2 hrs/wk n=17 0 hrs/wk n=3
Independent comprehension	Always n=1 Most of time n=10 Occasionally n=4 Rarely n=2	Always n=8 Most of time n=33 Occasionally n=33 Rarely n=12	Always n=33 Most of time n=52 Occasionally n=29 Rarely n=8

Table 13 extends this comparison across the three respondent groups, but instead focuses on

reports of the extent and timing of various types of strategy instruction within the course context.

Table 13: Comparison of Strategy Instruction across Constituency Groups

Instructors' Foci	DR Faculty	CTE Faculty	Student Perceptions
Textbook-reading strategy instruction	All semester n=16 Prior to testing n=0 Beginning of semester n=1 Not addressed n=0	All semester n=31 Prior to testing n=37 Beginning semester n=2 Not addressed n=14	All semester n=70 Prior to testing n=7 Beginning semester n=21 Not addressed n=20
Vocabulary strategy instruction	All semester n=14 Prior to testing n=0 Beginning semester n=3 Not addressed n=0	All semester n=51 Prior to testing n=2 Beginning semester n=10 Not addressed n=21	All semester n=70 Prior to testing n=9 Beginning semester n=8 Not addressed n=31
Expert-reader strategy instruction	All semester n=9 Prior to testing n=1 Beginning of semester n=1 Not addressed n=5	All semester n=30 Prior to testing n=1 Beginning semester n=15 Not addressed n=38	All semester n=60 Prior to testing n=8 Beginning semester n=7 Not addressed n=41
Graphic and visual information strategy instruction	All semester n=12 Prior to testing n=2 Beginning semester n=1 Not addressed n=1	All semester n=69 Prior to testing n=1 Beginning semester n=4 Not addressed n=10	All semester n=86 Prior to testing n=9 Beginning semester n=11 Not addressed n=12
Notetaking strategy instruction	All semester n=17 Prior to testing n=0 Beginning of semester n=0 Not addressed n=0	All semester n=48 Prior to testing n=0 Beginning semester n=17 Not addressed n=19	All semester n=78 Prior to testing n=8 Beginning semester n=15 Not addressed n=16

Finally, Table 14 presents a comparison of what faculty and students determined to be the biggest challenges students faced with respect to reading.

Table 14: Comparison of Student Challenges across Constituency Groups

Source of Challenge	DR Faculty Reported Challenges	CTE Faculty Reported Challenges	Students' Perceived Challenges
Student challenges	Awareness of text-expectations n=16 Study time n=15 Completing assignments n=14 Synthesis of ideas n=13 Attending class n=13 Text preparation n=12 Notetaking during class n=12 Notetaking while reading n=12 Asking questions n=12 Background knowledge n=12 Vocabulary n=9 Understanding text language n=8 Test-taking skills n=7	Awareness of text-expectations n=50 Study time n=60 Completing assignments n=41 Synthesis of ideas n=40 Attending class n=36 Test preparation n=35 Notetaking during class n=38 Notetaking while reading n=29 Asking questions n=39 Background knowledge n=26 Vocabulary n=31 Understanding text language n=8 Test-taking skills n=28	Awareness of text-expectations n=6 Study time n=48 Completing assignments n=20 Synthesis of ideas n=28 Attending class n=10 Test preparation n=54 Notetaking during class n=23 Notetaking while reading n=29 Asking questions n=15 Background knowledge n=27 Vocabulary n=29 Understanding text language n=23 Test-taking skills n=35
Situational interference	Attending class n=11 Completing assignments n=10 Study time n=7	Study time n=49 Awareness of text-expectations n=30 Completing assignments n=26	N/A

These cross-group comparisons, as well as the larger triangulation processes we employed across inquiries, yielded the following 11 key findings:

1. **Differences in class formats:** DR classes generally followed what might be considered traditional GE/liberal arts-style course formats with discussion as the primary mode. By contrast, CTE courses followed lab/shop and application-foci.

2. **Differences in text types:** DR courses used multiple texts across a variety of text types; the majority of texts were workbooks, novels, and some instructor-designed compilations of GE content. By contrast, the CTE faculty usually made use of a single

traditional (for CTE) textbook that was used primarily as a resource or reference, or for immediate use in application of the course content or lab/shop experience.

3. **Differences in course content:** According to DR faculty, the vast majority of the DR instruction throughout the semester focused on reading and study strategies, to include text organization and structure, vocabulary-development, note-taking approaches, and strategies for dealing with graphics and visuals in text. CTE faculty also reported including strategy instruction, but the depth and timing of the instruction ranged based on the strategy type. The majority of the CTE instructors focused on covering the content of the assigned reading material in class or via alternate sources (workarounds).

4. **Text differences across the areas:** One key finding that emerged from the systematic text analyses was that text type, text complexity, and text usage practices were vastly different between DR courses and CTE courses. In addition to genre differences, CTE course text samples frequently scored at higher Lexile text measure scores than did the DR course texts. Students viewed these required course texts as being both information sources and unnecessary expenses. The texts examined in the study included more than traditional texts, though. For example, for CTE courses, they included a camshaft in auto, a drip bag and mannequin in nursing, and the help feature of a software program in industrial technology courses. Texts were used in very different ways across these areas, as the text usually formed the basis for the class discussions in DR courses, whereas it was the specific content/information in application that formed the crux of the CTE lab/shop-based foci.

5. **Faculty expectations of student text-readiness:** Both DR and CTE faculty reported having expectations that most students should be able to navigate and comprehend text

independently at the outset of their specific course or for college reading in general. However, both faculty groups (DR and CTE) also reported that most students were unready for college literacy practices, and reported making adjustments to their instruction as a result. In short, faculty are holding and acting upon two contradictory expectations simultaneously. Students recognized the increase in literacy expectations from high school to college, noting especially the lack of class-based preparation for the exams in college, the sense that students are held responsible for their own work in college, and the increased amount and difficulty of reading in college.

6. **Faculty assumptions about student attitudes about reading:** Both DR and CTE faculty perceived students' attitudes toward reading as generally negative. Both sets of faculties noted some differences in attitude across different populations of students, and provided specific student characteristics and demographics to explain these differences. Both groups of faculties made adjustments in their courses based on their perceptions of students' negative attitudes (as well as the perceived lack of text-readiness). Despite a widespread faculty assumption that students don't read, students' responses were split on whether they read or not, with more than half of student survey respondents indicated that they read more than 75% of the required reading, and only a very small minority—just three who responded to the question—reported reading *none* of the assigned reading.

7. **Use of workarounds in CTE:** Because of the importance placed on content knowledge, CTE faculty tended to provide alternate sources of information (workarounds), including PowerPoint slides, instructor-prepared lecture notes, and study guides. CTE faculty made it clear that *how* information was acquired was less important than *that* it was acquired. Other stated reasons for the workarounds included faculty

assumptions of low literacy competence on the part of their students at the course outset as well as expectations that students would hold negative attitudes of reading.

8. Variation with instruction on disciplinary/professional literacy practices: DR faculty reported that they attempted to prepare students for the varied literacy demands across GE core disciplinary contexts. DR faculty did not include discussion of specialized language and literacy processes such as those enacted within CTE areas. Although three-fourths of CTE faculty reported providing some reading instruction, the majority did not directly address how experts in their respective fields read or utilized texts, a central tenet in disciplinary approaches to literacy. Students reported that instructors provided such instruction across the semester or not at all. However, students generally indicated that they were aware of differences in literacy practices across disciplines and areas.

9. Conceptualizations of literacy: Although CTE faculty were aware of literacy differences across disciplines/professions, they still tended toward more traditional notions of literacy instruction wherein literacy is a generic, monolithic construct. Rather, "literacy" for the DR instructors was the generalized type to be found within the traditional GE areas. Consequently, this type of instruction in DR resembled traditional, generic approaches to literacy instruction, rather than a more contemporary disciplinary literacy model. Students understood the act of reading as the execution of skills that, once mastered, will help them get to meaning. They also acknowledged the need for speed in reading, and the limited strategies they controlled in what they believe to be best practices for that particular need at that particular moment. Students reported a range of views on text usage, including the use of the text to help structure or sort out a potentially

confusing or poorly organized lecture, the use of the text as an authority, and the deliberate decision to not use a text that is perceived as not valuable.

10. **Status of DR on campus:** DR is perceived as isolated on campus, and DR faculty reported that their courses are not valued within the campus community, consistent with the historical displacement of developmental reading and study. However, it was encouraging that only a small minority of DR faculty reported not knowing much about the literacy practices in next-level courses. It was also encouraging that three-fourths of CTE faculty respondents knew about DE courses, though they did not know much about the specifics of the DR coursework on their campus, including what was taught in the courses.

11. **Goals for DR:** The CTE faculty respondents expressed the need for students who were enrolled in DR to exit the courses with the competencies needed to successfully read and learn from highly technical texts. In this way, DR is expected to bridge the gap between the perceived reading abilities of the students and the levels of literacy required for the next-level instructors' courses. Specifically, a number of the CTE faculty respondents wanted the DR faculty to be aware of the reading load in CTE classes and the complexity of the assigned readings.

Limitations

To better understand literacy practices across campus contexts within both CTE and DR courses, multiple sources of information and multiple layers of data collection were implemented. In spite of these efforts, however, some limitations persist. First, because convenience sampling was used and participants were recruited on a strictly volunteer basis, the various samples of faculty and students may not reflect a representative sampling of the overall

community college CTE and DR populations. Second, in most cases, only one class period in each of the courses was observed. Though we have no reason to believe it, it is possible that the observations were scheduled during atypical class sessions. Further, these individual class sessions may not entirely reflect the overall text usage in CTE and DR classrooms. Third, the text analysis and classroom observations were limited by the artifacts provided and instructors providing entrée. On a related note, given significant institutional changes that arose in the early stages of data collection, at one of the three sites we were unable to collect focus group data. Next, because the three study sites identified the CTE areas of interest to them, CTE was defined as a single construct from the beginning. This created some issues in the analysis, as we treated the CTE courses as a single construct, rather than as different professional areas. Lastly, Heisenberg's uncertainty principle (e.g., Crotty, 1998; Patton, 2002) acknowledges that the very act of observing affects what is being observed. The researchers' presence during classroom observations and focus groups could have affected the discourse and interaction despite efforts toward being unobtrusive. These uncontrollable factors may have impacted the results in idiosyncratic, unknowable ways.

Integrative Discussion

Following the analyses of each of the four inquiries, we looked across the complete data set, focusing on the patterns and themes that were identified across data sources, and reconsidering them against the extant literature in this area, as well as reconceptualizing them through the various and collective lenses set forth in our theoretical framework. Although these inquiries—and the resultant findings—lend themselves to a number of discussion topics, we focus here on five: instructors' conflicting expectations and assumptions, mismatch of literacy

conceptualizations and practices, comparing CTE and GE, connections between CTE and DR as devalued arenas, and in-between spaces for literacy-learning.

It should be noted that we base the following discussion points on recognition yielded from the findings of the study that these spaces—broadly defined as DR and CTE—are different. As noted in the findings, there are major differences in class formats, text types, course content, strategy instruction, and purpose for reading/text usage. We start this discussion, then, from the recognition that these are indeed very different learning spaces. Further, we want to acknowledge that, absent a purposeful linkage, such a comparison is perhaps unnecessary and maybe even unfair. We return, therefore, to the original guiding question of this study as a way to refocus attention on this study's linkage, literacy practices and preparation: how, and to what extent, are the DR courses adequately preparing students for the reading expectations of the introductory-level CTE courses?

Instructors' Conflicting Expectations and Assumptions

Both CTE and DR instructors reported that they expected students to be able to navigate and comprehend text mostly independently as a marker for preparedness for the requirements of their respective courses. At the same time, these faculty also assumed students would hold a negative attitude toward reading, and, would therefore refuse to engage in the literacy practices. Because these faculty expected students to be stronger readers, but also anticipated that they wouldn't be, it would seem that faculty are holding two contradictory expectations simultaneously. In short, they expected students to come in highly literate, but assumed they would be aliterate by choice. From both a Lifespan Literacy Development and a Disciplinary Literacies perspective, the former expectation is misguided as it ignores the continued literacy-learning that occurs over one's lifetime (e.g., Alexander, 2005), as well as the resultant need for

117

ongoing, focused, and context-specific literacy instruction (e.g., Lee & Spratley, 2010; Shanahan & Shanahan, 2008).

Based on these instructor expectations and assumptions, and consistent with findings from recent studies (NCEE, 2013), faculty across these areas provided extra provisions, including workarounds. Indeed, for many CTE faculty, workarounds were used as patches or fixes that at least allowed students to access the text content and material, even if in an alternate form. For many DR faculty, these workarounds took the form of basic skills approaches used as an attempt to meet students at their perceived performance levels with respect to reading ability. In short, we found faculty wishing students were in one place with respect to literacy preparation, but contradicting that by providing extra supports that are on the far end of that spectrum and resembled a response not to literate students or aliterate students, but rather illiterate students.

Indeed, with respect to text usage, we noted a range that may well correspond with these three perceived student literacy levels (highly literate, aliterate, and illiterate). First, in several CTE courses, there were incredibly difficult texts required with very high expectations for literacy. In the DR courses, there were some incredibly easy texts that seemed to be adopted with assumptions of illiteracy. And, finally, in both CTE and DR, we found workarounds and lecture-based content that seemed to be adopted based on assumptions of aliteracy.

Specific to the case of the DR instructors, their disappointment at the perceived reading levels of their students is something to ponder. First, students are being required to enroll in DR based on testing or high school grades that have indicated some area for continued growth in literacy, which seems at odds with the DR instructors' desire for students to be able to read more proficiently at the outset. At the same time, it is curious that DR instructors with such high

expectations of students' text-readiness would draw upon basic- and discrete-skills texts that would seem more in line with assumptions of illiteracy.

Mismatch of Literacy Conceptualizations and Practices

One of the most important findings from this study is the mismatch between the literacy practices in CTE and those in DR. This is not unlike what has previously been found with a similar alignment audit between GE and DR courses (Armstrong, et al., 2016). However, here the mismatch is multi-layered and extensive. First, not only are the CTE texts significantly different from the DR ones, but they are also far more complex in structure, in specialized language, in background knowledge assumptions, and in levels of technicality.

Also, the construct of 'text' takes on different meanings across various CTE contexts, both on conceptual and on operational levels, which first prompted us to start thinking about the need to further separate the various communities and microcosms that exist within the huge landscape in higher education loosely referred to as CTE. Take, for instance, the criminal justice courses, where 'text'—at least in terms of what was valued—was the instructor's stories from the field. Grubb et al. (1999) noted this as well: "Most often, however, the applications discussed in class come from the work experiences of the instructor" (p. 105).

Similarly, in several courses—most notably the auto mechanics course and nursing courses—it was immediately evident that the "text" was not actually a book or other written work. Indeed, students were being provided with explicit instruction, in the auto mechanics course, on how to read and interpret a camshaft, as a "text." This was equally true with a drip bag in one of the nursing courses, and a mannequin in another. It was also true of the micrometer in the industrial technology course. In short, artifacts deployed for learning through application in a given field may be used as "texts" and may or may not be a written work. And,

indeed often the textbook or other required written work was merely offered as a reference, a guide, or a supplement.

Also, the very purpose for reading may be different, which has certainly been acknowledged in past scholarship on CTE:

> Many questions in occupational classrooms ask about simple facts ("What is an alloy?" "What is flux?"), just as in most academic classrooms. However, occupational instructors shifted to more demanding questions, particularly diagnostic questions, which require knowledge of how a component works rather than simple recall ("What happens if I plug this filter?"). (Grubb, et al., 1999, p. 103)

For CTE areas, it's all about one's competency in the application of the content, or, as one instructor in our study put it, "Reading is irrelevant unless it can be applied." In short, traditional text-reading is less valued and less relevant in CTE than it is in other academic contexts. Often, this privileging of content mastery was for highly practical reasons, including state certification exams or upcoming internships. However, the point is that application is key in CTE. From a functional literacy perspective, this makes perfect sense as the learning in the classroom is intended as a simulation of the real-world context (e.g., Sticht, 1975a, 1975b, 1997; Sticht, et al., 1987). As one CTE instructor summed it up, "There's no text in the real world, but you will need to just know the material."

Comparing CTE and GE: Depth and Breadth in Literacy-Based Learning

Although a straight comparison of CTE and GE literacy expectations and practices is beyond the scope of this study, given the connections we identified (in part from our prior research in this area) between DR and GE, some reflection on this extension is in order. Specifically, one interesting idea that emerged was the recognition that in CTE arenas, often the

same text was used across multiple courses, resulting in a deep-level mastery that was not found in the one-and-you're-done text usage indicative of novels and workbooks within DR realms, and, by extension was not found in GE courses (Armstrong, et al., 2015, 2016). Indeed, the practice we noted in several CTE areas of using texts for deep learning is suggestive of a spiraled curriculum, which has been shown to be successful in similar professional contexts. In fact, medical schools have demonstrated the benefit of the case method/application approach for years. Based on our exploration, several areas of CTE represented in this study understand and deploy similar spiraled and case-study approaches. By contrast, in GE, these methods are not used as much. In short, the distinction is this: In most GE courses, the focus is on breadth over depth, with the inclusion of as many texts as possible. In CTE, the focus seems to be on depth of knowledge. And, because DR tends to follow GE, attention to wide and shallow coverage of information seems descriptive of DR as well. With experience in DR coursework, students are not prepared to transition into depth-focused literacy practices.

Connections Between CTE and DR as Devalued Arenas

The DR instructors reported that they sense their colleagues in other programmatic areas and disciplines may devalue the DR courses and, by extension, the work of the DR instructors. This negative positioning regarding college reading instruction is an old story. From a similar perspective, most academic disciplines tend to devalue the work of the CTE and professional areas (Crawford, 2009; Grubb, et al., 1999; Rose, 2012). Indeed, one of the manufacturing instructors used the following analogy: "Ever read Lee Iacocca's book, *The Five Kingdoms*? He had five kingdoms when he took over Chrysler and he said nobody talked to the other guy. Yes, each kingdom had a king, and no king talked to another king. That's the way it is in manufacturing. That is the way it is here."

To some extent, this devaluing is endemic in the siloed model of higher education now so prevalent. For example, this is certainly not much different from the differentiation between math and physics or composition and literature. With DR and CTE, however, there seems to be a hierarchical class system at work. In short, these are both marginalized areas of higher education, with relative power differentials across these areas and within a highly siloed institution and system.

Even beyond these more obvious power differences, DR faculty—however inadvertently—tend to draw upon GE traditions and not the possibly productive CTE practices. This may be related to the typical organization of most colleges, as most DR divisions are situated within or adjacent to traditional GE departments, but not in CTE ones. Or, perhaps this is a matter of comfort zone, with the vast majority of DR faculty having their own academic training either in education or the humanities; however, this may also be an attempt to gain respect from the faculties of greater perceived prestige, as it is clear that traditional literacy practices and texts common within the GE arenas are what are valued and privileged. Within these imposed social structures, these two broad areas are coerced into an identity that is less-than (Harrè & Langenhove, 1999). And, based on responses from students, it was clear that this stigma was not only felt by faculty in these areas, but by students too.

In-Between Spaces for Literacy-Learning

In part because of this devaluing—felt and articulated by so many faculty and students in this study—of both DR and CTE within the larger realm of higher education, we recognized the in-between nature of the spaces these participants occupy.

Not only is this felt by the humans involved in this study, but also, this in-betweenness is also enacted necessarily as part of their realities. For instance, DR is a space in-between; it is not

real reading, but rather a simulation of what is assumed to come for students. Similarly, CTE is not *real* application in a profession, but is always a simulation (both in the classroom learning environment as well as any lab/shop or internship contexts). In fairness, this is also an apprenticeship. However, in both cases, there is a degree of simulation to learn *about* literacy practices rather than actually *doing* them.

Implications

The implications from this study's findings are many; however, here we pose three directed at specific audiences: instructors, institutions, and the field of DR.

Implication for Instructors

First, community college instructors, regardless of their various fields of expertise, are committed to delivering the knowledge bases to the student clientele so as to lead them to develop the disciplinary and/or professional knowledge, competencies, and dispositions necessary to achieve course and career objectives. The historically grounded belief of faculty is that students will interact with the assigned texts in a mature and sophisticated manner so as to learn the foundational content for each course, regardless of field. However, such desires for student literacy on the part of faculty do not match the realities that students are either less than college ready for learning from text, or perhaps even more troubling, that they are aliterate when tasked with the demands of academic literacy practices. Rather than beating their heads against the wall in efforts to change such a perceived culture of a literacy, instructors within this study, as well as those participating in several other research endeavors over the recent past (NCEE, 2013), have developed the practice of providing students with "workarounds" so as to provide basic levels of course content. These workarounds would include traditional forms of content delivery such PowerPoints, lecture notes, and instructor-created study guides. Whereas such

instructional supports may be seen by instructors (and publishers) as value-added supplements for presenting content, they have become in many cases the *primary* delivery mechanism for course content. Thus one implication of this study is that instructors across CTE and DR reflect on the consequences of minimizing literacy expectations via workarounds.

Implication for Institutions

Second, as we analyzed the data collected on the DR courses, it became increasingly clear that the DR courses tended to focus—whether deliberately or not—on preparing students to enter the traditional GE/transfer track. Although a laudable goal, and one of the fundamental missions of the community college, it is but one of the missions and serves directly and extensively but a single student population. It appears, then, that there is a bias in DR coursework that may not be fully appropriate for training students moving into the various CTE fields. With a GE focus, students are hopefully honing and expanding their skills and dispositions associated with "reading to learn," an age-old requirement of success in the GE coursework. Yet, the fundamental requirement for most CTE specializations is the development and mastery of contextualized competencies associated with the construct of "reading to do." Given that general reading and study strategy approaches are intended to promote GE text practices, there is a need for additional approaches to prepare students for the practices and rigors of "reading to do" in CTE programming. Given that general reading and study strategy approaches, especially the basic skills approaches found in the DR courses under study, may be intended toward GE text practices, the implication is that there is a need to consider alternative approaches in DR courses that are intended to prepare CTE students.

Implication for the Field of DR

Different professional cultures of literacy exist (disciplinary literacy or academic literacy in the GE environment) across the CTE fields. Should faculty train students to read like an expert in their respective fields? Faculty have reportedly already attempted to do so through explicit instruction, students' lab/shop/internship experiences, or direct mentorship in attempts to demonstrate professional literacy practices. Such literacy differentiation begs the question of who should have the primary responsibility of teaching students how to read like a welder or an auto mechanic or a sous chef or a registered nurse? Further, can instructors of reading realistically and productively prepare students for a CTE course/program, when they likely lack knowledge of particular CTE fields? Current research by Lemley, Hart, and King (2018) suggests that wide content knowledge of a discipline may be a necessary prerequisite for any discipline-based literacy instruction. This is an issue that literacy education professionals at the PK-12 level have addressed, particularly as prompted by the DL movement. However, the field of DR as a whole should engage in reflective dialogue about how to prepare future DR instructors for the particular rigors of CTE literacy. And, beyond this, the field of DR needs to reflect on ways to support the content areas of CTE.

Recommendations

Although we bristle at blanket recommendations, especially because of our firm belief that interventions and programming must honor the local needs and missions rather than be directed from afar, we also acknowledge that the insights gleaned from this study have relevance across many contexts. The following recommendations—for practice, for research, and for scholarship—are offered here in the spirit of sharing the ideas for future work that this series of inquiries yielded for us.

Recommendations for Future Practice

      Recommendation 1: Promote and maintain greater communication across programs. CTE faculty in this study expressed their desire that DR instructors would be more aware of the particular text and literacy expectations in the CTE courses, and prepare students accordingly. That DR instructors were not preparing students for reading in CTE contexts, despite the majority of these faculty indicating their awareness of the goal to prepare students for their next-level courses, may suggest that they were not, in fact, well-informed about the particular rigors of CTE. This, coupled with the recognition that these two broad areas (CTE and DR) hold, simultaneously, a second-class status in higher education, may be justification enough that institutions encourage cross-campus communication via brown bag or workshop sessions, invited classroom observations, or cross-program textbook-selection conversations.

      Recommendation 2: Develop contextualized reading courses. Although we did not explore the fine-grained differences across the CTE programming, this study did allow us to recognize great variance in these fields. Thus, a curricular model that embeds contextualized literacy instruction with course-matched content would seem to provide the most viable options for approaches to serve CTE programs and students. At least two options supporting contextualized instruction come to mind immediately. First, a model that draws upon the long history and successes of linked courses (adjunct or co-requisites) but in this case linked to CTE fields rather than GE courses could be implemented. Secondly, the embedded model as it has gained prominence via the I-BEST approach with its CTE orientation may be an appropriate intervention. The reality is that DR cannot be all things to all disciplines, so the purposeful contextualization of reading and writing skill development into CTE curriculum is needed. A key

future role for DR experts, then, is to coach and support their colleagues in doing this work within their CTE classrooms.

Recommendation 3: Consider CTE traditions in SLO-development. Even with only an informal exploration of the CTE course syllabi or institution-mandated course outlines, it became clear that GE goals are explicitly built into the course syllabi/outlines for the CTE courses as institutional student learning outcomes (SLOs). Institutions need to embrace the differences of CTE literacies and learning approaches and should consider CTE traditions in developing institutional SLOs.

As an extension of this recommendation, DR programs may want to reconsider their own course/program-level SLOs to ensure representation of CTE literacy practices. Similarly, although there was mention of GE goals (sometimes called core requirements) in the CTE syllabi and outlines, we found very little in the way of specific literacy practices or learning toward becoming a literate member of a particular CTE field.   Thus, CTE programs may also want to reconsider course/program-level SLOs with specific literacy-oriented professional practices in mind.

Recommendations for Future Research

Recommendation 4: Conduct "Reality Checks." Given how much more there is to learn about the varied and context-specific literacies across any given campus, we highly encourage the use of Simpson's "Reality Checks" (1996) or curriculum audits (Armstrong, et al., 2015a, 2015b, 2016). Although especially useful as a tool for back-mapping curriculum and instruction toward targeted and purposeful scaffolding across levels, non-evaluative "Reality Checks" can also provide built-in opportunities for the communication called for in Recommendation 1.

Recommendation 5: Study individual CTE fields. It should be noted that the construct of CTE as presented in this report is a very broad, loose, and somewhat-arbitrary in its categorization. Indeed, one of the major insights we have gleaned from this study is that there needs to be greater attention paid to the specific literacy practices across CTE areas. Particularly given the range of results in literacy practices, we recognized that there may be significant distinctions across sub-fields. Thus, a recommendation for future research is to look at specific CTE areas as these fields have their own identities, as CTE, we now recognize, is too big a category.

Recommendations for Future Scholarship

Recommendation 6: Work toward theory-development that extends Disciplinary Literacies into the realm of technical and professional literacies. Given the remarkable insights we gleaned from this study about the range of CTE literacies, as described in this report, we pause to consider the possibilities for much-needed theory-development. One element of our theoretical framework—and a fundamental assumption driving this work—was an awareness of a Disciplinary Literacies perspective. One might assume, then, that such a perspective would also extend to a recognition of the area-specific literacies of CTE; and, to some extent, that was the case. However, we were not at all prepared for the realization that larger paradigmatic traditions were at play with GE traditions encompassing 'academic' and 'disciplinary' literacies, and CTE traditions encompassing 'professional' and 'technical' literacies. With all the theoretical work that has been devoted to DL, we call for an extension of that work to acknowledge, too, professional and technical literacies.

Recommendation 7: Critique existing power structures and the associated privileging. With this idea of literacy traditions in mind, we also became keenly aware very

early in this research of the accompanying power structures and privileging. Even in community colleges, where CTE is a key part of the mission, we found that GE-based identities and assumptions of generalized academic literacy practices and levels of rigor were being imposed on CTE areas. We are fully aware that it may well be a lofty goal that institutions—or the entire field of higher education as a whole—reconceptualize and reprioritize these value systems. However, such power differentials can still be interrogated with a critical lens.

Conclusion

This study was designed to provide a fuller and more current picture of what it means to be college-text ready by extending prior work in GE and DR contexts (Armstrong, Stahl, & Kantner, 2015a, 2015b, 2016) to CTE and DR ones. This study's findings suggest a lack of alignment between the DR courses and the introductory-level CTE courses, on a number of levels. We would be remiss not to acknowledge that a similar lack of alignment was identified in earlier work. Indeed, in that prior work, we concluded that

> In considering what the DR courses do entail: novels, workbooks, short excerpts, highly readable texts, and comprehension-check tasks, there is a thought that the DR courses are currently aimed too far below introductory-level college courses to provide any sort of purposeful scaffolding into the GE courses. In addition, based on our findings, it is clear that the nature of preparation needed for DR tasks is radically different than the preparation expected for a GE course. Indeed, no evidence of an intentionally scaffolded progression from DR courses to GE courses was identified in any of this study's investigations. (Armstrong, et al., 2015a, p. 59)

We found the same in the present study; however, on a much larger scale when one considers the paradigmatic traditions mentioned earlier.

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APPENDIX A: DR Faculty Survey

1. What is your departmental affiliation?

2. How many years have you been teaching at the college level?

3. Please list the name and course number of one developmental reading course you typically teach. Then, please use the identified course as you respond to the remainder of the prompts in this survey.

4. I have taught this course for _____ years.

5. The average number of students enrolled per section is_____.

6. The predominant format for the course as I teach it is
   - Lecture
   - Discussion
   - Laboratory/shop/kitchen
   - Problem-solving
   - Online or blended/hybrid
   - Experiential or community service
   - Other (please explain)_____

7. In this course, as I teach it, the required reading comes from
   - A single text
   - Multiple texts
   - There is no required reading

8. In this course, as I teach it, the required reading includes (please check all that apply):
   - Traditional textbooks
   - Novels or monographs
   - Collections of essays
   - Newspaper/magazine articles
   - Scholarly/journal articles
   - Trade books/manuals
   - Instruction manuals
   - Web resources
   - Lecture notes
   - PowerPoints
   - Study guides
   - Computer software or web-based program
   - Other (please explain)

9. In this course, I expect students to complete the assigned readings
   - Before the class session
   - After the class session
   - Before and after the class session

- There is no recommendation

10. I make this expectation clear to students
    - In the course syllabus
    - Verbally, in class
    - Through class handouts
    - Other (please explain)

11. In this course, I expect students to read _____ each week
    - less than 10 pages
    - 11-20 pages
    - 21-30 pages
    - 31-40 pages
    - 40+ pages

12. I make this expectation clear to students
    - In the course syllabus
    - Verbally, in class
    - Through class handouts
    - Other (please explain)

13. On the average, I expect students in this course to spend _____ hours per week outside the class preparing for the course requirements (note: this question assumes a 3-credit course; for courses carrying different credit hour loads, please specify in "other" below).
    - 0
    - 1-2
    - 3-4
    - 5-6
    - 7-8
    - 8 or more
    - Other

14. I make this expectation clear to students
    - In the course syllabus
    - Verbally, in class
    - Through class handouts
    - Other (please explain)

15. In this course, I expect students to be able to understand on their own the concepts, ideas, or material from the required reading:
    - Rarely
    - Occasionally
    - Most of the time
    - Always

16. I make this expectation clear to students
    - In the course syllabus
    - Verbally, in class
    - Through class handouts
    - Other (please explain)

17. In this course, I explain the vast majority (over 75%) of concepts, ideas, or material from the text during my lectures.
    - Rarely
    - Occasionally
    - Most of the time
    - Always

18. In this course, I explicitly address the structure and organization of the course text(s)
    - not at all
    - only at the beginning of the semester
    - only when a test is coming up
    - throughout the whole semester

19. In this course, I explicitly address strategies for how to read the course text(s)
    - not at all
    - only at the beginning of the semester
    - only when a test is coming up
    - throughout the whole semester

20. In this course, I explicitly address strategies for learning new vocabulary words in the course text(s)
    - not at all
    - only at the beginning of the semester
    - only when a test is coming up
    - throughout the whole semester

21. In this course, I explicitly address taking notes on the information presented in the course text(s)
    - not at all
    - only at the beginning of the semester
    - only when a test is coming up
    - throughout the whole semester

22. In this course, I explicitly address reading and using information presented in graphics or visual aids from the course text(s)
    - not at all
    - only at the beginning of the semester
    - only when a test is coming up
    - throughout the whole semester

23. In this course, I explicitly address how to read like an expert in the field
   - not at all
   - only at the beginning of the semester
   - only when a test is coming up
   - throughout the whole semester

24. In this course, I explicitly address how to prepare for class tests/quizzes
   - not at all
   - only at the beginning of the semester
   - only when a test is coming up
   - throughout the whole semester

25. In this course, I directly reference the required text(s) in class (by quoting from it, directing students to a particular passage, reading from it, etc.)
   - Rarely
   - Occasionally
   - During most class sessions
   - During every class session

26. The material for quizzes/tests in this course comes primarily from (please check all that apply):
   - The course text(s)
   - Class lectures/discussion
   - Both the course text and the class lectures/discussion

27. Final grades for this course are based on (please check all that apply):
   - Homework
   - Written quizzes or tests
   - Papers
   - Presentations
   - Lab, shop, or kitchen projects
   - Participation
   - Attendance
   - In-class activities
   - Other (please explain):

28. On the basis of my interactions with students enrolled in this course, I would say that the challenges they generally face related to reading and studying text material include (check all that apply):
   - Doing assignments regularly
   - Understanding/remembering vocabulary or terms from the text
   - Seeing relationships among ideas
   - Translating/understanding text language
   - Attending class sessions regularly

- Taking effective notes during class
- Taking effective notes while reading
- Preparing for tests
- Spending enough time studying outside of class
- Asking questions
- Being an effective test taker
- Being aware of college-level expectations
- Having background knowledge on the subject
- Other (please explain)

29. Of the above, which three are the most serious and most commonly interfere with students' success in your course?
- Doing assignments regularly
- Understanding/remembering vocabulary or terms from the text
- Seeing relationships among ideas
- Translating/understanding text language
- Attending class sessions regularly
- Taking effective notes during class
- Taking effective notes while reading
- Preparing for tests
- Spending enough time studying outside of class
- Asking questions
- Being an effective test taker
- Being aware of college-level expectations
- Having background knowledge on the subject
- Other (please explain)

APPENDIX B: CTE Faculty Survey

1. What is your departmental affiliation?

2. How many years have you been teaching at the college level?

3. Please list the name and course number of one introductory-level CTE course you typically teach. Then, please use the identified course as you respond to the remainder of the prompts in this survey.

4. I have taught this course for _____ years.

5. The average number of students enrolled per section is_____.

6. The predominant format for the course as I teach it is
   - Lecture
   - Discussion
   - Laboratory/shop/kitchen
   - Problem-solving
   - Online or blended/hybrid
   - Experiential or community service
   - Other (please explain)_____

7. In this course, as I teach it, the required reading comes from
   - A single text
   - Multiple texts
   - There is no required reading

8. In this course, as I teach it, the required reading includes (please check all that apply):
   - Traditional textbooks
   - Novels or monographs
   - Collections of essays
   - Newspaper/magazine articles
   - Scholarly/journal articles
   - Trade books/manuals
   - Instruction manuals
   - Web resources
   - Lecture notes
   - PowerPoints
   - Study guides
   - Computer software or web-based program
   - Other (please explain)

9. In this course, I expect students to complete the assigned readings
   - Before the class session
   - After the class session
   - Before and after the class session

- There is no recommendation

10. I make this expectation clear to students
   - In the course syllabus
   - Verbally, in class
   - Through class handouts
   - Other (please explain)

11. In this course, I expect students to read _____ each week
   - less than 10 pages
   - 11-20 pages
   - 21-30 pages
   - 31-40 pages
   - 40+ pages

12. I make this expectation clear to students
   - In the course syllabus
   - Verbally, in class
   - Through class handouts
   - Other (please explain)

13. On the average, I expect students in this course to spend _____ hours per week outside the class preparing for the course requirements (note: this question assumes a 3-credit course; for courses carrying different credit hour loads, please specify in "other" below).
   - 0
   - 1-2
   - 3-4
   - 5-6
   - 7-8
   - 8 or more
   - Other

14. I make this expectation clear to students
   - In the course syllabus
   - Verbally, in class
   - Through class handouts
   - Other (please explain)

15. In this course, I expect students to be able to understand on their own the concepts, ideas, or material from the required reading:
   - Rarely
   - Occasionally
   - Most of the time
   - Always

16. I make this expectation clear to students
   - In the course syllabus
   - Verbally, in class
   - Through class handouts
   - Other (please explain)

17. In this course, I explain the vast majority (over 75%) of concepts, ideas, or material from the text during my lectures.
   - Rarely
   - Occasionally
   - Most of the time
   - Always

18. In this course, I explicitly address the structure and organization of the course text(s)
   - not at all
   - only at the beginning of the semester
   - only when a test is coming up
   - throughout the whole semester

19. In this course, I explicitly address strategies for how to read the course text(s)
   - not at all
   - only at the beginning of the semester
   - only when a test is coming up
   - throughout the whole semester

20. In this course, I explicitly address strategies for learning new vocabulary words in the course text(s)
   - not at all
   - only at the beginning of the semester
   - only when a test is coming up
   - throughout the whole semester

21. In this course, I explicitly address taking notes on the information presented in the course text(s)
   - not at all
   - only at the beginning of the semester
   - only when a test is coming up
   - throughout the whole semester

22. In this course, I explicitly address reading and using information presented in graphics or visual aids from the course text(s)
   - not at all
   - only at the beginning of the semester
   - only when a test is coming up
   - throughout the whole semester

23. In this course, I explicitly address how to read like an expert in the field
   - not at all
   - only at the beginning of the semester
   - only when a test is coming up
   - throughout the whole semester

24. In this course, I explicitly address how to prepare for class tests/quizzes
   - not at all
   - only at the beginning of the semester
   - only when a test is coming up
   - throughout the whole semester

25. In this course, I directly reference the required text(s) in class (by quoting from it, directing students to a particular passage, reading from it, etc.)
   - Rarely
   - Occasionally
   - During most class sessions
   - During every class session

26. The material for quizzes/tests in this course comes primarily from (please check all that apply):
   - The course text(s)
   - Class lectures/discussion
   - Both the course text and the class lectures/discussion

27. Final grades for this course are based on (please check all that apply):
   - Homework
   - Written quizzes or tests
   - Papers
   - Presentations
   - Lab, shop, or kitchen projects
   - Participation
   - Attendance
   - In-class activities
   - Other (please explain):

28. On the basis of my interactions with students enrolled in this course, I would say that the challenges they generally face related to reading and studying text material include (check all that apply):
   - Doing assignments regularly
   - Understanding/remembering vocabulary or terms from the text
   - Seeing relationships among ideas
   - Translating/understanding text language
   - Attending class sessions regularly

- Taking effective notes during class
- Taking effective notes while reading
- Preparing for tests
- Spending enough time studying outside of class
- Asking questions
- Being an effective test taker
- Being aware of college-level expectations
- Having background knowledge on the subject
- Other (please explain)

29. Of the above, which three are the most serious and most commonly interfere with students' success in your course?
- Doing assignments regularly
- Understanding/remembering vocabulary or terms from the text
- Seeing relationships among ideas
- Translating/understanding text language
- Attending class sessions regularly
- Taking effective notes during class
- Taking effective notes while reading
- Preparing for tests
- Spending enough time studying outside of class
- Asking questions
- Being an effective test taker
- Being aware of college-level expectations
- Having background knowledge on the subject
- Other (please explain)

30. How familiar are you with the Developmental Reading courses/programming at your institution?
- Not at all
- Somewhat—I know these courses exist
- Very familiar—I know the courses, the curriculum, and the faculty

31. What would you like the faculty who teach Developmental Reading to know about the text expectations in the course identified on this survey as you teach it?

APPENDIX C: Student Survey

The first 7 questions focus on your status and goals at your college.

1. What is your current student status?
   - Current full-time student (enrolled in at least 12 credit hours)
   - Current part-time student (enrolled in 1-11 credit hours)

2. How many credits have you completed at your college as of the beginning of this semester?
   - 0-12
   - 13-24
   - 25-36
   - 37-48
   - 49-60
   - 61+ hours

3. How many credits have you completed at another institution?
   - 0-12
   - 13-24
   - 25-36
   - 37-48
   - 49-60
   - 61+ hours

4. Please list that other institution here:_____.

5. What is your goal in college?
   - to earn a certificate
   - to earn an associate's degree only
   - to earn an associate's degree and transfer to a four-year institution
   - to take courses for transfer to a four-year university, but not earn an associate's degree
   - taking classes; not seeking a degree or certificate

6. What is your intended or declared major or program at your college?

7. Have you ever taken a developmental reading course (at ECC, these are RDG 090, RDG 091, or RDG 110)?
   - I am currently enrolled in a developmental reading course
   - I have previously been enrolled in a developmental reading course at this institution
   - I took a developmental reading course at another institution
   - I have never been enrolled in a developmental reading course

The remaining questions in this survey will ask you for information related to the types of reading and learning activities you engage in for one of your current occupational education or career technical education courses. Please select one of the courses you are currently enrolled in and respond to the following questions with that course in mind. Please be honest

and frank in your responses; your responses will be kept confidential, and will not be shared with your instructors.

8. To which course will you be referring as you respond to these questions?
      COURSE NAME:
      COURSE NUMBER:

9. The predominant format for this course is
- Lecture
- Discussion
- Laboratory/shop/kitchen
- Problem-solving
- Online or blended/hybrid
- Experiential or community service
- Other (please explain)_____

10. In this course, the required reading comes from
- A single text
- Multiple texts
- There is no required reading

11. In this course, the required reading includes (please check all that apply):
- Traditional textbooks
- Novels or monographs
- Collections of essays
- Newspaper/magazine articles
- Scholarly/journal articles
- Trade books/manuals
- Instruction manuals
- Web resources
- Lecture notes
- PowerPoints
- Study guides
- Computer software or web-based program (i.e., MyReadingLab, etc.)
- Other (please explain)

12. The instructor for this course expects students to complete the assigned readings
- Before the class session
- After the class session
- Before and after the class session
- There is no recommendation

13. The instructor for this course makes this expectation clear to students
- In the course syllabus
- Verbally, in class

- Through class handouts
- Other (please explain)

14. The instructor for this course expects students to read _____ each week
- less than 10 pages
- 11-20 pages
- 21-30 pages
- 31-40 pages
- 40+ pages

15. The instructor for this course makes this expectation clear to students
- In the course syllabus
- Verbally, in class
- Through class handouts
- Other (please explain)

16. Approximately what percentage of the assigned readings do you complete each week?
a. none
b. less than 25%
c. between 25% and 50%
d. between 50% and 75%
e. between 75% and 100%
f. 100%

17. On the average, the instructor for this course expects students to spend the following number of hours per week outside the class preparing for the course requirements
- 0
- 1-2
- 3-4
- 5-6
- 7-8
- 8 or more

18. The instructor for this course makes this expectation clear to students
- In the course syllabus
- Verbally, in class
- Through class handouts
- Other (please explain)

19. The instructor for this course expects students to be able to understand on their own the concepts, ideas, or material from the required reading:
- Rarely
- Occasionally
- Most of the time
- Always

20 The instructor for this course makes this expectation clear to students
- In the course syllabus
- Verbally, in class
- Through class handouts
- Other (please explain)

21. The instructor for this course explains the vast majority (over 75%) of concepts, ideas, or material from the text during lectures.
- Rarely
- Occasionally
- Most of the time
- Always

22. To what extent does your instructor address the following?

22a. The structure and organization of the course text(s)?
- not at all
- only at the beginning of the semester
- only when a test is coming up
- throughout the whole semester

22b. Strategies for how to read the course text(s)?
- not at all
- only at the beginning of the semester
- only when a test is coming up
- throughout the whole semester

22c. Strategies for learning new vocabulary words in the course text(s)?
- not at all
- only at the beginning of the semester
- only when a test is coming up
- throughout the whole semester

22d. Taking notes on the information presented in the course text(s)?
- not at all
- only at the beginning of the semester
- only when a test is coming up
- throughout the whole semester

22e. Reading and using information presented in graphics or visual aids from the course text(s)?
- not at all
- only at the beginning of the semester
- only when a test is coming up

- throughout the whole semester

22f. How to read like an expert in the field?
- not at all
- only at the beginning of the semester
- only when a test is coming up
- throughout the whole semester

22g. How to prepare for class tests/quizzes?
- not at all
- only at the beginning of the semester
- only when a test is coming up
- throughout the whole semester

23. The instructor for this course directly references the required text(s) in class (by quoting from it, directing students to a particular passage, reading from it, etc.)
- Rarely
- Occasionally
- During most class sessions
- During every class session

24. The material for quizzes/tests in this course comes primarily from (please check all that apply):
- The course text(s)
- Class lectures/discussion
- Both the course text and the class lectures/discussion

25. Final grades for this course are based on (please check all that apply):
- Homework
- Written quizzes or tests
- Papers
- Presentations
- Lab or shop projects
- Participation
- Attendance
- In-class activities
- Other (please explain):

26. The top three challenges that I face in this course related to reading and studying text material include:
- Doing assignments regularly
- Understanding/remembering vocabulary or terms from the text
- Seeing relationships among ideas
- Translating/understanding text language
- Attending class sessions regularly

- Taking effective notes during class
- Taking effective notes while reading
- Preparing for tests
- Spending enough time studying outside of class
- Asking questions
- Being an effective test taker
- Being aware of college-level expectations
- Having background knowledge on the subject
- Other (please explain)

27. If you could make any recommendations to the instructor of this course about how to help you read and study more effectively in this course, what would they be?
     Comments:

FOR STUDENTS CURRENTLY OR PREVIOUSLY ENROLLED IN DEVELOPMENTAL READING

28. How well do you think your developmental reading coursework prepared you for the course you've chosen for responding in this survey?

- Excellent. I feel very prepared.
- Moderately. I feel somewhat prepared.
- Minimally. I feel less than prepared.
- I don't know.
- Other (please explain)_____
- Comments:

29. If you could make any recommendations to the staff at your college about how to improve the developmental reading courses, what would they be?

APPENDIX D: DR Faculty Focus Group Protocol

Informal focus groups (approximately 45-60 minutes)
    **General questions for discussion, with follow-up questions generated as needed.

1. What are the reading expectations you have for students in your courses?

2. How would you, if you were a student in your course, approach the current reading assignments?

3. Do you use readings reflective of other disciplines/fields in your courses?
    a. What?
    b. How?
    c. Why?

4. What are some of the strengths and weaknesses (specific to reading) that you notice with students in your courses?

5. What are students' attitudes toward reading in your courses?

6. How do you assess students' reading of required texts in your courses?

7. In higher education, there is a major focus currently on college-readiness. In what ways does your institution convey to you what constitutes a student being college-ready for reading at your institution?
    a. Do you know the criteria or measures? What are they?

8. How effective do you think the current developmental reading curricula are in preparing students for general/career tech education courses?
    d. If you could make any recommendations for change, what would they be?

9. Based on what you know about this study and our focus, do you have anything else to share? Anything else you think we should know? Any recommendations for others we should speak with?

APPENDIX E: CTE Faculty Focus Group Protocol

Informal focus groups (approximately 45-60 minutes)
 **General questions for discussion, with follow-up questions generated as needed.

1. What are the reading expectations you have for students in your courses?

2. How would you, if you were a student in your course, approach the current reading assignments?

3. How do you prepare students to read texts in their next-level courses in this major or in the careers related to your field?

4. In what ways do you discuss the reading demands/expectations of a professional in your field?

5. In what ways do you discuss with students how a person in your field might approach reading?

6. What are some of the strengths and weaknesses (specific to reading) that you notice with students in your courses?

7. What are students' attitudes toward reading in your courses?

8. How do you assess students' reading of required texts in your courses?

9. In higher education, there is a major focus currently on college-readiness. In what ways does your institution convey to you what constitutes a student being college-ready for reading at your institution?

10. What do you know about the developmental reading courses at your institution?
    a. How effective do you think the current developmental reading curricula are in preparing students for general/career tech education courses?
    b. If you could make any recommendations to the people who teach the reading courses, is there anything you'd want to say?

11. Based on what you know about this study and our focus, do you have anything else to share? Anything else you think we should know? Any recommendations for others we should speak with?

APPENDIX F: Student Focus Group Protocol

Informal focus groups (approximately 45-60 minutes)
**General questions for discussion, with follow-up questions generated as needed.

1. What is your current or intended major?
    a. What year are you?
    b. How many credits have you successfully completed?

2. Before you enrolled in classes at this college, what did you think the expectations would be as far as reading?
    a. How about studying?

3. How much reading is required in your classes?
    a. How does this compare with what you expected?
    b. How does this compare with what you did in high school?

4. How much studying is required?
    a. How does this compare with what you expected?
    b. How does this compare with what you did in high school?

5. What types of reading/what kinds of texts are you reading?
    a. How does this compare with what you expected?
    b. How does this compare with what you did in high school?

6. What are you expected to do with the information you read?
    a. How does this compare with what you expected?
    b. How does this compare with what you did in high school?

7. How much of the required reading do you actually do?
    a. Why?

8. Do your instructors ever discuss how people read in different subject areas?
    a. Can you provide example of this?

9. How well did your high school work prepare you for the courses you are in right now?

10. How well did your developmental reading course prepare you for general education or career technical education courses?

11. If you could make any recommendations about the developmental reading courses, what would they be? Why?

APPENDIX G: Text Usage Classroom Observation Checklist

Course:
Time/Day:
Text(s):

Instructor Text Usage/References	Yes	No	N/A	Frequency	Notes
Instructor's copy of the course text(s) is in within view					
Course text(s) is directly referenced					
Course text(s) is displayed or held up for students					
A course reading assignment is provided during the class session					
Text organization/ structure is mentioned					
Text organization/structure is explained					
A strategy for reading/studying the course text(s) is mentioned, explained, or modeled					
Class lectures are text-based or text-driven					
Class discussions are text-based or text-driven					

Class homework appears to be text-based or text-driven					
Multiple texts are incorporated					
Multi-modal texts are incorporated (i.e., online)					
Student-Generated Text References	**Yes**	**No**	**N/A**	**Frequency**	**Notes**
Course text(s) is directly referenced by a student					
Course text(s) is displayed or held up for others by a student					
Students ask questions about text content					
Students respond to instructor questions about content with text content					

APPENDIX H: Texts Analyzed, Including Text Type

SITE	COURSE	TEXT TITLE	AUTHOR	YEAR	TEXT TYPE
1	Programmable Logic Controllers I	*Programmable Logic Controllers*	Rabiee	2012	T
1	Introduction to Business	*Contemporary Business*, 15th ed.	Boone & Kurtz	2012	T
1		*Ten Steps to Improving College Reading Skills*, 5th ed.	Langan	2008	RW
		Playing with the Enemy	Moore	2006	N
	Basic Reading 2	*Brain on Fire*	Cahalan	2012	N
1	Core Networking Technologies	*Network + Guide to Networks*, 6th ed.	Dean	2013	T
1		*Ten Steps to Building College Reading Skills*, 5th ed.	Langan	2011	RW
		The Art of Racing in the Rain	Stein	2008	N
		Stronger	Bauman	2014	N
	Basic Reading 1	*Essential Study Skills*, 7th ed.	Wong	2012	T
1		*Nursing Diagnosis Handbook*, 10th ed.	Ackley & Ladwig	2014	CH
		Fundamentals of Nursing, 8th ed.	Potter, Perry Stockert, & Hall	2013	T
		Medical-Surgical Nursing Patient-Centered Collaborative Care, 7th ed.	Ignatavicius, & Workman	2013	T
		Manual of Diagnostic and Laboratory Tests, 4th ed.	Pagana & Pagana	2010	M
		Intravenous Infusion Therapy for Nurses, 2nd ed.	Josephson	2013	T
	Nursing	*Pharmacology: A Nursing Process Approach*, 7th ed.	Kee, Hayes, & McCuistion	2011	T
2	Industrial Manufacturing Technology	*Machine Tool Practices*, 8th ed.	Kibbe, Meyer, Neely, & White	2006	T

2					
	Introduction to Business	*Understanding Business*, 10th ed.	Nickels, McHugh, & McHugh	2013	T
2		*On Cooking*, 5th ed.	Labensky, Hause, & Martel	2011	M
	Culinary Techniques	*On Cooking Study Guide*	Stamm-Griffin	2011	TW
2	Introduction to Criminal Justice	*Criminal Justice in Action,* 7th ed.	Gaines & Miller	2015	T
2		*Mosby's Essentials for Nursing Assistants*, 4th ed.	Sorrentino & Remmert	2010	T
	Basic Nursing Assistant	*Mosby's Essentials for Nursing Assistants Workbook*	Sorrentino, Remmert, & Gorek	2010	TW
2		*Building Vocabulary Skills Short Version*, 4th ed.	Nist	2010	VW
		Ten Steps to Building College Reading Skills, 5th ed.	Langan	2011	RW
	Reading Comprehension Strategies II	RDG 090 (instructor-designed text)	Instructor	2013	C
2		RDG 091 (instructor-designed text)	Instructor	2013	C
		Improving Vocabulary Skills	Nist	2010	VW
	Reading Comprehension Strategies III	*Effective Vocabulary*	Henry & Pongratz	2007	VW
2		*Effective College Learning*, 2nd ed.	Holschuh & Nist-Olejnik	2011	T
		Pearson Textbook Reader, 3rd ed.	Novins	2003	C
		Advanced Vocabulary Skills, 2nd ed.	Nist	2010	VW
	Learning Strategies for College Texts	*Essential Study Skills,* 8th ed.	Wong	2015	T

		Ten Steps to Building College Reading Skills, 5th ed.	Langan	2011	RW
		Essential Academic Vocabulary	Huntley	2006	VW
2	Technical Writing	*Essentials of Business Communication*, 9th ed.	Guffey & Loewy	2013	T
2	Introduction to Hospitality Management	*Exploring the Hospitality Industry*, 2nd ed.	Walker & Walker	2012	T
3	Introduction to Computers	*CMPTR2*, 2nd ed.	Pinard & Romer	2014	T
3	Materials Management Processes	*Materials Management an Introduction and Overview* (instructor-designed text)	Instructor	2013	T
3	Metrology	*High Performance Manufacturing, Manufacturing Skill Standards Council*	MSSC Board	2006	M
3		*Managing Wildlife Habitat on Golf Courses*	Dodson	2000	T
	Horticulture	*Landscape Restoration Handbook*, 2nd ed.	Harker, Libby, Harker, Evans, & Evans	1999	CH
3	Introduction to Business	*Understanding Business*, 10th ed.	Nickels, McHugh & McHugh	2013	T
3	Introduction to Computers	*Network+ Guide to Networks*, 6th ed.	Dean	2013	T
3		*The Pearson Textbook Reader*, 3rd ed.	Novins	2011	C
	Reading Improvement	*Guide to College Reading*	McWhorter	2012	T
		The Fault in Our Stars	Green	2012	N
3		*House on Mango Street*	Cisneros	1984	N
	Basic Reading Skills	*The Skilled Reader*, 3rd ed.	Henry	2010	RW

APPENDIX I: DR Text Lexile Measures

Site	Title	Lexile Score Range	Lexile Score Mean
1	*Ten Steps to Improving College Reading Skills*, 5th ed.	890L-1100L	968L
	Playing with the Enemy	600L-1380L	930L
	Brain on Fire	640L-1230L	926L
1	*Ten Steps to Building College Reading Skills*, 5th ed.	620L-1010L	814L
	The Art of Racing in the Rain	510L-1200L	714L
	Stronger	610L-980L	750L
	Essential Study Skills, 7th ed.	920L-1360L	1160L
2	*Building Vocabulary Skills Short Version*, 4th ed.	X	X
	Ten Steps to Building College Reading Skills, 5th ed.	620L-1010L	814L
	RDG 090 (instructor-designed text)	X	X
2	RDG 091 (instructor-designed text)	X	X
	Improving Vocabulary Skills	X	X
	Effective Vocabulary	X	X
2	*Effective College Learning*, 2nd ed.		
	Pearson Textbook Reader, 3rd ed.	X	X
	Advanced Vocabulary Skills, 2nd ed.	X	X
	Essential Study Skills, 8th ed.	920L-1360L	1160L
	Ten Steps to Building College Reading Skills, 5th ed.	620L-1010L	814L
	Essential Academic Vocabulary	X	X
3	*The Pearson Textbook Reader*, 3rd ed.	1070L-1460L	1248L
	Guide to College Reading	820L-1240L	962L
	The Fault in Our Stars		
3	*House on Mango Street*	420L-1380L	986L
	The Skilled Reader, 3rd ed.	X	X

APPENDIX J: CTE Text Lexile Measures

Site	Title	Lexile Score Range	Lexile Score Mean
1	*Programmable Logic Controllers*	780L-1160L	966L
1	*Contemporary Business*, 15thed.	1160L-1360L	1266L
1	*Network + Guide to Networks*, 6th ed.	1080L-1350L	1222L
1	*Nursing Diagnosis Handbook,* 10th ed.	960L-1200L	1100L
	Fundamentals of Nursing, 8th ed.	950L-1440L	1160L
	Medical-Surgical Nursing Patient-Centered Collaborative Care, 7th ed.	1200L-1370L	1268L
	Manual of Diagnostic and Laboratory Tests, 4th ed.	840L-1340L	1130L
	Intravenous Infusion Therapy for Nurses, 2nd ed.	690L-1560L	1244L
	Pharmacology: A Nursing Process Approach, 7th ed.	1080L-1250L	1130L
2	*Machine Tool Practices*, 8th ed.	890L-1330L	1164L
2	*Understanding Business*, 10th ed.	1070L-1320L	1158L
2	*On Cooking*, 5th ed.	1090L-1380L	1232L
	On Cooking Study Guide	X	X
2	*Criminal Justice in Action*, 7th ed.	1300L-1560L	1374L
2	*Mosby's Essentials for Nursing Assistants*, 4th ed.	650L-1950L	1216L
	Mosby's Essentials for Nursing Assistants Workbook	X	X
2	*Essentials of Business Communication*, 9th ed.	860L-1140L	1068L
2	*Exploring the Hospitality Industry*, 2nd ed.	1100L-1420L	1244
3	*CMPTR2*, 2nd ed.	1050L-1370L	1268L
3	*Materials Management an Introduction and Overview*	1140L-1200L	1168L
3	*High Performance Manufacturing, Manufacturing Skill Standards Council*	850L-960L	912L
3	*Managing Wildlife Habitat on Golf Courses*	1110L-1320L	1224L
	Landscape Restoration Handbook, 2nd ed.	1090L-1400L	1206L
3	*Understanding Business*, 10th ed.	1070L-1320L	1158L
3	*Network+ Guide to Networks*, 6th ed.	1080L-1350L	1222L