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# The Function and Use of the Textbook in an Undergraduate Nursing Program

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THE FUNCTION AND USE OF THE TEXTBOOK  
IN AN UNDERGRADUATE NURSING PROGRAM

A Dissertation

Submitted to the School of Graduate Studies and Research

In Partial Fulfillment of the Requirements for the Degree

Doctor of Philosophy

Ryan David Costanzo

Indiana University of Pennsylvania

December 2009

Indiana University of Pennsylvania  
The School of Graduate Studies and Research  
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tool for learning maintained or even increased in importance as students progressed through the program.

This research concludes that success in the undergraduate nursing program is determined in large part by having the advanced literacy skills needed to transfer textbook-based concepts to multiple choice examinations and clinical situations. Students unable to bridge the gap between academic, textbook knowledge and clinical practice face an insurmountable barrier to their goal of becoming registered nurses. There is a shortage of trained nurses in the United States, and this research offers evidence that efforts to alleviate this shortage must take into account the literacy demands influencing students' success.

## ACKNOWLEDGEMENTS

I never thought I would stay in school long enough to earn a doctoral degree. Many who know me have heard me say that I am at a loss to explain how a person like myself who can hardly sit still for five minutes could succeed at writing a dissertation. That said, I know that there were many people along the way who made this process possible—and even enjoyable—for a man who struggles with the sedentary nature of academic work.

I came to Indiana University of Pennsylvania as an undergraduate in 1994. Early on, I had the opportunity to take my required literature class under the tutelage of T. Kenneth Wilson. His outgoing personality, clever wit, and great intellect prompted me to consider English as a major. And while he was perhaps my earliest mentor as an undergraduate at IUP, he was not my only mentor. I owe a debt of gratitude to professors who are still teaching classes at IUP, like Gay Chow, as well as professors now enjoying retirement, like Rosaly Roffman, and professors unfortunately no longer with us, like Raymond Thomas. I also owe many thanks to the students who shared the classroom with me, as they made the experience of learning so much more meaningful.

My graduate coursework at Duquesne University offered me a solid foundation for my doctoral endeavor. Without the assistance of Daniel Watkins, I would not have had the opportunity to quit my day job and return to school full-time. I also am grateful to Ruth Newberry, with whom I first entered the classroom as a teacher, and Frederick Newberry, who made me a better writer. My decision to move from the study of literature to the study of linguistics was

influenced by Rodney Hopson and Derek Whordley of Duquesne University's School of Education. I trace much of my scholarly interests today back to these two individuals. It would also be remiss not to mention classmates like Patricia Callahan and Rich Clark, whose academic and pedagogical insights I still solicit.

When I returned to IUP to complete my doctoral degree, I was impressed both by the graduate faculty and by my fellow classmates. Financial assistance, in the form of a scholarship and research assistantships, made it possible for me to remain a full-time student and to complete my coursework in a timely manner. I will not soon forget such generosity on the part of Donald McAndrew and others. In terms of the faculty, I can honestly say that they are some of the most committed educators I have seen anywhere. Without the teaching of Ali Aghbar, Carole Bencich, David Hanauer, Claude Hurlbert, Gian Pagnucci, Lilia Savova, Dan Tannacito, and Mike Williamson, I would not be the student—and educator—that I am today. Nancy Hayward, Jean Nienkamp, and Bennett Rafoth enjoy solid reputations for their teaching and scholarship. I am extremely fortunate to have completed this dissertation under their guidance. My conversations with Lynanne Black regarding research methodology and cognitive psychology were invaluable, and I appreciate that she never tired of my questions. Others who provided answers in times of need include John Mills, whose thoughtful guidance through the IRB process helped me tremendously, and IUP librarians James Hooks and William Daugherty, who assisted me with academic research dating back to my senior year of high school.

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## CHAPTER 1

### INTRODUCTION TO THE PROBLEM

#### Introduction

The college for which I teach (to be referred to as “William Penn College”) prepares students for careers in business, criminal justice, health sciences, and education. William Penn College, located in Pennsylvania, serves approximately 2,000 students, most of whom claim as their permanent residencies “William Penn County” and nearby counties. Fewer than 5 percent of students come to William Penn College from another state. Students are drawn to William Penn College because, as a senior college official mentioned at a recent graduation ceremony, it offers majors that are appealing to students even in times of economic uncertainty. Nursing is one such major, and this qualitative research project is a study of students working toward completion of the two-year associate’s degree in nursing.

The undergraduate nursing program at William Penn College is attractive to students because of the career opportunities available in as little as two years from the beginning of coursework. During the Fall 2007 semester when I collected data for this dissertation, there were 427 students seeking either an associate’s or a bachelor’s degree in nursing. From my own experience as a teacher of first-year students, I know that many who pursue nursing as a major do so because it is perceived by them to be practical—to be a hands-on discipline as opposed to being theoretical and abstract. However, students soon

learn that there is more to being a nursing student than mastering hands-on, clinical skills. The amount of reading and studying required for academic success in the undergraduate nursing program comes as a shock to many learners whose initial conceptualization of the study of nursing did not take into account the high-stakes multiple choice tests that they face each week that are based on their readings and on lectures—tests designed to prepare them for the National Council Licensure Exam (hereafter, NCLEX). Any nursing student aspiring to become a professional nurse must pass this exam.

Nursing students are immersed in a test-intensive environment that demands a high level of literacy in order to succeed academically. Tests based on textbook content, written in a manner consistent with the style of the NCLEX, are the primary means by which competency is assessed. Indeed, only 15 out of 640 total points in the first semester nursing course and 25 out of a total of 400 points in the fourth semester nursing course are awarded for assignments other than multiple choice tests, and students' clinical experiences in healthcare settings are graded only on a pass or fail basis. Without the literacy skills needed for academic success, students will not only fail to realize their own desire for a meaningful career, but society on the whole will suffer in light of the fact that there is a shortage of nurses in the United States. Therefore, there is a real need to understand the literacy required for success in undergraduate nursing programs as this literacy affects not only retention rates at colleges and universities but students' professional aspirations and the quality and availability of US healthcare.

This dissertation research is concerned with the role of the textbook within the nursing curriculum and the process by which students acquire the literacy needed for success in the two-year nursing program leading to an associate's degree in nursing. As I wished to learn about the process of literacy acquisition, I studied students from opposite ends of the spectrum within the undergraduate nursing program—Level 1 beginning students and Level 4 advanced. Two basic questions guided the research: (1) What is the role of the textbook in the undergraduate nursing program at William Penn College?, and (2) How do students utilize the textbook as they train to become nurses? The undergraduate nursing program's focus on testable textbook-based concepts oriented me toward this literacy artifact.

Each of the two basic questions was connected to an initial hypothesis. In the case of the first question regarding the role of the textbook in the undergraduate nursing program, I presumed that Level 1 students, those in the first semester of the first year of study, might have a different understanding of the textbook's role than Level 4 students, those in the final semester of the second (and final) year of study. For example, I thought it likely that the introductory students might view textbook reading as either more important or less important than the advanced students. In the case of the second question, which concerns textbook usage, it seemed reasonable to assume that the advanced students would be able to describe far more strategies for making sense of textbook-based concepts than the introductory students. What I learned as a result of my study is that the textbook maintained or even increased in its

relevance as a tool for learning as students progressed through the undergraduate nursing program. I also discovered that the Level 1 and Level 4 students were relying heavily on similar strategies to master textbook content. Additionally, I learned that students in the two-year nursing program must be able to cope with the high literacy demands of a course of study widely assumed to be vocational and hands-on. It is extremely unlikely that students unable to bridge the divide between classroom knowledge and clinical practice could ever become registered nurses.

### **Textbooks and Legitimate Knowledge**

The *Oxford English Dictionary Online* defines a textbook as “A book used as a standard work for the study of a particular subject; now usually one written specially for this purpose; a manual of instruction in any science or branch of study, especially a work recognized as an authority.” These authoritative works are pervasive in Western higher education, and to a large extent, they shape the way students experience any given major—that is, they shape students’ perceptions of the politics and reality of any particular field of study. Silverman (1991) writes “that textbooks, along with lectures based on the content in them, are the major conveyors of knowledge, ideas, and information to students in college and university courses” (p. 164). Textbooks’ purpose is to serve as vehicles for the transmission of knowledge, and it is important not to overlook the social dimension within which that knowledge is made legitimate.

Textbooks are, as Apple and Christian-Smith (1991) convincingly argue, classroom artifacts that are inherently political; as classroom artifacts, “They signify—through their content *and* form—particular constructions of reality, particular ways of selecting and organizing that vast universe of possible knowledge” (p. 3). Textbooks serve as “reifications” (Barton & Hamilton, 2005; Wenger, 1998, pp. 58-71) of disciplinary knowledge that does not exist in a vacuum. Rather, disciplinary knowledge and the reifications that make that disciplinary knowledge tangible are socially shaped. Building on the earlier work of Williams (1961), Apple and Christian-Smith propose that any given textbook testifies to “someone’s selection, someone’s vision of *legitimate knowledge and culture*” (p. 4, emphasis mine).

In *Language and Symbolic Power*, Bourdieu (2001) argues “that authority comes to language from outside”—from “authorized spokesperson[s]” and institutions (p. 109). Such people and institutions are therefore the transmitters “of the discourse of authority” (Bourdieu, 2001, p. 111). Apple (1991) draws upon Bourdieusian thinking in “The Culture and Commerce of the Textbook,” and he posits that it is none other than the classroom textbook that passes on the legitimate knowledge of the academic disciplines in elementary, secondary, and postsecondary classrooms (p. 24). Indoctrination and education go hand-in-hand, as textbooks pass on knowledge that is relative to, and valued by, specific disciplines.

Within the disciplines, textbooks serve a basic educational purpose. The pedagogical function of these textbooks, as Woodward (1993) explains, is “to

provide an overview of [the academic fields] in sufficient breadth and depth that students can begin to understand what [the disciplines are] about, and the methodologies and scholarship that underpin [them]" (p. 115). In so doing, textbooks "are a standard resource, reference, and instructional tool" (Woodward, 1993, p. 115). Despite advances in educational technology since the printing of this research on the textbook (Apple, 1991; Apple & Christian-Smith, 1991; Silverman, 1991; Woodward, 1993), the textbook remains a standard in postsecondary classrooms. It has been supplemented, but not replaced, by CD-ROMs, publishers' websites, and other types of print and electronic educational resources.

My working definition of a textbook as it relates to my study is this: A textbook is a written work recognized by students and teachers as an authority on a given subject. In its role as an authority, a textbook offers students and teachers a structured overview of the topics and subtopics related to the subject at hand. In terms of its layout, a textbook contains fairly standard, predictable features, from the table of contents near the front to the index at the back. The content knowledge within a textbook is considered to be representative of the thinking currently taking place in a given discipline. This content knowledge must be mastered if students are to be deemed proficient in the general subject covered by the textbook; therefore, the textbook can be said to play an important part in a student's educational experience.

## **Textbook Supplements**

The website, [textbookfacts.org](http://textbookfacts.org), which is sponsored by the Association of American Publishers, Inc., cites Zogby research that indicates “84 percent of college instructors believe students need a textbook to pass their courses, and 75 percent require or recommend their students use supplementary books or digital materials” (“What Everyone Should Know About College Textbooks”). The Association of American Publishers uses the term, “bundles,” to describe the package a student receives whenever he or she purchases a textbook that comes with additional learning resources, all held together, or bundled, with shrink-wrap. As indicated on the website, “These [bundled] components may include study guides, practice tests, CDs, videos and a variety of online support including tutors, graded homework, research, editing, language labs, problem and practice sets, artwork and other online tools” (“What Everyone Should Know About College Textbooks”). The day of the textbook as an independent, stand-alone resource has passed.

Textbook bundles, according to the Association of American Publishers’ website, serve three basic purposes: (1) “[to] meet the changing needs of higher education, such as the diversity in students’ learning styles, (2) [to] address the increase in part-time faculty members who require greater instructional support, and (3) [to] meet the demand for supplements that will enhance student learning, as well as the increased use by colleges of online course management systems” (“What Everyone Should Know About College Textbooks”). While the day of the textbook as an independent, stand-alone resource has passed, I argue that its

foundational role remains unshaken. It has not been replaced, simply augmented. No other resource is yet in a position to serve effectively as a textbook substitute.

### **Textbooks and Communities of Practice**

As undergraduates, students are introduced to the academic disciplines and, ideally, given the tools necessary to participate in the dialogues taking place within these disciplines. One such tool that empowers academic exploration and classroom dialogue is the college textbook. Support for understanding the textbook-as-tool is found in the literature (Bazerman, 1988; Gee, 2000, 2001a, 2001b, 2002; Holmes & Meyerhoff, 1999; Lave & Wenger, 1991; Rogoff, 1990; Saville-Troike, 2003; Wenger, 1998; Wenger, McDermott, & Snyder, 2002, as cited by Endsley, Kirkegaard, & Linares, 2005, p. 29). As a tool, the college textbook helps to facilitate students' participation—or apprenticeship—within academic communities of practice, a concept that informs much of the scholarship of thinkers like Gee (2000, 2001a, 2001b, 2002); Holmes & Meyerhoff (1999); Lave & Wenger (1991); and Wenger (1998). Textbooks contain the “interpretive frameworks” (Silverman, 1991, p. 165) that have been established within a discipline, and they serve as a vehicle for delivery of the content information necessary for students to participate more fully in the dialogue and activity taking place within that discipline.

## **Rationale for Researching the Function and Use of the Textbook in the Undergraduate Nursing Program**

Among the various health sciences majors offered by William Penn College, the nursing major is considered to be an especially challenging course of study; stories abound of the stress and anxiety associated with classes and clinicals. A colleague in the nursing program cited a 72 percent graduation rate for the 2-year nursing program. According to this colleague, the first point at which attrition occurs is at the end of the first semester, first year of study. Attrition also occurs during the second and third semesters of study, with roughly the same number exiting during each of these two semesters. The students who leave the program at the end of the first semester, though, are greater in number than those who leave during the second and third semesters.

Reasons for leaving undergraduate nursing often depend on how far along in the program students are when they dissociate. Students who leave during the first semester do so out of personal choice (i.e., they switched majors, took a job, went to another school, etc.) or because of grades (i.e., they are placed on probation and/or removed from the nursing program). Students who leave at later points are not usually choosing to leave nursing; rather, they are dismissed for academic reasons. My colleague also cited a small number of students who are threatened with dismissal during the final semester, characterizing this as being fairly “traumatic” for the students. But looking beyond the trauma experienced by individual students, the profession of nursing suffers—and society stands to suffer—as a result of fewer trained nurses. A review of the literature uncovers

concerns about retention in academic nursing programs (Deary, Watson, & Hogston, 2003; Uyehara, Magnussen, Itano, & Zhang, 2007) and in professional nursing (Crow, Smith, & Hartman, 2005). Serious work is needed to retain more nursing students, and this work falls not only to nursing instructors but to teachers and researchers of literacy. Writing for the *Harvard Educational Review*, Shanahan and Shanahan (2008) conclude “that the literacy demands on students are unique, depending on the discipline they are studying” (p. 48). This dissertation research into the function and use of the textbook in an undergraduate nursing program contributes to scholarship in the field of literacy studies concerned with such discipline-specific literacy discussions. In addition, it embodies both the social and the linguistic activity views on literacy described by Colombi and Schleppegrell (2002, pp. 06-12).

My understanding of textbook reading within an undergraduate nursing program is that it is a high-stakes endeavor from the standpoint of students seeking to earn passing grades, from the standpoint of instructors who need to train and retain student nurses, and from the standpoint of society, which is in need of competent nurses. Mann (2000) offers support for such an understanding, writing that “[Academic or textbook reading] is made public and evaluated through examinations, projects, and seminar discussions . . . In the educational context, the private and personal activity of reading almost always has the potential for a public sharing of its outcome” (p. 312). Continuing along Mann’s line of thinking, I would add honor society inductions, in which a few of the students involved in this study participated, and academic dismissal, which

was the fate of one of the students, as being instances in which textbook knowledge is made public. Likewise, the passing or failing of state boards, like the NCLEX, should also be added to the list. It is evident that on many occasions, the private act of reading is brought into the public spotlight.

This investigation into the function and use of the textbook in a two-year undergraduate nursing program is an investigation into the process by which students as members of a community of practice acquire the literacy needed for academic success—literacy that involves using the textbook as a tool to master the disciplinary knowledge of nursing. As attitudes, behaviors, and literacy practices develop over a period of time and as a result of interaction with other people and other texts (Wenger, 1998), the community of practice concept offers a solid foundation for this research project.

### **Overview of the Research Project**

This research project is a study of the function and use of the textbook in the two-year nursing program leading to the associate's degree in nursing at William Penn College. The goal of students enrolled in this program is to obtain the educational credential required for professional employment as registered nurses. Two groups of students were studied. One group was made up of a freshman, Level 1 cohort, and the second group contained senior, Level 4 nursing students. In essence, I used a “bookend” approach by interviewing Level 1 students in their first semester of the program and Level 4 students who were in their final semester. In terms of the academic study of nursing, there was one

group of “newcomers” and one group of “old timers” (Lave & Wenger, 1991, p. 56). The bookend approach presented itself as the most likely way to capture the development of textbook-centered literacy practices as students progressed through the course of their studies. This approach also helped to identify shifts in attitude in regard to the relationship between classroom knowledge and clinical (pre)professional nursing practice.

I selected a total of 24 students to participate; 12 Level 1 students and 12 Level 4 students. These 24 names were drawn randomly from those in the Level 1 and Level 4 nursing classes who consented to participate. Not all students who indicated their willingness to participate and who were invited to participate actually did so. Those who did participate are identified below:

#### Level 1

Abigail, Adam, Alice, Allison, Anna, Annette, and Amy

#### Level 4

Barb, Ben, Beth, Betty, Brad, Brandon, Breanna, Brigitte, Brittany, and Bryan

The participants’ names were changed to protect their privacy. I gave all Level 1 students names beginning with the letter “A” and all Level 4 students names beginning with “B.” All students listed permanent addresses in close proximity to William Penn College, with two exceptions, both from the Level 4 group: Beth

and Brittany listed permanent addresses located between 100 and 125 miles from William Penn College. All participants were native speakers of English.

Individual interviews were used to obtain additional information from participants. Such information was used to pursue themes that emerged during focus group meetings. These individual interviews were conducted largely through e-mail correspondence, but I did have the opportunity to engage in face-to-face conversations, as well. The students who participated in the individual interviews were randomly selected from the students who participated in the focus groups and included Alice and Anna from the Level 1 group and Betty, Brandon, and Breanna from the Level 4 group. Annette, who was dismissed from the undergraduate nursing program at the end of her first semester, discontinued her participation in the research project. She did not attend the second focus group meeting nor did she continue her participation in the individual interviews for which she had been randomly selected. Annette and Amy from the Level 1 group and Barb from the Level 4 group were the quietest participants during the group interviews. All other members of both groups participated actively in discussions.

In addition to my work with these Level 1 and Level 4 students, I surveyed the nursing faculty to obtain data on the reading required of professional nurses, study strategies sanctioned in the undergraduate nursing program, and general perceptions regarding reading and studying in the undergraduate nursing program. Also, I obtained information on the required reading (i.e., the literacy artifacts) for the Level 1 and Level 4 nursing classes, the grading scale, and the

point spread by referring to course syllabi. At various points it was necessary for me to obtain institutional information on William Penn College and its students, which was made possible by referencing William Penn College's website and as a result of conversations with various administrators.

## **Conclusion**

This study involves a specific population of learners as they engaged in literacy practices geared toward mastery of a specific discipline. This research sheds light on students' perceptions of textbook reading and the strategies they employed to make that reading more meaningful. It also serves as an investigation into the linkage between use and comprehension of the textbook and academic success.

To conduct this research, I relied on focus group interviews, individual interviews, surveys of nursing instructors, course syllabi, and institutional data to understand what it means to be literate within the domain of undergraduate nursing and, more specifically, to understand the role of the textbook in the two-year undergraduate nursing program. Two basic questions guided the research: (1) What is the role of the textbook in the undergraduate nursing program at William Penn College?, and (2) How do students utilize the textbook as they train to become nurses? This dissertation centers on the function and use of the textbook more so than on other literacy artifacts because the undergraduate study of nursing emphasizes the importance of mastering textbook-based content and displaying mastery of such content on high-stakes multiple choice

tests designed to prepare students for the NCLEX. Students' academic success and the future of the professional practice of nursing depends upon the acquisition and use of literacy skills critical to the comprehension of textbook-based content and in the transferability of textbook-based content to multiple choice examinations and to clinical practice.

## CHAPTER 2

### REVIEW OF LITERATURE

#### **Introduction**

The literature cited in this section is intended to contextualize the literacy demands associated with undergraduate nursing programs and to emphasize the process of enculturation within which students must participate if they are to succeed academically. A review of the literature regarding textbook reading, advanced literacy and scientific discourse, communities of practice, the nursing shortage, and the preparation of future nurses provides the necessary background for this qualitative research project. Specifically, this review of literature highlights the difficulties inherent with textbook reading—especially with science-based texts, and it also draws attention to factors influencing readability. In addition, I describe what is meant by the community of practice concept—a concept that takes into account the role of language and activity in shaping the thought and behavior of community members. Finally, I review literature that draws attention to the need to recruit and train future nurses as well as to provide teachers and scholars of literacy with a degree of insight into how disciplinary insiders view the classroom and clinical components of undergraduate nursing programs. Please note that literature relevant to the layout and design of this project is handled in the following chapter.

## **Textbook Reading**

The ability to read and learn from textbooks is foundational to much postsecondary coursework. From the standpoint of the learner, however, textbook reading is often difficult, and research indicates that the textbooks students encounter in college classrooms “are conceptually more sophisticated than those used at the secondary level” (Alvermann & Qian, 1994, as cited by Taraban, Rynearson, & Kerr, 2000), making it logical to conclude that even students who did not struggle with learning from high school textbooks are not guaranteed success in the postsecondary environment. That said, the benefits of mastering textbook content (e.g., earning high marks on exams and eventually gaining meaningful, financially rewarding employment) can be high. In this section, I will address the difficulty inherent in learning from textbooks, the textbook as part of a larger social context, and what research says about students’ use of reading strategies.

The following passage from Pugh, Pawn, and Antommarchi (2000) offers a helpful discussion of the generic college textbook, from its status as a staple of college learning to the problems associated with reading college textbooks to the document design of textbooks:

Any kind of reading material can be assigned in a college class, but most introductory courses use a traditional comprehensive textbook that provides foundational knowledge in the discipline. In addition, supplemental readings in the form of instructor-composed readers and trade books are common in many courses [ . . . ]

Large, comprehensive textbooks. . . . do not invite reader construction of meaning, honor the knowledge the reader brings to the text, or lend themselves to critical reading. . . . These textbooks usually have most if not all of the following characteristics: high conceptual density; compression of information: a paragraph may represent a volume of research; use of special terminology, often as the object of learning; multiple ways of presenting information through print, including prose, tables and graphs, photos and illustrations, boxed anecdotes, advance organizers and summaries; organization that reflects the logic of the discipline represented or patterns that dominate thinking in the field. (pp. 30-31).

Biber, Conrad, Reppen, Byrd, and Helt (2002) likewise point to the difficulty of reading from textbooks while not overlooking the language spoken in college classrooms, a factor that adds even more complexity to the literacy demands of college classrooms:

Students must deal not only with informationally dense prose but also with interactive and involved spoken registers. They must handle texts with elaborated reference as well as those that rely on situated reference, and texts with features of overt persuasion as well as texts that lack those features. They must understand discourse that uses an impersonal style with many passives as well as discourse that tends to avoid passives. . . . [But overall] The written registers—regardless of their specific purpose—are characterized by informationally dense prose, a very nonnarrative

focus, elaborated reference, few features of overt persuasion, and an impersonal style. (p. 41)

Textbooks are commonplace—inescapable for the college learner. And while they serve a very basic function, what is required to make sense of them is not at all basic. Often densely written, textbooks are best utilized by skilled, sophisticated readers—readers who are not discouraged by their taxing cognitive demands.

One productive way to talk about the literacy demands of textbook reading is through the lens of research that investigates the psychology of reading—specifically, research on the issue of cognitive load. Reading academic textbooks is a challenge in terms of the cognitive effort required to engage with that task. Recent research by McCrudden, Schraw, Hartley, & Kiewra (2004) concludes that “learning is hindered under high cognitive load scenarios” (p. 292), and “well-organized texts reduce extraneous cognitive load because less effort is needed for the integration of related idea units and less effort is devoted to search for and maintain related information” (p. 291). The productive reading of academic text, as measured in terms of concept learning and general comprehensibility, is made easier or more difficult by choices concerning overall organizational scheme (McCrudden et al., 2004).

While a textbook’s organizational scheme has been shown to contribute to how easily students learn textbook content, the issue of schema—or background knowledge—also merits discussion. Paul and Verhulst (2007) note that:

Schemas develop from our experiences; information from these experiences is organized and stored in our long-term memory as background knowledge. In learning, schemas are the building blocks as they help us connect new information to our stored knowledge. (p. 208)

Having background knowledge of a topic makes reading easier. In terms of reading from textbooks, readers suffer when they are unfamiliar with the topic at-hand. As Paul and Verhulst (2007) explain:

Prior knowledge about a topic makes it possible for readers to fill in gaps, read between the lines, and make sense of what they are reading; a developed schema can result in reading ease and increased comprehension. (Smith, 1994; Smith & Swinney, 1992; Richgels, 1982; as cited by Paul & Verhulst, 2007, p. 208)

These researchers also cite work by Smith and Swinney (1992) that identifies an increase in reading time in the absence of schema (Paul & Verhulst, 2007, p. 215), and research by Casazza (2003) notes that inadequately formed schema present difficulties for the learner as he or she struggles to process new information (p. 188). Additional discussion on the topic of schema in facilitating learning and problem solving is found in the work of Gerjets, Scheiter, and Catrambone (2004). It is evident based on a review of this literature that a clear relationship exists between schema and (1) a student's level of textbook comprehension and (2) the rate at which the textbook can be read. Discussions of schema have also recently appeared in published medical education research (Bowen, 2006).

Students' ability to manage the task of textbook reading, then, is influenced by such factors as the textbook's organization and their previous exposure to concepts covered in the textbook. Research indicates that it is not productive to view the textbook as an isolated object-unto-itself, but rather as an object with which a reader interfaces. Ede and Lunsford (2003) explain that readers bring to the written text "their own experiences and expectations" (p. 81), which are directly related to sociocultural factors of gender, race, and class, and in general, their experiences with language (see Finn, 1999; Hudson, 2001; Monaghan & Hartman, 2002).

In the previous chapter, I cited research by Apple (1991), Apple & Christian-Smith (1991), Bourdieu (2001), Silverman (1991), and Woodward (1993) to position the textbook as an authoritative resource that contains a vision of a field of study deemed legitimate by members of an academic community. Textbook authors and textbook readers are engaged in an active process of constructing and interpreting the reality of the academic disciplines. As nursing students—or for that matter, any students—read their textbooks, they are investing energy in a process whereby they will begin to understand how to think more like a practitioner of their discipline. In other words, the students' thinking is shaped by the text, which was itself shaped by the thinking of an expert or experts in the discipline. Adherents to the New Literacy Studies (Barton & Hamilton, 2000; Gee, 2000, 2001a, 2001b, 2002; Newman, 2002; Street, 2001) stress the social nature of *all* literate activities, and reading from the textbook is no exception. Textbook reading occurs within a social context, and the

acquisition of textbook knowledge offers an opportunity to earn real economic and social benefits (Brandt, 2001; Finn, 1999).

This research project privileges textbook reading as a “literacy event,” a concept I borrow from the work of Heath (2001). Citing her earlier work from 1978, Heath (2001) explains that “a literacy event is any occasion in which a piece of writing is integral to the nature of participants’ interactions and their interpretive processes” (p. 445). She goes on to say:

In studying the literacy environment, researchers describe: print materials available in the environment, the individuals and activities which surround print, and ways in which people include print in their ongoing activities. A literacy event can then be viewed as any action sequence, involving one or more persons, in which the production and/or comprehension of print plays a role. (Anderson, Teale, & Estrada, 1980, as cited by Heath, 2001)

Activities involving college textbooks, then, like reading to prepare for tests or looking up information relevant to mastering a specific clinical skill, are literacy events. Such literacy events are found not simply within a discourse community but within a community of practice that involves not only listening, speaking, reading, and writing, but consistent, engaged activity with other community members to achieve established common goals.

Based on the research offered in this section as well as in the previous chapter, it is evident that textbooks are (1) a mainstay of the undergraduate curriculum; (2) often difficult to read; and (3) necessary for students to use if they

are to participate meaningfully in an academic community. What, then, is known about students' use of the various reading strategies at their disposal?

First, the good news: Research “indicate[s] that college students are aware of the utility of reading comprehension strategies, and that the strategies do make a difference in college students' academic performance” (Taraban, Rynearson, & Kerr, 2000, p. 303). Lenski and Nierstheimer (2002) likewise conclude that “The use of strategies during reading . . . is powerful. Teachers, therefore, need to teach students how, when, and why to use a variety of reading . . . strategies” (p. 140). Holschuh (2003) reiterates the need for educators to teach the “how, when, and why,” and she does so by calling attention to the bad news: Namely, that “average and low performing students [do] not seem to understand the conditional nature of strategy use in the content-areas” (Holschuh, 2003, p. 326), and, in many cases, these weaker students “never [move] beyond memorizing terms” (p. 323). Similar issues are noted in the work of Cao and Nietfeld (2007), whose research uncovered “students [who] did not vary their study strategy selection over the semester even when they perceived different kinds of difficulties” (p. 36).

Citing the research of Pressley (1995), Lenski and Nierstheimer argue that more skilled readers are able to “selectively and flexibly” utilize a range of reading strategies (p. 127). Based on this research, and on the work of the other researchers cited in this section, it seems reasonable to conclude that many students who struggle with the task of textbook reading do so because they are reluctant to employ the full range of strategies at their disposal, focusing only on

such methods as rote memorization, and that they fail to appreciate that different courses may require different strategies. These deficiencies act as barriers to students' fuller participation in postsecondary academic communities.

### **The Acquisition of Advanced Literacy and the Discourse of Science**

In *Literacy in Theory and Practice*, Street (1984) argues that when one teaches literacy, one teaches “not just about phonetics or technical ‘skills’ but about a whole approach to the use of one’s own language and control over one’s own life” (p. 15). That said, it should be noted that the idea of “one’s own language” is a bit tricky; as it has often been said in academic circles, very few students would cite academic discourse as their primary means of communication—as their “own language.” College educators expose students to specialized forms of communication that differ significantly from forms relied upon to meet daily communicative needs. This is especially true in regard to reading in the sciences and applied sciences—disciplines that revolve around densely written, technical discussions found in textbooks that demand advanced literacy skills (Colombi & Schleppegrell, 2002; Lemke, 2002) on the part of the reader. In this section, I focus on a discussion of advanced literacy and the discourse of science, as students enrolled in the undergraduate nursing program are required to have a background in the general sciences and nursing textbooks resemble science textbooks in terms of their overall layout and language.

The literacy practices involved in learning science have been investigated on all levels of schooling, from Hanauer’s (2006) research in the primary grades

to Wellington and Osborne's (2001) study that focuses on secondary settings to researchers like myself who are interested in understanding science-oriented literacy in postsecondary settings. Nursing textbooks, like other science and applied science textbooks, contain more than words on a page. In Lemke's (2002) discussion of science textbooks, the author explains that "[such] textbooks contain not just words in sentences and paragraphs, but tables, charts, diagrams, graphs, maps, drawings, photographs, and a host of specialized visual representations from acoustical sonograms to chromatography strips and gene maps" (p. 24). Lemke (2002) draws attention to the daunting literacy tasks that students face in science classes. Specifically, he describes students who must cope not only with the reading demands of their textbooks—especially with the "high degree of lexical density" noted by Shanahan and Shanahan (2008, p. 53)—but also with their instructors' lectures, which often incorporate various diagrams, calculations, and formulas, and even the actions and comments of fellow classmates (Lemke, 2002, pp. 24-25). What Lemke (2002) describes is not unlike Bazerman's (1988) description of how students learn science; both scholars incorporate semiotics into their discussion. Bazerman (1988) describes a process whereby "the neophyte becomes socialized into the semiotic-behavioral-perceptual system of a community with language taking a major and multivalent role in the organization of that system, but with that system also shaped around concrete worldly activities" (p. 210). Bazerman (1988) writes:

Language use in the communal enterprise of chemistry is taught and learned in textbook diagrams and charts to be memorized, in classroom

discussion of the previous night's reading, in pencil problems to be solved, in the teacher's commentary on demonstration experiments, in getting particular bottles down from the shelf, in student groups with lab book on the table attempting to set up an experiment, in the teacher's comment on the experiment's write-up. Students learn not just names of chemicals, but when to use such names, how to label the results of experiments, how to determine whether their results fit the standard description, how to answer questions. (p. 305)

Lemke (2002), like Bazerman (1988), describes a process of enculturation involving language and activity. In the case of learning science—or, for that matter, learning nursing—students must engage not only with print text but with diagrammatic and pictorial representations, as well as classroom discussions and clinical experiences in which the ideas expressed through print and picture come to life. As Lemke (2002) is careful to point out, all of this—print text, pictures, discussion—are part of the advanced literacy that students rely on to make meaning (pp. 25-26). This literacy incorporates both social and linguistic activities (Colombi & Schleppegrell, 2002, pp. 06-12).

The advanced literacy required for learning science—and more specifically, for learning nursing—is not limited to words on a page. It is dependent on the social interactions that ultimately make the printed words meaningful. While the sciences and applied sciences are often viewed as objective, factual, and existing as part of a reality unto themselves, Pickering (1992) proposes that the knowledge associated with scientific inquiry “has to be

seen, not as the transparent representation of nature, but rather as knowledge relative to a particular culture” (p. 5). These social and cultural factors are central to the communities of practice concept that underpins this dissertation research.

### **Communities of Practice**

Applying the sociolinguistic concept of community of practice to postsecondary content classroom facilitates greater understanding of the sociocultural factors that influence learning. The community of practice model is a useful construct from both practical and theoretical perspectives; it originates from the “social turn” in literacy studies (Gee, 2000) that pushes forward and develops a “theory of literacy as a social practice” (Barton & Hamilton, 2000, p. 7). Such a theory revolves around the understanding that more meaningful conceptualizations of print literacy will only take place when “reading and writing . . . [are] studied in the context of the social and cultural (and we can add historical, political, and economic) practices of which they are but a part” (Gee, 2000, p. 180). These practices include the ways by which new members are enculturated into the academic communities found within postsecondary educational settings.

An understanding of students as apprentices who benefit from the guidance of instructors is supported by literature dating back to the work of Vygotsky (1896-1934). To be sure, contemporary scholarship owes a great debt to his *Mind in Society* (2007). Rogoff’s (1990) discussion of children’s cognitive development, for example, capitalizes on the notion of “guided participation” (p.

8). According to Rogoff (1990), “both guidance and participation in culturally valued activities are essential to . . . apprenticeship in thinking” (p. 8). Basically, Rogoff (1990) argues that “It is essential to view the cognitive activities of individuals within the cultural context in which their thinking is embedded” (p. 42). It is in Rogoff’s work that an understanding of textbook-as-tool is again validated:

Each generation of individuals in any society inherits, in addition to their genes, the products of cultural history, including technologies developed to support problem solving. . . . Some of these technologies have material supports, such as pencil and paper, word-processing programs, alphabets, calculators, abacus and slide rule, notches on sticks, and knots in ropes. All the technologies have systems for handling information that are passed from one generation to the next. (Rogoff, 1990, p. 51)

Textbooks are indeed “material supports” (p. 51) just like similar supports cited by Rogoff. To summarize here, students’ sociocognitive apprenticeships, as articulated by contemporary thinkers like Rogoff (1990), as well as by Bartholomae (1985/2003), Gee (2000, 2001a, 2001b, 2002), Lave and Wenger (1991), and Wenger (1998) are mediated through both language and behavior. The individual is shaped cognitively, linguistically, and behaviorally by the culture within which that individual is situated.

Discussions of academic discourse, such as those offered by Bartholomae (1985/2003) and Gee (2001a), identify one inherent difficulty of joining an academic community of practice. Both authors identify students’ need to communicate using disciplinary language with which they are largely unfamiliar.

Learners of an academic discourse, like learners of language generally, are required to produce output long before they have mastered the content. Newman (2002) likens this experience to a game “that is best played only after learning as many of the rules, strategies, and principles governing it as possible” (p. 169). The idea that students must demonstrate some degree of competence before they feel competent—or are, in fact, competent—leads me to assume that the quicker a student finds friends, teachers, and tools to demystify this game, the more likely he or she will be to win. It is within the community and the practice components of the community of practice model that the student learns of the resources necessary to do just this. I turn now to the task of more clearly defining what is meant by communities of practice, a concept that builds upon the idea of discourse communities by emphasizing interaction and activity among members of a group instead of focusing more narrowly on the distinguishing features of language use.

I do acknowledge that there are differing views on discourse communities with different foci, some of which seem to share common ground with the community of practice concept. Ramanathan (2002) offers such examples in a recent publication. To definitively state what separates a discourse community from a community of practice based on the various definitions to date of discourse communities is beyond the scope of this dissertation, and would no doubt involve some arbitrary and tenuous distinctions. As stated in the previous paragraph, I have adopted the community of practice concept for its overt emphasis on contextualized social interaction and activity in joint endeavors.

Lave and Wenger (1991) define community of practice as “a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice. A community of practice is an intrinsic condition for the existence of knowledge, not least because it provides the interpretive support necessary for making sense of its heritage” (p. 98). According to this definition, the social construction of knowledge is an essential component of communities of practice, underscoring the sociocognitive component of human learning. It is also essential to note the role of language use in defining a community of practice and its members.

The language and gender researchers Holmes and Meyerhoff (1999) explain that individuals join communities of practice through learning, and community of practice membership “inevitably involves the acquisition of sociolinguistic competence” (p. 174). Saville-Troike (2003), in *The Ethnography of Communication*, points to a direct connection between membership in a community of practice and the ability to acquire and use the language of that group. Language, then, plays a major role. However, the discourse used within the community is not learned in a vacuum; it is learned in collaboration with others. Because of this, the community of practice concept proves especially useful for gaining clearer insights into literacy in postsecondary settings.

Prior’s (1998) discussion of the ideas in Lave and Wenger’s (1991) *Situated Learning: Legitimate Peripheral Participation* further helps to clarify this point about social interaction and learning. Prior (1998) explains that “By emphasizing participation in practices, [Lave and Wenger] are pointing to the

centrality of situated activity, activity that is partially improvised by individual participants, but is also strongly shaped by situational contexts and tools that embody a collective history of pursuing certain goals with certain resources within particular forms of social interaction” (p. 21). All of this, as Prior (1998) explains, is ultimately a decided movement away from conceptualizations of “disembodied knowledge fixed in abstract centralized systems” (p. 21).

Recent literature offers evidence that the community of practice concept is being utilized within healthcare fields. Endsley, Kirkegaard, and Linares’s (2005) contribution to *Family Practice Management* applies the concept of communities of practice to family medicine. In the article, the authors cite Wenger, McDermott, and Snyder (2002) for articulating three basic components of a community of practice: (1) a domain; (2) a community; and (3) a shared practice (Endsley, Kirkegaard, & Linares, 2005, p. 29). The importance of communities of practice to family physicians is, as Endsley, Kirkegaard, and Linares (2005) explain, that they “offer a way of learning and working together that can accelerate improvement [in a physician’s medical] practice and allow [that physician] to stay ahead of the pack in the health care marketplace” (p. 32). These authors cite practical benefits for the physician who chooses to engage in a community of practice. This article, as well as one published by Austin and Duncan-Hewitt (2005) in the *American Journal of Pharmaceutical Education*, demonstrate the relevance of the community of practice concept to healthcare fields.

In terms of applying the community of practice concept to this research project, the community is where relationships develop for purposes of pursuing

the common goal, which is academic success in the undergraduate nursing program that leads to employment in the nursing field. The practice itself contains the behavioral, linguistic, and physical resources that enable students to achieve competence in both the classroom and clinical settings that fall under the domain of undergraduate nursing. Textbooks utilized within the academic community of practice are physical resources that serve as “reifications” (Barton & Hamilton, 2005; Wenger, 1998, pp. 58-71) of the body of knowledge associated with the study of nursing at the undergraduate level.

Before concluding this section, there are a few caveats regarding application of the community of practice concept to my study of the function and use of the textbook in an undergraduate nursing program. When Lave and Wenger (1991) articulate their understanding of the “situated learning” that takes place within communities of practice (pp. 34-37), they are careful to point out that readers should not be too literal in how they conceive of “peripheral” or “complete/central participation” in a community of practice (pp. 35-36). Lave and Wenger (1991) write that a community of practice “has no single core or center” (p. 36), and “*Complete participation* would suggest a closed domain of knowledge or collective practice for which there might be measurable degrees of ‘acquisition’ by newcomers” (p. 36). These complexities are also noted in more recent community of practice scholarship (Lea, 2005). That being said, this study does recognize that within the undergraduate nursing program, individual courses are designed to present students with a fixed body of knowledge to acquire, and their acquisition of this knowledge is largely assessed by means of

multiple choice examinations that are a way of “[measuring] degrees of ‘acquisition’” (Lave & Wenger, 1991, p. 36).

While Lave and Wenger (1991) seem uncomfortable with the notion of “complete” or “central” participation, they do allow for the idea of “*full participation*” (pp. 36-37). The relationship between “peripheral” and “full” participation can be thought of this way: Peripheral participation provides members within a community of practice the opportunity to “[gain] access to sources for understanding through growing involvement” that could eventually lead them to full participation (pp. 36-37). My initial thinking was that the Level 1 students who participated in this study would be situated on the periphery of the academic community of practice of nursing students, owing to their entry-level status in the program. But while data indicates that the Level 1 students struggled more with the clinical component of their coursework than their Level 4 counterparts, the Level 1 students were too aware of the demands of the nursing program and of the reading and study skills required for academic success to warrant characterization as peripheral participants in their academic community of practice. This study of Level 1 and Level 4 students is a study of motivated students. Of the 7 Level 1 students who participated in this study, only Annette was dismissed from the program. As I write this dissertation, the other 6 Level 1 students remain in good academic standing and are in their last semester of coursework. All of the Level 4 students have graduated with their associate’s degrees, some of whom have even made the decision to further their educations by pursuing bachelor’s degrees in nursing.

## The Nursing Shortage

The need to attract and retain qualified nurses is clearly articulated in the literature. In their 2005 article in *Health Care Manager*, Crow, Smith, and Hartman write that “Most would agree that there is a serious nursing shortage in America” (p. 336), and they further note:

In 2000, a reported shortage of 110,000 nurses was disturbing, and the situation is projected to become far worse. Based on historical trends, the 6% shortage in 2000 will grow to 12% by 2010, and 20% by 2020. The news media frequently reminds us about the nursing shortage. (p. 336)

Concern over the lack of willing and competent healthcare providers is not limited to the US context. Three researchers based in the United Kingdom, Deary, Watson, and Hogston (2003), contend in their article published in the *Journal of Advanced Nursing* that “Increasingly, the workforce is ageing while younger people are not attracted to the profession” (p. 71). In terms of retaining student nurses in the United Kingdom, these researchers note that “The reasons students leave nursing programmes are many and varied, and include discontinuation on several grounds, such as academic failure, misconduct or failing clinical assessments. However, they also leave for personal reasons, because they anticipate failure or the fact that the programmes have not lived up to their expectations” (Deary et al., 2003, p. 74). A recent article by Uyehara, Magnussen, Itano, and Zhang (2007), published by *Nursing Forum*, includes similar reasons for discontinuation but is more specific in citing personal reasons such as “pregnancy or illness” (p. 32) and “financial difficulties” (p. 32). Uyehara

et al. (2007) also identify certain stressors that may affect retention. These include “not-so-caring interaction with faculty” (p. 32) and “feeling unprepared for clinical practice” (p. 32). That said, Deary et al. (2003) are careful to note the following:

There are fundamental methodological problems associated with the measurement of attrition; for example, where students leave for reasons other than being discontinued on academic or clinical grounds, it is very hard to ascertain precisely why they left. Personal reasons may cover a multitude of circumstances. If students leave because of academic failure, then personal reasons or some other factor such as stress may have contributed to this. Inventories used to catalogue reasons for leaving are only as good as the items which they include and, while they may ask open questions, students may be unable to articulate concepts such as stress. Former students, if asked why they discontinued, may provide reasons other than the one which led them to leave their programme. For instance, they may report personal problems or difficulty with studying and academic failure as reasons for departure. However, there may have been antecedents such as low educational ability, inability to cope with the stress of the programme, including the clinical placements, and even burnout if they find the work emotionally demanding. (p. 73)

While it may be difficult, if not impossible, to pin down exactly why students leave a nursing program, it is significant that they do, in fact, leave in numbers large enough to be of concern, possibly due to their educational underpreparedness, a

lack of general educational aptitude, or the inability to handle the stresses inherent in training to become a member of the community of professional nurses.

While the UK study by Deary, Watson, and Hogston (2003) focuses on student nurses, Crow, Smith, and Hartman (2005), in writing for the *Health Care Manager*, explain that “[professional] nurse turnover is [also] a complex phenomenon which cannot be explained in simple terms of supply and demand” (p. 341). The researchers do, however, note that “those who left the field consistently cite ‘working conditions’ and family responsibilities” (Deary et al., 2003, p. 340). According to the researchers, these two reasons are known to be the primary reasons for leaving the nursing profession according to the literature written to date (Deary et al., 2003, p. 340).

### **Preparing Future Nurses**

A review of some texts aimed at those interested in becoming teachers of nursing offers additional insight into a discipline that those immersed in the field of literacy studies may know little about. In Gaberson and Oermann’s (2007) *Clinical Teaching Strategies in Nursing*, the clinical component of nursing education is elevated above that of the academic classroom component. The authors explain that “Because nursing is a professional practice discipline, what nurses and nursing students do in clinical practice is more important than what they can demonstrate in a classroom” (p. 5). Gaberson and Oermann (2007) point out that “Some learners who perform well in the classroom cannot apply

their knowledge successfully in the clinical area” (p. 5). The inability to transfer classroom content knowledge—or textbook knowledge—to the clinical site no doubt creates some real problems for students in a nursing program. However, it should be noted that despite Gaberson and Oermann’s (2007) focus on clinical competence, they do remind their reader that “the central focus in clinical education should be on learning, not doing” (p. 5), and “the role of the student in nursing education should be primarily that of learner, not nurse” (p. 5). With this in mind, the authors state their preference for “nursing student” over “student nurse” to describe the apprentice learner (Gaberson & Oermann, 2007, p. 5).

In the discussion of course design offered by Iwasiw, Goldenberg, and Andrusyszyn (2005) in *Curriculum Development in Nursing Education*, the authors note that “courses [within the nursing curriculum] contain substantive knowledge (facts, concepts, hypotheses, methods, to name a few) through which the thinking processes for nursing practice are developed” (p. 196). In Chapter 1 of this dissertation, citing researchers like Apple (1991), Apple and Christian-Smith (1991), Bourdieu (2001), Silverman (1991), and Woodward (1993), I identified the role of the college textbook as a tool that codifies and legitimizes the widely accepted academic approach to any given discipline. I am reminded of this textbook function when I read Iwasiw, Goldenberg, and Andrusyszyn’s (2005) discussion of how the thinking of nursing students is essentially shaped by the nursing curriculum. It is impossible to discuss a curriculum without also discussing the textbooks that shape that curriculum. Nursing classes, revolving around the codified knowledge contained within nursing textbooks, shape the

thinking of student nurses as they attempt to master the domain knowledge of nursing required for membership in the community of professional nurses.

## **Conclusion**

This review of literature, with its focus on textbook reading, advanced literacy and the discourse of science, communities of practice, the nursing shortage, and the preparation of future nurses, serves as the foundation for a scholarly investigation of the function and use of the textbook within a particular domain: nursing. This dissertation is aimed at uncovering the role of the textbook in developing the linguistic, conceptual, and clinical competence needed by undergraduate students of nursing if they are to succeed in their chosen field. To accomplish this, focus group interviews, individual interviews, surveys, syllabi, and institutional data were analyzed in an effort to situate the textbook in the lives of students as they prepared for their quizzes, exams, classroom discussions, and clinical experiences. Such “literacy events” (Heath, 2001, p. 445) are central to the learning that takes place within the undergraduate nursing program.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### **Introduction**

Students unable to demonstrate comprehension of textbook-based content through multiple choice testing do not persist in the undergraduate nursing program at William Penn College, which privileges scores on these tests over other measures of competency. The ability to succeed on multiple choice tests, then, is a determining factor on whether or not students are able to realize their goal of becoming registered nurses. Therefore, multiple choice tests serve a gatekeeping function, as students without the literacy skills and behaviors required for success in nursing stand no chance of entering into a field desperately in need of additional workers. In this chapter, I explain the methodological approach that informed this dissertation.

Two basic questions guided the research: (1) What is the role of the textbook in the undergraduate nursing program at William Penn College?, and (2) How do students utilize the textbook as they train to become nurses? I collected data from focus group interviews and individual interviews from which I generated transcripts that were analyzed, coded, and subjected to a basic content analysis as described by Krueger (1998a). This study employed a “bookend approach”: beginning and advanced students shared their experiences as learners within the college’s nursing curriculum. My initial assumptions were that the Level 1 and Level 4 students were likely to have differing views on the role of the textbook, specifically on its importance when it comes to mastery of

testable content, and that the Level 4 students would describe far more strategies for working with the textbook than the Level 1 novices. A total of 7 Level 1 and 10 Level 4 students participated in this research project, which was conducted during the Fall 2007 semester. All were residents of Pennsylvania, and all were native speakers of English. In addition to the focus group interviews and individual interviews mentioned previously, I relied on surveys given to nursing faculty, course syllabi, and institutional data to aid in my analysis.

### **Data Collection**

My intent was to uncover students' perspectives regarding the function and use of the textbook in the two-year nursing program at William Penn College. In their discussion of qualitative research, Krueger and King (1998) write that "Evaluators using a qualitative approach could not assume that they know best but instead elicit wisdom and grounding from local people" (p. 4). More recent research by Lea (2005) cites the importance of uncovering students' "lived experiences" (p. 195), and it is with the experiences of students in mind that I approach the topic at-hand. By questioning students about their experiences as textbook users in the undergraduate nursing program, I was able to situate the textbook as an artifact central to students' experiences as they trained to become registered nurses. Previously, I cited the community of practice concepts as foundational to my project due to its emphasis on interaction and activity—in essence, its social orientation. A social orientation is at the heart of focus group research, which provided the bulk of the data used in my analysis.

**The focus group interview.** I began with focus group interviews because I felt it essential that the selected members of the community of undergraduate nursing students who volunteered actually come together to meet with me and with each other. With a catered lunch and a friendly, relaxed atmosphere, I established a good rapport with the students and was quickly convinced of the appropriateness of using focus group interviews in an educational context.

Focus groups are useful when it comes to exploring complex issues, such as those encountered in the field of literacy research. Bloor et al. (2001) contend that “focus groups can yield data on the uncertainties, ambiguities, and *group processes* that lead to and underlie group assessments” (p. 4), and they “can also throw light on the *normative understandings* that groups draw upon to reach their collective judgments” (p. 4). The use of focus groups in literacy research seems all the more appropriate given the understanding that literacy cannot be understood outside of its social context, which I emphasized earlier in this dissertation with my discussions of the New Literacy Studies and, for that matter, the whole concept of communities of practice. Focus group interviews offer a way to understand nursing students’ involvement within their community as they engage in the practices necessary for mastering domain knowledge. To reiterate, a community, a practice, and a domain are the three components of any community of practice (Wenger, McDermott, & Snyder, 2002, as cited by Endsley, Kirkegaard, & Linares, 2005, p. 29).

Some explanation of what is meant by focus group is in order. Greenbaum (1998) acknowledges several variations on the focus group, breaking it down to

*“full groups, minigroups, and telephone groups”* (p. 1). Full groups last “approximately 90 to 120 minutes, [are] led by a trained moderator, [and involve] 8 to 10 persons who are recruited for the session based on their common demographics, attitudes, or buying patterns” (p. 2). Greenbaum (1998) notes that “a mini group is essentially the same as a full group, except that it generally contains 4 to 6 persons,” and telephone groups involve “individuals . . . in a telephone conference call, wherein they are led by a trained moderator for 30 minutes to 2 hours” (p. 2). For the purposes of this study, 12 Level 1 and 12 Level 4 participants were invited to participate to compensate for any attrition. Of the Level 1 group, 7 students participated in the focus group interviews. A total of 10 Level 4 students participated.

**Individual interviews and survey of nursing instructors.** I used individual interviews of focus group participants and a survey of nursing instructors to collect additional data regarding the textbook reading and related literacy habits of nursing students. I randomly selected 3 participants from both focus groups (Level 1 and Level 4) to participate in these individual interviews. 2 of the 3 recruited from the Level 1 focus group participated in the individual interviews, and all 3 who were recruited from Level 4 participated. Those participating from the Level 1 group were Alice and Anna, and the Level 4 participants were Betty, Brandon, and Breanna. Annette, who was dismissed from the undergraduate nursing program, did not participate in the individual interviews, and her participation in the focus group interviews was minimal.

Surveys were distributed to nursing faculty at William Penn College. 10 faculty members returned surveys to me.

**The participants.** The participants were nursing students at William Penn College, Pennsylvania residents, and native speakers of English. In one focus group cohort were the first-semester, first-year nursing students (Level 1); in the other group cohort were the second-semester, second-year nursing students (Level 4). The decision to keep the two groups separate is supported by research on focus groups. Morgan (1998b) writes:

When the participants perceive each other as fundamentally similar, they can spend less time explaining themselves to each other and more time discussing the issues at hand. In contrast, mixed groups may spend a good deal of time getting to know each other and building trust before they feel safe enough to share personal information—if they ever reach this level of comfort. (p. 59)

Homogenous groups ensure that participants “have similar levels of experience with the topic” (Morgan, 1998b, p. 94). Having homogenous groups of students is helpful for researchers like myself who wish to understand how students at opposite ends of their academic careers view and approach their textbooks.

The students who participated in this study were volunteers randomly selected from among the total population of students willing to take part. I relied on random selection from among those participating in the focus group interviews for my individual interviews. The students were not financially compensated, nor

were they given credit in any college course. Justification for the selection and recruitment of volunteers is found in the work of Krueger (1998a). The participants were:

#### Level 1

Abigail, Adam, Alice, Allison, Anna, Annette, and Amy

#### Level 4

Barb, Ben, Beth, Betty, Brad, Brandon, Breanna, Brigitte, Brittany, and Bryan

I changed all students' names for privacy, with Level 1 students assigned "A" names and Level 4 students "B" names. As far as the ages of participants from the Level 1 group are concerned, Alice was the oldest member of the Level 1 group. She was 47 at the time of this study. All other members of the Level 1 group were between 18 and 26 years of age. Of the Level 4 participants, Barb, Beth Breanna, Brigitte, Brittany, Bryan, were between 20 and 25. Ben, Betty, Brad, and Brandon were between 31 and 41 years of age.

A number of participants entered into the nursing program after some degree of prior postsecondary experience. Of the Level 1 participants, 5 of the 7 engaged in postsecondary study before enrolling in nursing. The only Level 1 participants lacking such experience were Alice and Annette. Half of those who participated in the Level 4 focus groups had postsecondary educational experience prior to their study of nursing. Those students included Betty,

Brandon, Breanna, Brigitte, and Bryan. All participants were native speakers of English.

Many of the students who participated in my study reported that they chose to enroll in this particular college because of its good reputation, small class size, a variety of different clinical opportunities (as opposed to getting all your experience in only one hospital), and the belief expressed by one of the Level 4 participants that at William Penn College, students are more than “just a number,” which is how that student claimed to have felt at a nearby state school. Some students cited the influence of family members and friends as contributing factors in their decision to attend the college. A handful of participants had earned a previous degree from William Penn College and, as a result, were inclined to work on their nursing degrees because credits transferred fairly easily. Students claimed to like the structure of the nursing program, specifically that a student can earn an associate’s degree in nursing and continue on for the bachelor of science in nursing degree, perhaps with the possibility of an employer footing the bill. One of the Level 1 students, Annette, who did not persist in the nursing program, had been granted a scholarship, and that was a contributing factor in her decision to study at this particular college. Another major factor was the geographic location of the college (i.e., it is close to home). During one of the group interviews, a student shared with the group that some people she knows of are considering discontinuation of their studies because “they say it’s not worth it to drive the whole way up here—’cause it’s like farther away (from home), I guess.” With the exception of Beth and Brittany, whose

places of permanent residence were over 100 miles from William Penn College, all others participating in my study listed home addresses in close proximity to the campus.

In terms of the decision to study nursing, some students cited altruistic reasons. One particular student mentioned that she had seen people suffer in her life as a result of unspecified diseases, and so she was drawn to a helping profession. Two participants in the Level 4 group enrolled in nursing after a career in retail that really didn't "make any kind of a difference" and a career in juvenile justice that led to burnout. Two students with previous medical experience cited the desire for careers with a higher level of patient interaction. Additional reasons for choosing to study nursing included the belief that nursing allows a person a certain degree of flexibility in terms of scheduling, and nursing offers an opportunity to work in different types of healthcare settings. Pay and job security were also perceived to be valid reasons for pursuing nursing as a career.

The Level 1 and Level 4 student who participated in this study gave the impression of being educated consumers in terms of the college they chose to attend as well as thoughtful in terms of why they chose to study nursing. Their decision to enroll in the college and to study nursing was informed by economic, geographic, and social factors.

**The researcher.** I am a doctoral candidate in English Composition and Teaching English to Speakers of Other Languages at Indiana University of Pennsylvania. I am also a faculty member whose primary charge is the teaching

of college reading skills at William Penn College, a small liberal arts college of approximately 2,000 students in Pennsylvania.

**The setting.** The focus group interviews were held in on-campus conference rooms at William Penn College, a small liberal arts college of approximately 2,000 students located in Pennsylvania. Two audiorecorders captured the discussion. They were placed at each end of the table in plain view. My colleagues in nursing and I believed that in the case of undergraduate nursing students, the “common hour” from 12:00-1:00 p.m. was the best time to hold the interview sessions.

**The equipment.** Krueger (1998c) recommends the following equipment for moderating focus groups: audiorecording devices and microphones; electrical extension cords and extension cords for the microphones; index cards; batteries; extra cassette tapes; pens and pencils; writing tablet; questions; list of participants’ names; pens and paper for participants; tissues; tape and duct tape (pp. 12-13). All of these were used during the focus group interviews.

**The questions.** I developed questions for students on two levels: (1) the general, or “grand tour” questions, and (2) more specific questions related to the textbook reading habits and related literacy practices of students enrolled in nursing. I designed the survey questions for nursing instructors for the purpose of uncovering their own reading habits as well as to gain additional insight into the

reading required of their students. The focus group questions, individual interview questions, and questions for nursing instructors are included as Appendices B, C, and D, respectively. The waiver form signed by all participants precedes these, and is listed as Appendix A.

## **Data Analysis**

**Coding.** The audiorecorded narratives from the focus group meetings were typed, and the transcripts were coded according to basic guidelines for content analysis. The general process, from start to finish, was primarily informed by Krueger (1998a), though Clandinin and Connelly (2000), Denzin (1997), Lincoln and Guba (1985), Krippendorff (1980), Miles and Huberman (1994), Polkinghorne (1988), and Stewart and Shamdasani (1990) were also consulted. I provided a third party with ten randomly selected passages and asked that person to code them according to the system I developed. There was a high level of consistency; all ten passages coded by that individual were consistent with my coding. Individual interviews of select focus group participants, conducted primarily via e-mail, were analyzed according to the same coding categories developed for the focus group interviews. Finally, survey responses from nursing faculty were reviewed not according to coding categories but according to the questions I posed—questions that offered insight into the strategies and resources shared with students by nursing faculty as well as insight into the factors believed to influence success or failure in the undergraduate nursing program.

**Transparency of the research project.** All participants were encouraged to contact me at any time if they had any questions about the project or would like to review what was said during the focus group sessions. I alerted my participants when transcripts were finalized, and they were given the opportunity to take a final look at those transcripts and offer feedback. This process of member checking is described in the literature (Lincoln & Guba, 1985, p. 314). There was no level of deception in this research project.

**Literacy artifacts and additional considerations.** I collected syllabi from the Level 1 and Level 4 nursing classes. In the Level 1 nursing course, which carries seven credits, students were required to purchase seven print resources, including Fundamentals of Nursing, which was the primary text for the course. Some of these same texts were required for the Level 4 class, which, like the Level 1 class, listed seven print resources under “Required Texts.” This is a complete listing of the reading materials for both the Level 1 and Level 4 classes:

*Level 1*

1. *Fundamentals of Nursing: The Art and Science of Nursing Care.* (This text comes in two volumes and is “bundled” with a CD-ROM, DVDs, and a study guide.)
2. *Lippincott’s Nursing Drug Guide.*
3. *Math and Meds for Nurses.*

4. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems.* (This is purchased, but not utilized, during the first semester.)
5. *Nursing Diagnosis Handbook.*
6. *Strategies, Techniques, and Approaches to Thinking: Critical Thinking Cases in Nursing.*
7. *Taber's Cyclopedic Medical Dictionary.*

#### *Level 4*

1. *Foundations of Clinical Drug Therapy.*
2. *Lippincott's Nursing Drug Guide.*
3. *Math and Meds for Nurses.*
4. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems.* (This text comes in two volumes and is "bundled" with a handbook.)
5. *Nurse's Quick Reference to Common Laboratory and Diagnostic Tests.*
6. *Nursing Diagnosis Handbook.*
7. *Taber's Cyclopedic Medical Dictionary.*

In Level 1 nursing, instructors cited *Fundamentals of Nursing* as the primary text for the course. The primary text in Level 4 nursing was *Medical-Surgical Nursing*. In addition to listing the required texts, an examination of syllabi revealed that both Level 1 and Level 4 students were graded most heavily on their performance on multiple choice examinations. Other types of assignments were

assigned far fewer points. For example, the two written assignments in Level 1 nursing account for 15 out of the 640 total class points. In Level 4 nursing, a maximum of 25 points out of 400 total points is awarded for performance on objectives not measured through multiple choice assessment. The lowest passing percentage in a nursing course, as indicated on both syllabi, is 79 percent.

One additional consideration involves how William Penn College marketed itself to prospective students at the time of this study. For example, a prospective student looking at the college's website under "Academics" would learn that "[William Penn College's] emphasis is on hands-on experience, challenging class work, and personal attention. Classes are small, so professors spend extra time with each student." Please note that in an effort to keep the research site anonymous, this material is not cited in the bibliography. William Penn College's decision to mention "hands-on experience" first is significant in regard to one of the findings covered in the chapter on data analysis—namely that some members of the Level 1 group were frustrated because they were not receiving enough points for their clinical experiences. Students from both groups indicated that they enjoyed William Penn College's smaller classes and interaction with faculty, and one member of the Level 4 group, Brad, indicated that he came to William Penn College because its nursing program required a high level of commitment to academics.

## **Conclusion**

Vaughn, Schumm, and Sinagub (1996) draw attention to the following defining quality of focus group interviews: “One of the characteristics that distinguishes focus groups from other qualitative interview procedures is the group discussion. The major assumption of focus groups is that with a permissive atmosphere that fosters a range of opinions, a more complete and revealing understanding of the issues will be obtained” (p. 4). Focus groups, as Barbour and Kitzinger (1999) explain, are “particularly useful for allowing participants to generate their own questions, frames and concepts and to pursue their own priorities on their own terms, in their own vocabulary” (p. 5). This type of research, then, centers more on the participants and their experiences than on the researcher.

Bloor et al. (2001) note that focus groups are commonly used “as an adjunct of other methods” (p. 8). While a strong case could be made for focus groups “as a stand-alone method” (p. 8), I used individual interviews of nursing students, a survey of nursing faculty, course syllabi, and institutional data to make possible this investigation into undergraduate nursing students’ literacy practices, specifically as those practices relate to textbook reading. My methodology offered an effective and low-cost approach to collecting data that can be used to further scholarly investigations into discipline-specific literacy.

## CHAPTER 4

### RESULTS AND DISCUSSION

#### **Introduction**

I coded students' responses to focus group and individual interview questions according to the three general themes that emerged. Specifically, these themes included (1) the experience of reading and studying in the undergraduate nursing program, (2) the influence of intensive testing in shaping the advanced literacy of nursing students, and (3) social influences that shape advanced literacy in the undergraduate nursing program. Analysis of data indicates that within the undergraduate nursing program, students were held highly accountable for their mastery of the content presented in the textbook; however, the textbook itself was only made meaningful as a result of the social environment within which it was used. The nursing students relied on textbooks, in conjunction with other print and electronic sources of information, faculty members and clinical staff, and each other to master the domain knowledge of nursing—domain knowledge that is largely assessed through high-stakes multiple choice examinations. This study illustrates that the domain knowledge required in the two-year nursing program is reified in textbooks and in the various print and electronic resources that supplement—but do not replace—the textbooks. My analysis of the conversations that took place with the Level 1 and Level 4 students points to the textbook as serving a central function within the community of practice of nursing students as they attempted to make sense of

textbook-based skills and concepts that related to professional nursing practice, but it also uncovers the confusion experienced by some Level 1 learners as they struggled to reconcile intensive multiple choice testing with a discipline they assumed to be largely hands-on and experiential. Such reconciliation is crucial, though, as evidence suggests that advanced students no longer struggled with this reality. This investigation into the role of the textbook and of the discipline-specific practices surrounding its use points to complex social and linguistic components of literacy that must quickly be mastered by students if they are to succeed within the undergraduate nursing program.

Please note that Level 1 students have been given names that begin with the letter “A” while Level 4 students have been given names beginning with the letter “B.” Also, please note that students’ responses were not edited for grammaticality.

### **Community of Practice in the Undergraduate Nursing Program**

The Level 1 and Level 4 students who participated in this study were members of a community of practice comprised of individuals engaged in activities within the academic domain of nursing; however, nursing is an academic domain that is in no way independent of the domain of professional nursing. Everything done in the academic setting, from listening to lectures, to reading the textbook, to working with mannequins, and to taking tests, is done to prepare students for participation in the community of professional nurses—a community that students must learn to engage with from an early point in their

course of study and with which they will continue to engage throughout all four levels of the two-year program. The various activities associated with the practice of academic nursing, like reading and studying for tests, interacting with instructors, and working with peers, are activities undertaken with a common goal: a career as a registered nurse.

Nursing students' participation in the community of professional nurses is participation within certain limits. For example, Alice, a Level 1 nursing student, commented in a somewhat-joking, somewhat-serious manner that all she gets to do "is stand around the nurses' station." This statement reflects the limitations a Level 1 student faces prior to his or her acquisition of the skill and competence to undertake more meaningful duties at a clinical site. The Level 1 students also talked about working with patients suffering from Alzheimer's or dementia, which is reflective of the fact that most Level 1 students are assigned to healthcare settings where duties tend to be more menial. The more limited involvement of Level 1 nursing students in professional healthcare settings stands in contrast to the involvement of Level 4 students, like Brad, who had witnessed such medical crises as cardiogenic shock as a result of his placement in healthcare settings where he assisted professional nurses in helping patients with more acute needs.

I do not claim that the transition from Level 1 to Level 4 to status as a registered nurse occurs smoothly and in clearly delineated steps. Lea (2005) is critical of community of practice scholarship that limits its focus to "the benign nature of communities of practice, where there is a simple and smooth transition from peripheral participation as a novice to full membership at the core of the

community's endeavour" (p. 184). Building on earlier ideas from Ivanic (1998), Lea (1998), and Lillis (2001), Lea (2005) argues that by concentrating on an idealized, "simple and smooth transition," it is all too easy to overlook "the more contested nature of participation in communities of practice, that is when participants are excluded from full participation in the practices of a community" (p. 184). When Alice remarked that she and some of her Level 1 classmates merely "stand around the nurses' station," she drew attention to the fact that in regard to the community of professional nurses, she and her Level 1 classmates remained on the periphery, limited by their knowledge base and skill level. The "contested nature of participation" that Lea (2005) refers to was also apparent when the Level 1 students discussed the topic of delegation, whereby a registered nurse can delegate certain tasks to licensed practical nurses or nurses' aids. In that discussion, one of the participants mentioned that there were Level 1 students prematurely assuming the role of professional nurses when they reportedly tuned-out lectures they perceived to be irrelevant because the tasks mentioned during those lectures were tasks most often undertaken by licensed practical nurses or nurses' aides. These examples are meant to draw attention to some of the complexities associated with membership and attempts at membership in communities of practice from the standpoint of students pursuing degrees in nursing. The undergraduate nursing program at William Penn College requires students to acclimate quickly to classroom and clinical environments that can only be seen as challenging for those new to such demands.

For students in the undergraduate nursing program, it is necessary to demonstrate a high level of classroom competence, measured primarily through multiple choice examinations based on textbook content that mimic the style of the NCLEX, as they work toward becoming professional nurses. Failure to earn at least a 79 percent on any nursing examination is considered failure of that examination. If students are eventually to join the ranks of professional nurses, they must adapt to the curricular demands of the undergraduate nursing program. Students enrolled in the program must read and study, pass multiple choice examinations, and interact socially in classrooms and clinicals in order to learn and to complete necessary tasks. The students participating in this research project were members of an academic community whose practice incorporated the tools and resources necessary to make learning within the domain of nursing possible.

### **Reading and Studying in the Undergraduate Nursing Program**

There is no activity more central to the undergraduate college experience than reading and studying, especially from textbooks. The domain knowledge of nursing that is required for meaningful participation within the academic community of practice of nursing and in (pre)professional clinical practice is obtained by students as they read their textbook, their notes on the textbook, and their notes from textbook-based lectures. Nursing students also rely on print and electronic supplemental materials to master textbook content associated with the domain knowledge of nursing. The responses from Level 1 and Level 4 students

indicate that the textbook maintains—and possibly increases in—its importance over the course of the two-year program. There is no evidence to suggest that Level 1 and Level 4 students view the role of the textbook, or its importance as a literacy artifact and tool for learning, differently. Responses further indicate that the students participating in this study were active textbook readers who relied upon numerous strategies for making sense of textbook content; moreover, my hypothesis that the Level 1 students would not be aware of as many strategies for learning from the textbook as their Level 4 counterparts was outright refuted based on the evidence.

**The sophistication of the level 1 nursing students.** As an educator who teaches reading skills and strategies to underprepared, first-semester, first-year college students, I was surprised by the insight the Level 1 nursing students had regarding the challenges facing them in terms of the reading load and the best ways to go about meeting those challenges. My assumption that this research project would uncover Level 1 students who were largely unaware of the academic skills required for success in the undergraduate nursing program was disproved as the majority of strategies for reading and studying reported by nursing students were used by students in both the Level 1 and Level 4 groups. These strategies included:

- (1) Rereading and reviewing.
- (2) Answering end-of-chapter questions to test comprehension.

- (3) Comparing instructor-generated notes and instructor's lecture to the textbook.
- (4) Predicting test questions while reading.
- (5) Highlighting and marking the textbook.
- (6) Creating notes from the textbook.
- (7) Analyzing text structure/ breaking down paragraphs, etc.
- (8) Analyzing pictures, charts, tables, diagrams, etc.
- (9) Skimming the chapter before reading more closely.
- (10) Reading before class in order to understand the textbook-based lecture.
- (11) Testing comprehension using NCLEX 3500 software and/or improving comprehension by referring to electronic sources of information (including instructional DVDs).
- (12) Improving comprehension by referring to other print sources (including handbooks, workbooks, and other textbooks).
- (13) Making flashcards.
- (14) Reciting information to assess comprehension.
- (15) Studying with other students.
- (16) Audiorecording textbook-based lectures.
- (17) Learning from clinical experiences.

The majority of these strategies—14 of the 17 according to the transcripts—were mentioned by students in both levels, and so I cannot conclude that the Level 1 students were unsophisticated in their knowledge of the “domain-

specific learning strategies” (Holschuh, 2003, p. 317) utilized by the more advanced Level 4 group. Two likely reasons account for this: (1) As I recruited volunteers, I no doubt received some of the more motivated members of the incoming Level 1 class—a class which, on the whole, was described by the nursing faculty as being good academically, and (2) The majority of students in the Level 1 group had some degree of postsecondary education before enrolling in the nursing program, which means that while they were new to nursing, they were not new to postsecondary education.

5 of the 7 Level 1 students who participated in this research project had previously completed some amount of post-secondary coursework, either at business schools, community colleges, or four-year institutions. This prior academic preparation is the likely reason behind why so many of the Level 1 students appeared to be so insightful in terms of how they handled the job of reading and studying in the undergraduate nursing program. They may have been new to nursing, but they were not new to being postsecondary students, and they were certainly not weak readers.

The majority of the Level 1 students who participated in this study avoided placement into developmental reading courses. Based on a review of academic transcripts, only one of the Level 1 participants, Anna, was required to complete formal remediation in reading by the College. For Anna, this remediation was addressed through successful completion of a one-credit class in which she earned a “B.” Had she been deemed more at-risk by lower SAT or placement test scores, she would have been required to take the three-credit version of College

Reading. Therefore, while she had weakness in reading as determined by William Penn College's institutional measures, she was not deemed to be among the weakest. Many of the nursing faculty with whom I have spoken regard placement in the three-credit version of College Reading to be a sign that a student is likely not to persist in the undergraduate nursing program. While Anna was the only student required to take a course in reading and study strategies, the Level 1 group as a whole was able to articulate many of the strategies that would be covered in such a course, and which are itemized in the 17-point list.

**Reading strategically in level 1 nursing.** When I asked the Level 1 students about their reading and studying—specifically, how confident they felt about their academic abilities—the ensuing conversation was enthusiastic, as evidenced by raised voices, overlapping conversations, and even laughter. While the participants were self-effacing, it did become clear that they were strategic readers of their textbooks. In terms of the importance of reading as a nursing student, the first student to respond, Abigail, was direct and honest about how some students feel about the task of reading: “You have to read. You have to be thorough. As much as you’re not going to want to read...Chapter 17 was 15 pages long, [and] that was really dry.” Abigail explained that she and the rest of her classmates, despite the fact that they were only a few weeks into the semester, were at Chapter 17 because the readings “skip around.” She then elaborated upon her previous comment regarding the importance of thorough reading:

You have to read everything. As far as testing goes, you don't know what's going to be on there...which, is a day to day scenario if you were in a hospital—you're not going to know. So, you just have to take it all in. As far as studying goes, I read everything and then review what we did in class. That's all you can do.

Here, Abigail compared a student's preparedness for examinations to that student's preparedness on-the-job. According to this student's analogy, it is imperative that students be conscientious readers because their comprehension of what they read will be tested, no matter how "dry" and boring that reading might be. In essence, a nursing student must not only be prepared for anything on an examination, but they must also be prepared for anything in the clinical setting. As Abigail explained, she is not going to know what she will have to deal with on any given day in a hospital or other medical setting. The often painful task of textbook reading is necessary from two practical—and related—standpoints: For doing well on quizzes and exams, and for laying the foundation for a successful career as a registered nurse. Abigail's perspective is a mature one in that she made a connection between textbook reading and her eventual, professional career.

After Abigail talked about her study method of reading and reviewing, one of her Level 1 classmates, Anna, wanted to explain in greater detail why the reading that nursing students are dealing with is often perceived as so difficult. In her words, she explained why textbook reading for nursing is so burdensome:

It's not memorization of facts, it's applying knowledge. It's different from anything I've done. As far as, like, having the knowledge in there to apply to something, I don't think you have to study as hard—just have a good solid knowledge base. Instead of being, like, "Standard blood pressure is 120 over 80," you have to know the deviants and all that.

While the ability to memorize facts is no doubt a valuable skill, this Level 1 student is the first to bring to the group's attention her awareness that more than strict memorization is required when it comes to studying. This need to know more than straightforward facts or definitions was also cited by the nursing instructors from whom I collected additional data. If a student is to succeed on exams and in the clinical realm, that student must prove that he or she is able to go beyond rote memorization of definitions. Yes, any beginning nursing student needs to know what standard blood pressure is, but students must also know what it means in terms of patient care when blood pressure is not the standard 120 over 80. This Level 1 participant described the challenge of applying knowledge as being a challenge that she had not had to face in her education thus far. Her comment is all the more significant because she holds a degree in surgical technology from William Penn College and had worked professionally in healthcare. She is therefore indicating that the undergraduate surgical technology program at William Penn College is not equivalent to the undergraduate nursing program at William Penn College in terms of academic expectations.

The decision to use blood pressure to make a larger point about the need to be able to apply knowledge gained through reading the nursing textbook is really a thoughtful one. This became apparent as a result of talking to some of my colleagues in nursing. Blood pressure is not static. A person's blood pressure is not the same seated in a chair reading as it is standing in front of a large crowd delivering a speech. Medications can influence blood pressure, as can many other factors. In short, the student's example is a meaningful one in that it is a prime example of how a seemingly simple concept learned in Level 1 nursing, like blood pressure, is not so simple when one takes into account all the various factors that can influence it. It further serves as proof that being a strategic reader entails knowing about discipline-specific literacy demands, as is evident in Anna's remarks and in the research of thinkers like Holschuh (2003).

Students enrolled in the two-year nursing program are faced with an arduous task. Over the course of a relatively short period of time, they must master the "substantive knowledge (facts, concepts, hypotheses, methods, to name a few) through which the thinking processes for nursing practice are developed" (Iwasiw, Goldenberg, & Andrusyszyn, 2005, p. 196). Participants in the Level 1 group identified the need to read and reread portions of the textbook, and the cumulative nature of the coursework was commented on by Adam, who remarked, "With [nursing], you have to build on everything you learn. You have to keep going over it." The concepts and skills taught in the introductory nursing course build on one another. Reading from the textbook once clearly is not enough, and students must be careful not to forget what was read because they

are held accountable for their level of comprehension on quizzes and exams—a comprehension often measured by testing students' knowledge on quizzes and exams using clinical scenarios. As Adam further explained:

If you read, you need to make sure you understand how to do it, 'cause that's hard when you're asked, "If you were in this scenario, what would you do?" And there's only so much of that eliminate two questions you can do!

This Level 1 participant seemed to be indicating that any time a nursing student reads something from the textbook, the student has to review so as not to forget; he or she must also be thinking about what the clinical application of the knowledge would be. Adam seemed to know something of test-taking strategy, too, in that he referred to the advice often given by teachers to rule-out as many wrong answers as possible before deciding on the correct choice, which is done to avoid falling for any second-best answer choices.

In teaching developmental college reading, I, like many developmental reading instructors, encourage students to view textbook reading as a process of asking and answering questions. The SQ3R strategy, described by Stahl, King, and Eilers (2005), is one example of a reading strategy I teach that encourages students to survey a chapter before reading more closely and to view textbook reading as a task undertaken for the specific purpose of being able to answer questions. As I reviewed the focus group transcripts, it became apparent to me that the Level 1 students who participated in this study were approaching the reading and studying for their nursing classes in a strategic and appropriate

manner even though most of them did not participate in formal reading remediation. The students articulated methods for comprehending textbook material that are consistent with what any educator would advise, and they were also utilizing many of the same strategies reported by their Level 4 counterparts, including the use of questions to guide reading and assess comprehension.

During the first Level 1 focus group meeting, two participants shared with the group their reliance on having questions that they can use to guide their reading and to check their level of comprehension. After Abigail remarked that she liked to use the workbook that accompanied the textbook because it has “questions you can answer,” Anna agreed, saying:

That’s how I study. Every night or day before the test, I always go through the study guide for each chapter, and I answer every single one of the questions: the knowledge [questions], the mastery questions, and the critical thinking questions. That honestly helps me out a lot because it helps me test my understanding of what I was reading, 'cause I have a hard time comprehending what I read right away. I have to read, like, five times. It’s not all, like, common sense, either.

To be clear, the study guide is generated by the instructor, but it is based on the textbook. The questions the student is referring to are found in the textbook. In the passage above, the Level 1 student described her overall approach to handling the nursing textbook. Prior to a scheduled examination, Anna answered questions for each assigned chapter to assess her level of comprehension. She admitted that her level of comprehension after one reading is inadequate, hence

the need for rereading. However, a few minutes later into the interview, Anna made an unexpected claim:

You can take this test and not study at all. I honestly believe that [...] Like me, I studied, well, a friend and I studied for, like, 6 or 8 hours yesterday, and we knew that information inside and out, but when it comes to taking that test, it's the way it's worded. You literally have to stop...I think you need to study more on, "OK, here's the fact: Blood pressure is so-and-so. Is it going to be worded this way, or is it going to be worded this way? And if it's worded like this, how...?" It's actually kind of a shame because you don't even really have to know the exact information—you spend more time worrying about how they're going to ask the question!

While Anna established that she reads and rereads and then checks her level of comprehension by answering questions based on the reading, it is evident that she viewed these efforts as not necessarily being absolute predictors of success. Anna was frustrated because her hours spent studying with a friend might not guarantee the score she wants on the examination, and she flirted with a defeatist mindset. While her assessment was that she and her friend understood the material "inside and out," she lamented that they were at the mercy of the test itself. This statement stands in contrast to one offered by Brad, a Level 4 student, who claimed that "you may think that you know the material, but you may not be able to handle the test question." His statement about "think[ing] that you know the material" reflected his belief that you do not actually know the material in a practical sense unless you are able to apply that knowledge on the test. The

difference between Anna's comment and Brad's is the difference between an external and an internal locus of control (Hand & Payne, 2008). In Anna's defense, she was not the only Level 1 nursing student to struggle with nursing quizzes and exams. Semester after semester, I have heard through casual conversation with Level 1 students that the quizzes and exams in nursing are a real challenge. Anna's comment is similar to comments made by many other Level 1 nursing students, and Brad's comment is indicative of a perspective that successful nursing students come to adopt over time. To put it simply, the student who continually finds himself or herself a victim of the test will never make it to Level 4.

Despite her negative test-taking experience, Anna, to her credit, indicated that there are ways to study with these tests in mind. The conclusion this student drew is that whenever it comes to reading and studying from the textbook and textbook-based lecture notes, a student needs to think about the information from more than one perspective, taking into account the different ways he or she might be asked on the examination to show his or her comprehension of the material. This perspective was expressed by another member of the Level 1 group, Allison, who stated, "When I'm studying, I try to think of how they're going to ask me stuff." And later during the focus group meeting, Abigail shared her account of how she was reading "something about high fever" and, as she explained, "I just read over that, and I was like, 'Oh, I better highlight this. You know, we might have a question on it!'" As these comments indicate, there was clearly an awareness among Level 1 participants of the need to think about

potential test questions while reading the textbook. In a program as test-centered as undergraduate nursing, this certainly seems like a valid approach.

In addition to studying with friends, reading and rereading, and using questions to guide their reading and studying, the Level 1 participants commented on other resources, like the instructor-generated study guides that were mentioned previously. During the interview, many students referred to these simply as “handouts.” The participants, however, had differing views on how best to use these handouts. Ideas ranged from outright disregard for the handouts to using the handouts as a skeleton from which to take more detailed notes during lecture or to guide textbook reading. The discussion of handouts among my Level 1 participants began with Adam offering a cautionary statement regarding what happens when one relies exclusively on the handouts: “I read the chapter for both exams 1 and 2, and I did really well. But then for [exam] 3, they gave us handouts. Then, I didn’t read the chapter, and I definitely didn’t do very well.” Abigail soon afterward remarked, “I don’t use the handouts. I haven’t used them for what, three chapters? I haven’t even looked at them.” Between total reliance on the handouts over the textbook, the result of which is reported to be negative, and overlooking the handouts entirely, the result of which is not known, some Level 1 students claimed to be using these handouts in productive ways to help them master the content of first-semester nursing. These handouts, as Annette explained, “follow the chapter to a tee.” That said, it was noted that it is important not to ignore the textbook because the handouts are “just a general outline” and lack sufficient detail.

Allison likewise acknowledged that the handouts in-and-of themselves are insufficient, but she noted that there are productive ways to work with the handouts to improve learning. She remarked:

I would much rather go through the chapter and read it myself and come up with my own notes in my own words and come up with my own ways to remember it. And then, I mean, yeah, I'll skim over the handouts and make sure I match a little bit, but there's things in the chapter that are not on the handout...So, I figure if I have to take the time and read the chapter anyway, I might as well put it in my own words...The outlines are very, very brief. One word, two words.

Allison reported a highly engaged method of studying that consisted of reading, taking notes from the reading while thinking of ways to translate the language of the textbook to her "own words," cross-referencing her notes with the handouts, and figuring out ways to retain the information. The primacy of the textbook over the handouts is established, for it is not enough to rely exclusively on the handouts, as was made clear by Allison's comment that "there's things in the chapter that are not on the handout." She also indicated that she supported the approach of one of her fellow Level 1 participants who used the handouts to guide note-taking during lectures. However, unlike her classmate who recorded additional notes on the pages of the handouts, Allison reported that she keeps her textbook open as the instructor lectures, presumably to get a greater sense of what to focus on from the chapters.

In Cao and Nietfeld's (2007) study of the metacognitive awareness of college students and their use and adjustment of study strategies, the researchers conclude that "[college students'] awareness of different kinds of difficulties encountered in learning the class content did not lead to adjustment of their study strategies" (p. 40). The responses of these Level 1 students indicate that they were aware of the difficulties involved in mastering nursing content and that they were cognizant of the need to employ multiple strategies in an effort to grasp the material. Such responses, when compared to the Level 4 group's responses, point toward a sophisticated group of Level 1 learners who employed a surprising number of reading and study strategies for mastering the domain knowledge of undergraduate nursing.

**Uncovering text structure.** Awareness of text structure and genre convention on the part of nursing students made learning from textbooks easier than it might otherwise have been. Both the Level 1 and the Level 4 students demonstrated that they are aware that nursing textbooks tend to follow a predictable and formulaic pattern. Attentiveness to text structure is a critical component of nursing students' literacy. Some students, like Abigail, offered proof that as they read, they were able to make judgments about the greater or lesser importance of the ideas they encountered in their textbooks.

After Allison mentioned that she cross-referenced the nursing instructor's lecture with the textbook, I asked a question to the whole group about how they knew what to focus on as they read the nursing textbook. The first response

came as a chorus: “Everything!” One of the participants, Abigail, then followed up, re-asserting the importance of “everything” and bringing up the notion of “common sense”:

Everything’s important, but I think a lot of it is just common sense. If you have...Of course, there’s a lot of people that lack common sense...I’ll read, and I’ll be like, “OK, well, that’s something that just sounds important!”

Earlier, I shared Anna’s frustration over having to read from the textbook multiple times in order to understand the reading, which, as she explained, was not “common sense.” Here, common sense is mentioned again. It seems to me, however, that what Abigail attributed to common sense was in actuality the rather sophisticated skill of being able to analyze academic text and make determinations regarding which ideas are most important. Even though she claimed on the one hand that “everything” is important, she did qualify this assertion by noting that certain ideas sound more important than others. Anna then proposed that “If you understand the main point, then common sense will kick in and help you with everything else.” In Anna’s remarks, too, we see common sense used to describe something that is indeed much more complicated. Abigail then offered additional elaboration:

Kind of like whenever they give you the outline. It’s the complete, like, backbone of everything, and it gives you a topic, and it has a list under of, like, six things, and before you can remember that list you have to know what everything on the list means. You have to look at the first thing and

say, “OK, do I understand this? Alright, now I can remember it on the list. Do I understand the next thing? OK, now I can remember it on the list,” rather than, like, studying what it means, then, you can study it in a group. “Common sense” was previously cited by Abigail as relating to one’s ability to determine important information from the textbook. Now, a view of common sense as the ability to make judgments regarding overall text structure emerges more clearly. Anna and Abigail recognized the need to capitalize upon text structure—to recognize how the parts make up the whole—to improve overall comprehension when faced with what McCrudden, Schraw, Hartley, and Kiewra (2004) characterize as “high cognitive load scenarios” (p. 292). The study of nursing, with its dual focus on classroom knowledge and clinical skill, is cognitively burdensome in that students must continually navigate technical textbook discussions that serve as a foundation for understanding complex clinical realities.

This knowledge of text structure was also evident in a later comment by Anna heard during the first Level 1 focus group: “Even if the chapter is long, it’s usually because there’s so many examples, and back-and-forth, and ‘This is what you do in that scenario’...Which, is good to read, so when they ask you a question...” Anna’s comment reflected her awareness that nursing textbooks are organized according to a fairly predictable plan, and it offers additional evidence that nursing students were using their knowledge of text structure to understand textbook content. These Level 1 students offered proof that they possessed the “metacognitive skills” (Cao & Nietfeld, 2007, pp. 31-32) needed for success in

the undergraduate nursing program. Cao and Nietfeld (2007) explain that “metacognitive skills refer to intentional regulation of study strategies” (p. 32). The Level 1 students were actively engaged in a process of sorting through text, distinguishing more important from less important information, and all the while keeping related pieces of information together as they attempted to master the textbook knowledge of first-semester undergraduate nursing.

There was also evidence that Level 4 students were relying on knowledge of text structure to assist in their learning. Brad, whose mother taught nursing, shared with the group the knowledge his mother imparted to him—knowledge that he put to good use when it came to reading the textbook:

In general, I always think that if I can make a question out of something I've read, whether it's a sentence or a paragraph, I try to make a mental question and answer it. If you can't make a decent question out of it, don't go back to it. Don't even highlight it because it's irrelevant to what you want to accomplish. But, if you can make a question out of what you read...And I do that. Usually, if the paragraphs are small, it's paragraph by paragraph, and if it's larger, maybe it's every few sentences, and usually it's like, beginning, middle, end. You get a lot of hard stuff towards the end. They'll sum it up. So, I do a lot of that [ . . . ] My mother was a nursing instructor, and she said that most nursing books are set up that way. You know? Look at the content. She said there will be a lot of stuff in there that's absolutely irrelevant, but the core of the information is usually in just a few sentences. She said the other stuff supports it. If you can't get the

idea from what the base of the information is, the stuff that you might feel once you get a knowledge for, is around at the beginning or tail end of it just supports it. She said that is just putting it in layman's terms for you to pull it together.

Brad's basic point was that nursing textbooks, as he learned from his mother, are organized in a predictable way. As Brad read from his textbook, he actively engaged in a question-and-answer process and sorted relevant from irrelevant information. While not indicated in the commentary cited above, this student did go on to say that background knowledge—in his words, “base knowledge”—of a topic reduced students' need to read as diligently because students with sufficient background knowledge can sometimes make do with just the lecture. That said, Brad's emphasis on an active, engaged approach to reading in which he created questions and analyzed the overall text structure was the result of his belief that this approach was necessary to comprehend print text. Brad's remarks indicated that he was aware that his purpose for reading was to be able to answer questions based on that reading and that the ideas within the textbook were presented hierarchically—with main ideas and supporting details. Brad's awareness of how helpful it is to be able to rely on predictable text structure is further evident when he reported that he paid special attention “towards the end” of paragraphs or sections of the book because there students will find helpful summaries of the material.

The evidence suggests that these nursing students were aware of the need to rely on knowledge of text structure to facilitate their mastery of textbook

content. Students participating in the focus groups were able to describe the typical genre conventions of nursing textbooks and, furthermore, how knowledge of the genre was helpful to them. These Level 1 and Level 4 readers were actively engaged in the process of learning from print text—a process essential for proving mastery of domain knowledge on quizzes and exams and for participating, albeit in limited ways, in professional healthcare settings. In describing how nursing textbooks are written, the students showed that knowledge in the domain of nursing is communicated according to a formulaic procedure. Textbooks, according to Apple and Christian-Smith (1991), are classroom artifacts that “signify—through their content *and* form—particular constructions of reality, particular ways of selecting and organizing that vast universe of possible knowledge” (p. 3). Barton and Hamilton (2005) explain in their assessment of Wenger’s ideas that literacy artifacts are reifications (p. 28). The nursing textbook, as a literacy artifact, is a reification of the domain knowledge of nursing. Once students are able to discern the pattern behind the ideas embedded in their textbooks, they are better able to understand the foundational concepts associated with the domain of nursing.

**Using textbook supplements.** Level 1 and Level 4 participants relied not only on the textbook but also on supplemental print and electronic resources to master textbook-based content. The Association of American Publishers explains that the supplements that students receive along with their textbooks are part of the “bundle.” According to the Association, “These [bundled] components may

include study guides, practice tests, CDs, videos and a variety of online support including tutors, graded homework, research, editing, language labs, problem and practice sets, artwork and other online tools” (“What Everyone Should Know About College Textbooks”). No nursing textbook adopted for use by William Penn College is an exclusive, stand-alone resource for mastering domain knowledge. Students purchasing nursing textbooks receive supplemental learning materials beyond the textbook itself. Moving beyond the materials physically bound (in shrink-wrap) with the textbook or, in the case of publishers’ websites, referred to by the textbook, the other print and electronic resources utilized within the undergraduate nursing program should also be considered part of the bundle. Consider, for example, the fact that Level 4 students, like Brad, referred back to their Anatomy and Physiology textbook to make a given topic in their nursing textbook more comprehensible. A few other examples of print and electronic resources that should be seen as part of the bundle include *The Dictionary of Medical Terminology*, publications by Assessment Technologies Institute (hereafter, ATI), and the NCLEX 3500 software that is loaded onto every computer at William Penn College.

In mastering the domain knowledge of nursing, students relied on the textbook, but in many cases, they relied on other resources to help them understand textbook content more fully. Whether students find themselves in Level 1 nursing, Level 4 nursing, or anywhere in between, the domain knowledge of undergraduate nursing is made accessible through a multiplicity of bundled resources. Lemke’s (2002) discussion of “advanced scientific literacies” (p. 27)

reinforces the relevance of resources beyond the textbook. In his discussion, Lemke (2002) argues that when it comes to dealing with scientific writing as a genre, a reader is required to engage in a “close and constant integration and cross-contextualization among semiotic modalities” (p. 27). This is a requirement, he explains, if students are “to infer the correct or canonical meaning on which [they] will be tested” (p. 26). The nursing textbook is one literacy artifact among many in the undergraduate nursing program at William Penn College. While it is arguably the central literacy artifact in the lives of nursing students, it is a literacy artifact frequently—and productively—used in conjunction with other semiotic resources.

During their first focus group meeting with me, the Level 1 students mentioned that there was a CD-ROM study guide in addition to the instructor-generated study guides distributed throughout the semester. This CD-ROM study guide was a resource that students could use to find answers to certain questions posed in the textbook, along with critical thinking exercises. One of the students also mentioned an ATI publication that was described by the students as “*Cliff’s Notes* for the textbook.” The students seemed to agree that both the CD-ROM study guide and ATI publication were helpful study aids. During the second focus group interview, Allison mentioned that she often used the *Dictionary of Medical Terminology* and the *Drug Handbook* to help with her studies. As I prepared to ask the group what advice they would have for me if I were a new student just coming into the nursing program, I anticipated discussion of the CD-ROM study guide, the ATI publication, and possibly other

electronic or print resources that students could have used to lessen the burden of reading from the textbook. While the students were aware of resources outside of the textbook itself, which many of them used to some extent, they indicated overwhelmingly a need to focus their efforts on the nursing textbook first-and-foremost. Students' deference to the textbook was apparent when I asked the Level 1 group a question that I thought might uncover strategies for avoiding the textbook.

Assuming the role of a student new to the nursing program, I asked the Level 1 group if I should go to the CD-ROM or to an ATI publication before I considered turning to the textbook. In essence, I was attempting to determine if these resources could reduce a nursing student's need to rely on the textbook. Perhaps there is even a valid textbook substitute that has everything a student needs, especially considering the electronic age in which we live. However, the Level 1 group was biased toward the book. Abigail, in offering a suggestion for what to do before reading a chapter closely, offered advice as follows: "I would scan the chapter, maybe..." One of her fellow participants, Anna, offered an elaboration along the lines of the SQ3R strategy described by Stahl, King, and Eilers (2003):

The chapter...The headlines...The headings and the [bold-face] words, I think, are going to be the foundation for getting the rest of the chapter. Go through it, like skim the [bold-face] words, and then I go back through, and I read it. Cause I think if you have...If you try to read it from the first page of the chapter to the end of the chapter, you don't know what some of

those [bold-face] words mean—you don't know what you're going to read.

So, I go through, and I try to figure out like what the main...what the main topics are, what the definitions are, what the chapter's going to be on.

This advice was followed by a student who recommended that I use the objectives and questions found at the beginning of each chapter “to give [me] an idea of what [I'm] going to be reading about.” This same kind of advice was given earlier, too, when two of the Level 1 participants shared that they print questions from the publisher's website and the CD-ROM that they later used to assess their comprehension of each chapter. This use of technology to aid in mastering textbook concepts was mentioned both in the Level 1 and Level 4 groups. But, there is no evidence that Level 1 or Level 4 students found any resource that effectively served as a textbook substitute. Students relied on other resources to supplement, but not replace, the classroom textbook.

The Level 4 students cited a number of resources that helped to supplement their textbook learning and to prepare for their upcoming licensing exam, the NCLEX. While the Level 1 students were aware that the types of questions they were given even in Level 1 were NCLEX-type questions, for the Level 4 group, the NCLEX was something that was weeks—not semesters—away. Level 4 students mentioned the NCLEX 3500 software, which is found “on all the computers up at [William Penn College],” and a few of them talked about books they purchased at additional expense to them at the bookstore for the express purpose not only of understanding what they were studying in their nursing classes but for doing well on the upcoming licensing exam. One student

mentioned that she used the internet because, as she explained, “I know pictures help me.” Another student, Ben, spoke highly of his PDA:

I have a (Personal Data Assistant) that I use a lot as a resource, especially when it comes to clinical. It’s like having three or four books in your pocket—in one place—instead of...running back to look at...whatever.

After the PDA was mentioned, Brad mentioned the helpfulness of the *Merck Manual*, which he characterized as a “disease process book.” He announced proudly, “You don’t hear [the *Merck Manual*] mentioned no more...I don’t know anyone who uses one.” Brad made the point that this resource is useful because it gives “a different perspective” that helps a student learn course content. He further explained the benefit of reading from more than one source:

Sometimes, it’s the way it’s worded that you’ll pick it up a little faster. ‘Cause I’ll do that like she (referring to another student in the focus group) said: use the notes, use the textbook that we have, then I have an NCLEX book.

Brad continued on to make a point regarding how some sources will have more detail or less detail than a student needs, but that from reading a variety of sources, a learner stands to benefit greatly. The NCLEX preparation book and the NCLEX 3500 software were mentioned by a number of Level 4 students. Two of the participants, Brandon and Ben, explained why these particular resources are so helpful. Brandon said: “I use the NCLEX book and the 3500, but the reason I think those help me is because if you get it wrong, you look at the

rationale—why you got it wrong.” And then Ben added, “And on the 3500, if you pick the right one, it tells you why you picked the right one, too, if you want to read the rationale.” It seems apparent that these Level 4 students realized that in order to master textbook concepts, they needed to look beyond the textbook—to other print and electronic sources—to maximize their learning.

An additional source of study help was also mentioned: “other students.” One of the Level 4 students, Brad, recommended “talking to the previous class for some insights.” At this point in the conversation, there was discussion of how other students can sometimes help, but sometimes hinder, a student’s progress. Both the Level 1 students and the Level 4 students acknowledged the importance of learning with and from other students, but the Level 4 students mentioned something that the Level 1 students did not.

The Level 4 students, in discussing on-campus and off-campus clinical experiences, explicitly pointed out one final resource for learning: “actual, live patients.” While the Level 1 students did mention the patients they interacted with, they did not go so far as to identify them directly as a resource to aid in their learning. In fact, the Level 4 students would have had considerably more experience in working with patients than the Level 1 students. I would argue that this connection made by a member of the Level 4 group is illustrative of the learning that is made possible as a result of the more advanced students’ fuller participation in professional healthcare settings. That is, as students progress through the nursing program in both its classroom and clinical components, they achieve increasing levels of competency that translate into an ability to do

more—and thus learn more—through their clinical experiences. These clinical experiences, along with the print and electronic resources that facilitate clinical competence, are all part of the apprenticeship process through which all students in the undergraduate nursing program are required to progress if they are to become registered nurses.

As one might expect from students nearing the end of their academic program, the Level 4 students were aware of the need to read and study from not only their nursing textbooks, but from a variety of other sources, like the NCLEX preparation book and the 3500 software, the *Merck Manual*, software loaded onto PDAs, various websites, like the Centers for Disease Control and Prevention's website, which was mentioned in a follow-up individual interview, and even other textbooks, like the one required for Anatomy and Physiology, in an effort to succeed academically. Furthermore, when it came to learning from the nursing textbook, the students seemed to know what worked for them, individually, and what did not. The Level 1 and Level 4 students relied on a bundle of resources for learning textbook content. While the nursing textbook is not a stand-alone resource, it retains a central role within the undergraduate nursing program in that none of the supplemental resources that are part of the bundle are in a position to de-center it.

**The specialized discourse of nursing.** Students enrolled in the undergraduate nursing program must master a specialized discourse. This specialized discourse is required of students in both the classroom and clinical

setting. A primary means of acquiring this discourse is through the nursing textbook. Student responses in the Level 4 group indicated that students were aware that decisions on the part of publishers affect the comprehensibility of a given textbook. As students progress through the undergraduate nursing program, they encounter texts that assume a certain level of prior knowledge, highlighting the phenomenon of “intertextuality—how texts draw upon and relate to other texts” (Ivanic, 1998; Fairclough, 2003; as cited by Barton & Hamilton, 2005, p. 24) and underscoring the importance of schema. Furthermore, a student within the Level 4 group was able to articulate a connection between language use in nursing textbooks and language use in professional healthcare settings.

The Level 4 students were able to comment on the reader-friendliness or reader-attentiveness of the textbooks they had been assigned over the course of their studies. One of the members of the group, Brad, even commented on the newer edition of *Medical-Surgical Nursing* that the Level 1 group was required to purchase:

The *Medical-Surgical* book that the classes are using below us now, I think it's with the same author, but it has more charts, more pictures, easy to read. I believe it's [written at an] actual lower-grade reading level than the one our group has.

Brad also noted that more advanced textbooks assume a certain level of prior knowledge. In his own words, upper-level textbooks “[expect] you to have certain things already in mind as far as vocabulary and understandings of things.” One of

the other members of the group, Ben, explained that once a student has the foundational knowledge required for more advanced textbooks and is able to read at that more advanced level, the less advanced textbooks, which still must be referred to from time to time, are “just boring.” In describing the experience of referring back to the Level 1 nursing textbook, Ben commented that it was “like [reading] Dick and Jane.”

These examples of Level 4 students noting that their Level 1 counterparts had purchased easier-to-read textbooks and that advanced nursing textbooks required a certain amount of background knowledge to be made intelligible point to the role of schema in reading comprehension. Paul and Verhulst (2007) explain that “In learning, schemas are the building blocks as they help us connect new information to our stored knowledge” (p. 208). The researchers also cite work by Smith and Swinney (1992) that identifies an increase in reading time in the absence of schema (Paul & Verhulst, 2007, p. 215). The increased reader-attentiveness of newer editions of nursing textbooks would allow for the easier formation of schema that readers would continue to rely on as they progressed through all four levels of nursing and, eventually, into their professional careers. The more developed schemas of the advanced, Level 4 students contributed to their sense that reading lower-level textbooks are “like [reading] Dick and Jane.”

During the second focus group interview of the Level 4 students, it became apparent that students recognized that their chosen discipline has a distinct language. Brad stated:

The environment's got its own language, you know. And if you're in that environment, you understand it. And if you're an outsider to that environment...And people will stand and talk back and forth using medical language...You're lost. So it's like understanding a whole other language, too. And, like, in the *Medical-Surgical* book, it's printed that way. You know, it's not going to tell you, "Your colon's inflamed!"

Professional nurses—and nursing students—participate in a specialized discourse that, as this student explained, leave the uninitiated out in the cold. Brad realized that professional nurses use language in a way that outsiders would find incomprehensible. The language used by professional nurses is language learned as a result of formal study and as a result of continuous interaction with other, more seasoned, professional nurses. In regard to acquiring the language of nursing through formal means of study, Brad connected the language used by members of the nursing community to the language that appears in the nursing textbook. In addition, he noted that the upper-level textbooks that are used to master nursing skills and concepts assumed that readers were comfortable and familiar with the discourse. As Brad explained, the upper-level textbooks are not going to point out the obvious, and so a reader lacking appropriate schema faces a barrier to his or her comprehension of the material.

Nursing students, as they progress through the undergraduate nursing program, grow more confident in their ability to interact in professional healthcare environments. Brad and the other members of the Level 4 group, then, should be

seen as students who, unlike their Level 1 counterparts, engaged more fully with the professional nursing community in that they were able to understand and contribute to the discussions taking place within that community. In regard to textbook reading, Brad's comment indicated that by the time students reach a certain point in their academic careers, authors and publishers will not coddle them in terms of how ideas are presented in text, just as they would not be coddled in the hospital if they lacked the basic content knowledge and language skills to work effectively. At a certain point, it is assumed that nursing students—just like professional nurses—are comfortable with the discourse.

**Building background knowledge through pre- and corequisite science courses.** Any student wishing to enroll in the undergraduate nursing program must first earn a “C” or better in Anatomy and Physiology I. This is the first of several courses taught through William Penn College's Division of Natural Sciences and Mathematics that is required for nursing students. Students are required to take the following science courses:

1. Anatomy and Physiology I. This course is taken prior to Level 1 nursing.
2. Anatomy and Physiology II. This course is taken during Level 1 nursing.
3. Microbiology. This course is taken during Level 3 nursing.

Students are also required to furnish evidence that they had earned a “C” or better in two lab sciences in addition to those listed above within the last five

years. Any student who is not able to furnish such evidence is required to enroll in Biology 101, Chemistry 100 or 101, or similar course to fulfill that requirement. Comments made by the Level 4 focus group participants offered insight into the value of prerequisite science courses for making nursing content more meaningful.

Brad argued that much of the foundation for the specialized discourse students need to become competent academically and clinically is found not in the introductory nursing course but in one of the required prerequisites: Anatomy and Physiology. In his words, “the concept starts there.” Referring to the textbook that is required reading for Level 4 nursing students, Brad explained:

The classes like the Anatomy and Physiology and stuff were sort of like a prerequisite for this book. I mean, once you get through the Anatomy and Physiology I and II and start getting into [the] *Medical-Surgical* [textbook], what you’re reading in *Medical-Surgical* is understood because you have the background. . . Diseases and processes. . . You can follow along and know why this, this, and this—the series happens—[and] not just read it and say, “I know it because the book tells me.”

He then continued:

And whenever you read it, too, you’ll read something one time, it might be spelled out what something is, and in the very next sentence, you got three letters. You know what I mean? And you’ll read it the rest of that way through the book. You know, once it’s covered, it just seems like it...So you have to understand all those abbreviations, you know?

At least one member of the Level 4 group can be overhead saying how bothersome the abbreviated use of language can be, reflecting the difficulties associated with becoming familiar with a specialized discourse in an information-dense domain.

Anatomy and Physiology I and II were credited for offering background knowledge essential to students' comprehension of nursing textbooks. While few would argue with the logic here, the comments shared are more than just statements of the obvious. In the first of Brad's two comments, he credited Anatomy and Physiology I and II with making possible a more critical approach to reading nursing textbooks. Brad indicated that critical reading—and critical thinking—is made possible only if the student has an acceptable knowledge base. Moreover, the second comment referred to the prevalence of abbreviated language use or acronyms as a feature of nursing textbooks. One member in the group shared that the need to keep track of abbreviated language “can be irritating at times,” but Brad argued that while it can be frustrating to have to look up what various acronyms stand for, having a working knowledge of those acronyms does lead to “a faster way of reading.” As he explained:

You've got to look it up—what those three letters actually stand for, and it brings the whole concept back to you, and then you go again. But, if you forget, it's going to cost you a couple minutes to look it up.

Research by Smith and Swinney (1992, as cited by Paul & Verhulst, 2007) identifies a link between lack of schema on the part of readers and increased time to complete a reading task (p. 215), and this is the very thing that Brad

described. Other members of the Level 4 group reinforced Brad's assertion regarding the need to look up what you have forgotten and the time penalty incurred for not knowing something, providing evidence that many nursing students can relate to this experience of finding that they lack schema essential to ease-of-reading.

I asked the group if there were any other foundational courses that they would cite, or if Anatomy and Physiology deserved special mention. Brad remarked:

I'd say [Anatomy and Physiology] deserves a special mention, but then again I also want to include it depends on where you took it and who taught the course. I mean, if you had someone who didn't teach the course, you're lost. You're going to learn it on your own. But, if you had someone who taught you it, and I think most of us in this room might have [had] the same instructor—three of us did, I know that for sure—he pretty much taught the class from his notebook because he said, "Your textbook's more information than you need right now to move on." So, as far as the textbook's concerned, you go from here to basic-level nursing. And, even in the end—I don't know if anyone mentioned it—I'll still reference that book today in nursing sometimes. If something's a little vague, the [Anatomy and Physiology] book's got a bigger, defined picture than the nursing book has, and it's easier to follow.

I was curious to know if this particular Anatomy and Physiology instructor's emphasis on notes over the textbook somehow tainted, for lack of a better word,

students' perceptions of the textbook's importance. Brad, however, explained to me that this was not the case because the notes were based on the textbook. As he explained, "The textbook was deeper than we needed to know, and he (the instructor) told us that. But he pulled what he wanted, but you could reinforce it by reading." Brandon then added:

The notes were just condensed versions. He would recommend if you did open the textbook, look at the highlighted words and a sentence or two afterwards or before, but don't read into it because it will confuse you.

The instructor that these students are referring to was credited with giving students helpful explanations of the topic at-hand, often using colored chalk to assist in pictorial examples on the blackboard. Here again, a scene similar to that described by Lemke (2002) and by Bazerman (1988) emerges. Students, "in order to infer the correct or canonical meaning on which [they] will be tested," (Lemke, 2002, p. 26) must be flexible enough to draw meaning from print text that is read, discussions of print text that involve the representation of ideas on chalkboard or overhead and that may rely even physical gesturing, and even certain "motor routines" that are associated with using required scientific instruments (pp. 25-26). As Lemke (2002) concludes, learning within a science-based course of study requires the acquisition of advanced, multimedia literacy skills.

Several other members of the focus group stated agreement with Brad that where you took Anatomy and Physiology and who taught the class made a tremendous difference. The students were no doubt referring to the fact that

Anatomy and Physiology is also taught at a nearby community college, where, according to widespread perception by the faculty and students at William Penn College, the classes are far less challenging.

After Brittany reiterated that “you need a good foundation [in Anatomy and Physiology] to make it,” one of the other nursing students, Brigitte, talked about the helpfulness of the Microbiology class: “The other thing that helped was Micro. It helped especially when you’re dealing with infections and stuff. Bacteria. It gives you a good understanding of why certain antibiotics are going to work, and others aren’t.” Beth agreed, saying that it helped her with her Pharmacology class, which is normally taken during a student’s second semester (Level 2). It is worth noting that this is a benefit that she would not have experienced had she taken her courses according to the prescribed sequence, where Pharmacology precedes Microbiology. The one member of the group who said that Microbiology was not a help reported that she took the class online from the nearby community college, showing up on campus only for the laboratory component. To generalize from the experience of this student leads to the conclusion that science courses taken online or from the nearby community college may not offer the same level of preparation as coursework taken at William Penn College or possibly at another four-year institution.

Pre- and corequisite science courses are an essential part of the undergraduate nursing curriculum. Brittany suggested that the sciences in general help students to understand what is to be learned in their nursing courses. She noted that Biology and Chemistry “build into Microbiology” and

even into Anatomy and Physiology, highlighting the phenomenon of “intertextuality” (Ivanic, 1998; Fairclough, 2003; as cited by Barton & Hamilton, 2005, p. 24). This is further evidence of the bundled, connected nature of the knowledge and resources associated with the undergraduate nursing program.

After Brittany shared her observations, Brad offered a statement that underscored his agreement on this issue: “That would be a good, interesting thing to research: Those in the nursing group that we started with who didn’t finish, what was the classes taken? Did they drop out because of grades and not understanding content?” Brad believed that academic success in nursing is connected to one’s level of preparation in the basic sciences, as evidenced by this comment and by his previous remarks about the importance of the Anatomy and Physiology class. The ability of Level 4 students like Brittany and Brad to recognize the interconnectivity—and intertextuality—among their required science courses and their nursing coursework speaks to their cognizance of how the job they are to perform in the near future as registered nurses will have been made possible as the result of mastering a body of coursework that was not limited to their nursing classes.

**Implementing successful reading strategy.** Based on responses from the Level 1 and Level 4 participants, there is evidence that nursing students are implementing reading strategies in an effort to master course content in the domain of nursing.

According to the Level 1 participants, the lectures in their nursing class, which were presented via PowerPoint, were textbook-driven. Anna stated: “I

mean, I take very little notes in that class. I like to listen more just because the PowerPoint lectures are pretty much word-for-word by the book....You pretty much need to follow the book.” The textbook was situated as the authoritative resource for learning in Level 1 nursing classes. The delivery of textbook content “word-for-word” established its role as authority to both student and teacher, and surveys given to nursing instructors offer further proof that there was a close connection between the textbook and their classroom lectures.

As the students and, for that matter, instructors, agreed that the textbook and lecture were closely connected, it is understandable that the students talked of the importance of reading before attending class. Consider the exchange of dialogue between three of the Level 1 participants—Annette, Abigail, and Anna.

Annette: “I try to read the chapter before class...That helps me...It kind of helps you remember.”

Abigail: “[The nursing instructors will] say things from the book, and it will be like, “Oh, I remember reading that. Maybe that’s important!”

Anna: “It clicks...If you have a basic understanding of what the chapter is trying to tell you, then when they go back and add their input and add the little extra things to it, then it helps to click together.”

These statements testify to an awareness among the Level 1 students that reading before attending lecture is beneficial in that reading the textbook and hearing a lecture based on the textbook are both made more meaningful. The textbook is the authority on which the instructor bases his or her lecture. As a physical object, the textbook is the abstract discipline of nursing “reified” (Barton & Hamilton, 2005; Wenger, 1998, pp. 58-71). Whenever an instructor offers a textbook-driven lecture, the professor’s authority and the textbook’s authority become interdependent. Some disciplines, like nursing, require strict reliance on textbooks as purveyors of “legitimate knowledge” (Bourdieu, 2001). The reality of the two-year nursing program is that it is a fast-paced, information-saturated, test-driven program of study that requires students to master certain theoretical and clinical concepts that are rigidly defined by licensing boards and accrediting agencies. Within the undergraduate nursing program, students and instructors “act within a textually mediated social world” (Smith, 1990, as cited by Barton & Hamilton, 2005, p. 24). The undergraduate nursing program is a world in which the textbook and its supplements play “a central role and most communication is about [them]” (Barton & Hamilton, 2005, p. 24). The strategies that nursing students reported for learning from the textbook were strategies geared toward mastering a body of legitimate knowledge that is required for entrée into the community of professional nurses.

In responding to my question regarding how I would know what to focus on in the textbook if I were a new nursing student, Brad, from the Level 4 group,

indicated that I should not be afraid to read portions of the textbook more than once. Brad claimed:

If you can read over the information, and it's not hard to remember, then fine. If it's something you read over once, and you think about it, and you have to read over it a couple of times to get it to stick, then that's even better.

Brad was not the only student who noted the benefit of rereading to master material. Students from both the Level 1 and Level 4 groups mentioned rereading as a strategy to improve comprehension, but Brad's remark about the benefit of rereading was especially telling of his awareness of how learning through print text occurs. A similar awareness was found on the part of Ben, Brandon, and Betty, who all reported that they utilized the textbook more sparingly than some of their Level 4 classmates, concentrating only on the parts of the book that they needed to reinforce what they did not fully grasp from the textbook-based lecture.

Strategic reading and rereading is essential for success in the undergraduate nursing program. Research by Millis and King (2001) supports the notion that "understanding is usually not uniform across the content of a text, [so learners] reread strategically, focusing on problematic areas" (p. 60). While the researchers conclude from their study that "better readers (and most likely, the better students) show a greater benefit from rereading than the poorer readers (most likely the poorer students)," rereading is comprehension-improving strategy that should be endorsed by educators (Millis & King, 2001, p. 63).

In both the Level 1 and the Level 4 focus groups, students reported that they reread and reviewed the textbook and textbook-based lecture notes as a way to improve comprehension. Based on the work of Millis and King (2001), it would seem that they were wise to engage in such a process; however, as I have stated previously, there is reason to conclude that the students who voluntarily agreed to participate in my study were more motivated and committed than their classmates who declined the offer to participate. I have also indicated that even the Level 1 students were by no means weak academically or unfamiliar with the demands of postsecondary coursework. This research project, then, assumes a relatively strong reader base of students enrolled in the undergraduate nursing program.

One member of the group Level 4 group, Beth, explained that she does read her book, but she does so strategically, concentrating on certain bits of information, including visual aids:

I usually do read my book, but I don't sit down and read the whole chapter. I look at the charts, and I skim through everything. But I mostly just look at my notes and just glance a little bit through the chapter, and I have a "B," so...

What Beth describes is a method of reading not unlike Ben's. Beth's system, which she claimed is working for her as indicated by her comment about having a "B," involved looking at the chapter's visual aids, skimming the chapter, and cross-referencing her lecture notes with the chapter. Her decision to incorporate the chapter's visual aids into her routine should not be overlooked in that

pictures, charts, graphs, diagrams, and the like are key features of science-based discourse (Lemke, 2002, p. 24).

An analysis of the discussion that took place in the Level 1 and Level 4 focus groups points to students who were actively engaged in making meaning from their textbook. In many instances, students reported cross-referencing textbook and lecture, realizing that that these are complementary means of acquiring critical information. Furthermore, students were attuned to what they knew and what they do not know, enabling them to focus more on the latter. The reading strategies of these students were employed purposefully, selectively, and effectively, as evidenced by their responses and by the fact that out of both the Level 1 and Level 4 groups, only one student, from the Level 1 group, was dismissed from the undergraduate nursing program.

**Can a student succeed without the textbook?** When I asked the Level 4 students to reflect on their time spent studying nursing and to explain whether or not they believed academic success was connected to their comprehension of nursing textbooks, the students indicated that a number of factors are involved when it comes to textbook reading and academic success. My conversation with the Level 4 students has led me to conclude, however, that students who wish to succeed in the undergraduate nursing program should think carefully before deciding to ignore their textbook as a tool for learning.

Some of the Level 4 students perceived that differences in learning style might determine the degree to which students needed to rely on their textbooks.

Brad noted that some students might be able to utilize their strengths as aural learners to lessen their textbook dependence, claiming that such people are able to “[get] it all from the theory part [of lecture] or just from the [lecture] notes... [and they don’t] need the book to reinforce it.” Brad, however, claimed that he himself needed more intensive study: “Now, I actually have to sit and read it. You know, I can hear it, but I can’t retain everything that’s said.” Another member of the Level 4 group, Ben, likewise cited individual learning differences: “It depends on your learning style. It depends on the individual’s learning style whether they have to pull everything out of the book or they have to pull everything out of the lecture.” Brigitte then suggested that the connection between textbook comprehension and academic success might depend more on the learner’s motivation and desire to achieve a certain grade:

I think, in my opinion, I think it depends on the grade you want. I mean, you can possibly skate by without reading, just going through lecture, and end up with a “C.” Some people possibly could. Some people can’t.

Some learners, according to Brigitte, can pass their coursework simply by attending textbook-based lectures, though some cannot. Her realization that motivational factors play a part in a student’s grade is significant. In Linnenbrink and Pintrich’s (2002) study of motivation and academic success, the researchers cite the work of Pintrich and Schunk (2002) when they claim that “there is a recognition that students need both the cognitive skill and the motivational will to do well in school” (p. 313). Skill and will in large part help to determine a student’s grade.

The need to read and learn from the nursing textbooks was strongly indicated in my follow-up individual interviews with Betty, Brandon, and Breanna. In sum, their responses suggest that as students progress through the various nursing levels, the need to focus on the textbook becomes all the more critical as the information presented increases in complexity. Therefore, the number of students who are able to succeed strictly by relying on the lecture likely diminishes over time. In terms of the textbook's role in the reification of domain knowledge that maps to the reality of a professional practice, the trend is that as students continue to progress through the various levels in the undergraduate nursing program, they are assigned to clinical sites and are given clinical tasks that demand more knowledge and skill than was necessary in the earlier levels. As the information presented in the textbook and in lecture increases in its complexity, so too does the (pre)professional practice of nursing in which students participate during their clinical rotations. Students must increase their level of literacy to keep pace with both classroom and clinical demands.

The benefit of reading the textbook is further reinforced when a statement made by one of the nursing instructors is taken into account. The instructor, who like many of her colleagues is charged with granting or denying appeals from students dismissed from the program, said that students frequently claim they should have read more in order to have avoided their academic dismissal.

The possibility of a nursing student remaining in good standing without heavy reliance on the textbook is perceived by students to be dependent upon a number of factors. These factors include the individual's strengths or

weaknesses as a learner, the specific level of the nursing program he or she is participating in, and the student's motivation and desire to achieve a certain grade. While it is possible in some instances to learn textbook-based ideas without reading the textbook, students' responses—and faculty insights—indicate that it is for many students a risk they would not or should not take. In conclusion, it is significant that all of the Level 4 students who participated in this research were reading from their Level 4 nursing textbook, offering evidence for my argument that the textbook may even increase in its importance as students progress through their coursework.

**Bridging the gap: Textbook reading and hands-on experience.** Within the undergraduate nursing program, the primary purpose for classroom experiences involving reading and discussing ideas from the textbook is to provide students with the necessary background for clinical practice. The knowledge gained in the classroom, as Iwasiw, Goldenberg, and Andrusyszyn (2005) explain, provides the foundation upon which “the thinking processes for nursing practice are developed” (p. 196). Both Level 1 and Level 4 students were able to cite instances where a concept or skill was reinforced as a result of learning about it in the classroom as well as experiencing it in a clinical setting. However, the application of knowledge from classroom to clinical is many times fraught with difficulty. A recent article by Bowen (2006) in *The New England Journal of Medicine* describes how “in the clinical setting, the [medical students'] recall of basic science knowledge from the classroom is often slow, awkward, or

absent” because students must learn to “make new connections between their [classroom] knowledge and specific clinical encounters” (p. 2217). Bowen’s (2006) article draws attention to the challenge of applying classroom knowledge to clinical practice, a challenge noted as well in the writing of Gaberson and Oermann (2007). As became apparent in my meeting with the Level 1 focus group, the challenge involves not only how to apply knowledge from classroom to clinical, but how to reconcile situations where what a student sees during clinical rotations is perceived to contradict what he or she learned in the classroom. Level 4 students did not cite similar concerns, nor were they aggrieved by the fact that nursing students’ grades are determined primarily through classroom, and not clinical, measures of assessment. Over the course of time, successful nursing students are able to bridge the perceived gap between classroom knowledge and clinical practice. While the Level 1 students widely acknowledged that their comprehension of the textbook is improved as a result of their clinical experiences, there were learners who still questioned the level of textbook knowledge required for clinical practice. Level 1 students who questioned the relationship between academic knowledge and clinical practice appear to have grounded such questioning in their perception of nursing as a vocational, hands-on career and in the course syllabus that designates clinical as a pass or fail component instead of a course component with a significant point value associated with it.

A comment made by Anna first drew my attention to this perceived problem in terms of the relationship between classroom knowledge and clinical

practice. Toward the end of the first focus group interview with the Level 1 participants, Anna said, “I want to say one thing. I’ve talked to a few of the nursing instructors about this. Once you’re out there, you don’t do anything... Things are not done the way we’re being taught.” On the tape, several other participants can be heard agreeing with Anna. One of them added, “Each hospital has their own standards, too!” At this point, the Level 1 participants entered into discussion of how standards may vary from one hospital to the other, and one participant even made a point about how nursing instructors do not all teach in the same way. Essentially, nursing textbooks contain within themselves discussions of established theoretical and practical approaches to the field of nursing. The participants recognized that lecture followed the textbook closely, and the on-campus clinicals were designed to allow for practice of the skills students read about in a more sheltered setting than would be possible with live patients in a hospital. It is very regimented, yet there is some level of variation for which to account. Anna’s contention that a disconnect exists between what nursing students learn as a result of textbooks, lectures, and sheltered on-campus clinicals and how professional healthcare providers practice their art is indicative of her effort to connect her experience in professional clinical settings with formal academic training.

Anna’s perception that things are not always done “by the book” (quotation marks mine) situated her as a learner involved in a process of acquiring new information in the classroom, comparing that information with what she had experienced in her previous role as a Surgical Technologist, and pondering how

the new information and her professional experiences in another area of healthcare supported or did not support what she witnessed during her clinical rotations. Anna is thus describing the messy fashion in which a learner's schema is formed or re-formed.

During this focus group conversation with the Level 1 students, they shared with me a comment made by one of their instructors that had to do with the fact that nursing students will sometimes see healthcare providers take shortcuts, and these shortcuts can negatively affect the well-being of the patient. This instructor attempted to instill within her students a more conscientious approach to patient care. What Anna commented upon—and what others in the group also reportedly observed—was that sometimes things are not done “by the book,” which in some cases amounts to negligence on the part of the healthcare provider. This is an example of one of the difficulties faced by undergraduate nursing students as they work with members of the professional healthcare community and are forced to grapple with how things are done versus how things should be done.

Despite her report of witnessing discrepancies between how patient care should be undertaken and how, in reality, it is sometimes undertaken, Anna still recognized that positive learning experiences come about as a result of a nursing student's clinical experiences. She explained that when seeing something that she has read about, her level of comprehension increases:

Well...obviously, it, like, clicks together, like, when you actually see it you're like, "Oh, that's how you do it!" 'Cause you read it, and sometimes you're like, "I don't really get it!" But when you see it, it clicks!

A fellow Level 1 student, Abigail, then talked of the heightened level of confidence she felt when she read about something that she had previously seen as a result of her hospital experience. In her words, as she read from the textbook, she felt that she "knew it so much better." Abigail then went on to offer a specific example:

Because I had the experience in the hospital with wound care, and then the next week we actually started learning wound care in class. I already knew how to do it, so it was a lot easier knowing what they meant by everything.

Abigail's example, just like similar observations offered by students in the Level 4 group, indicated that background knowledge of a topic lessens the "cognitive load" (McCrudden, Schraw, Harlley, & Kiewra, 2004, p. 292) associated with reading from the textbook and following textbook-based lectures. Her comment was followed by a statement from Adam, who remarked:

I had a patient with an ostomy, and then we went over it in class, and I knew how to empty it and change it. Clean it. I mean, you see it on the video, but until you do it...

Here, Adam made the point that even watching a procedure on video does not give one the competence or confidence that hands-on experience does. In terms of understanding various nursing procedures discussed in the textbook, one

member of the Level 1 group argued that “it’s easier to remember if you do it first, and then you read it.”

A later statement from Anna also reaffirmed the importance of clinical, hands-on experience:

I mean, I can learn by, like, doing stuff, and then I have it, and I understand it. But I can’t just sit down with a book and know what I’m doing and take all that information in. You know, that’s just not how I learn.

Comments like these are significant, though, in light of the fact that there was so much disagreement among the Level 1 students regarding how helpful previous medical training or hands-on experience working in a medical setting is when it comes to studying in the two-year nursing program at William Penn College.

Anna claimed that the study of nursing was not easier for her even though she received a degree in surgical technology from William Penn College and worked professionally in a hospital. What might be at play here is a tension facing any student who, like Anna, considers himself or herself to be a hands-on, kinesthetic learner. During a conversation I had, a nursing instructor reported that the surgical technology program that Anna graduated from is much more experiential and much less intensive in terms of the testing that takes place. This instructor also said that unlike a career in nursing, a career as a surgical technologist demands less personal accountability and less “standing on your own two feet” than a career in nursing. For example, the surgical technologist is never in a position to be as personally responsible for an individual patient’s care.

Therefore, it is likely that the frustration expressed by Anna was indicative of her

previous experience in an academic program and in a professional community of practice where standards and expectations were different from that of nursing.

In Chapter 3, I noted that William Penn College's website claims that "[William Penn College's] emphasis is on hands-on experience, challenging class work, and personal attention." While true that "challenging class work" is to be found at William Penn College, it is significant that "hands-on experience" is privileged first-and-foremost. I cannot help but wonder how many students—especially those less skilled and motivated than those participating in this study—come to the college seeking degrees in what they perceived to be practical, hands-on professions, only to realize that there is a great deal of reading and high-stakes testing that bars many of them from reaching their goal. While Anna was aware that she learned best by doing—not by reading—that is not to say that she ignored her textbook reading, or that she mistakenly believed she could get by without the textbook, as evidenced by her sharing that she relied on the textbook to prepare for her nursing tests. As I write this dissertation, Anna is nearing completion of her coursework, a feat made possible because she, like other members of the Level 1 and Level 4 groups, was able to "selectively and flexibly apply a vast array of strategies to every reading . . . event" (Pressley, 1995, as cited by Lenski & Nierstheimer, 2002, p. 127). Based on these focus group discussions and the learning styles research of Lemire (2002) and Dembo and Howard (2007), the most responsible course of action for any educator working with students who aspire to become professional nurses is to encourage those students to be flexible when it comes to reading and studying and not label

them—or allow them to label themselves—according to a specific learning style. Success within the undergraduate nursing program requires competence both in the classroom and in clinical settings. The reality, though, is that there was a clear gap between classroom knowledge and clinical practice in the minds of some Level 1 that was reinforced by how things were perceived to be done in professional healthcare settings and by questioning the level of classroom and textbook knowledge required for clinical competence.

The Level 1 students engaged in a heated debate in regard to whether it was more important to be good in the classroom or competent at the clinical site. This issue did not arise during meetings with the Level 4 group. The Level 1 students disagreed over how much background knowledge, or textbook knowledge, is necessary to perform hands-on tasks, and even how strongly textbook knowledge and clinical competence are connected. One of the students, Abigail, argued that “You need to be better at hands-on than booksmart.” Anna then said with great conviction that “People believe that the hands-on part is so much more important when it comes to nursing.” Here, Anna is making a case that the hands-on *is* more important; she is not stating that people other than herself feel that way. However, other voices clearly disagreed with Abigail and Anna. As Allison reasoned, “I don’t think you should be inserting a catheter if you don’t know why!”

While members of the group did acknowledge Allison’s claim, those who argued most forcefully for the importance of hands-on skill over textbook knowledge did not back down. The biggest grievance students had regarding

their clinical experiences is that they did not receive a significant amount of credit for that experience. In the words of Anna, “I think we should get a grade for the hands-on. I really do.” Abigail offered support for Anna’s assertion:

That’s what I think, too. I mean, passing or failing. Whatever. But we don’t get a grade for it. It’s not going to boost our grade up. It’s not like at the end of the semester, if you passed the clinical, you get an extra 100 points or if you fail...I think we should definitely get points for it at the end of the semester.

Comments like this indicate that in the minds of some of the Level 1 students there is a disconnect between textbook knowledge and clinical competence that is reinforced by the point spread on the syllabus. The question some of the Level 1 students wrestled with is this: If the intent of classroom learning is clinical competence, then why is a student’s grade based almost entirely classroom performance? A telling statement by Anna is as follows: “Cause I’ve seen people, even at my clinical, that are doing good, like, on the tests, but at clinicals it’s just like...they’re not comprehending what they’re learning in the book!”

Abigail lamented:

I don’t think they should focus so much on the book smarts here. That’s why I think it’s more important to have the hands-on skills, but we’re not getting credit for the hands-on skills that we do have!

Comments like these indicate that while Level 1 students were cognizant of the need to master textbook concepts in preparation for quizzes, examinations, and professional clinical practice, some students emphasized the notion of a divide

between classroom and clinical competence. This divide was reinforced because the clinical component of students' education was awarded only a pass or fail grade as opposed to point value and, for some Level 1 students, point value equaled importance. The Level 4 students did not cite similar concerns, offering evidence that over time successful nursing students are able to move beyond any initial misgivings regarding the classroom and clinical relationship.

The Level 4 participants, like their Level 1 counterparts, indicated that their comprehension of the textbook benefited from clinical experiences. Unlike the Level 1 participants, the Level 4 students gave no indication that they perceived a tension between classroom knowledge and clinical practice. Initiating the Level 4 focus group discussion on the topic of textbook knowledge and clinical skill, Ben contended that a student's learning is reinforced when that student not only reads about a procedure or skill but witnesses the procedure or the skill first-hand and then attempts the procedure or skill. Brad reported the following scenario:

Last week, we started studying cardiogenic shock. I went to the hospital and had a patient who was in cardiogenic shock. So, to read it, to see it, is two different things. And, so, it definitely pulls it all together. But if you just read something, per se, you're going to use your imagination—imagining what it would be like—but to read it, see it, and then reread it—it would be like riding a bicycle!

Ben then responded that comprehension of the textbook can benefit "either way": "If you read about it and then see it, or if you see it and then read about it. It just

reinforces what you've learned or what you've seen." After another Level 4 student talked about how reading about dialysis was made easier after witnessing the process of dialysis, a classmate remarked that:

Sometimes, if you see something and then read about it, it gives you a better grasp on the process. To see it and then you read the whole pattern behind it and the whole process behind it, and the reasons why this just happened, then you make a more solid connection.

As each of these comments indicates, students were aware that their comprehension of the textbook stands to benefit from witnessing first-hand the clinical scenarios described by the textbook. In some cases, students read about a situation and then saw it, and in other cases, students saw something and later read about it. Either way, as one respondent put it, a "more solid connection" is made, arguably with the most solid connection formed as a result of reading, seeing, and rereading, which was mentioned by Brad.

These Level 4 students, in short, are calling attention to a phenomenon outlined in Millis and King's (2001) study of rereading. The researchers, citing earlier work by Bromage and Mayer (1986) Graesser, Singer, and Trabasso (1964); Mayer (1983); Millis et al. (1998); and van Dijk and Kintsch (1983), maintain that rereading or re-listening allows the reader or hearer to "[pay] more attention to how the text ideas relate to one another conceptually" (Millis & King, 2001, p. 43). What these Level 4 students are describing are repeated exposures to concepts, ideas, and skills that facilitate a deeper level of understanding as a result of repetition.

Over time, successful nursing students are able to bridge any gap perceived to exist between classroom and clinical. Unlike the Level 1 students, the Level 4 group emphasized only positive connections between classroom and clinical, offering no indication that there were any conflicts regarding what they learned from the textbook and in the classroom and how that knowledge was applied in clinical settings. The Level 4 syllabus, just like the Level 1 syllabus, awards no points for clinical experiences; they are strictly pass or fail. The Level 4 students, due to the number of experiences they had connecting textbook knowledge to clinical practice, were able to move beyond the perception of clinical rotations as less significance due to their lack of point value. Students' ability to reconcile the classroom and clinical components of the undergraduate nursing program must, then, be considered essential for their success. Based on this research, it appears that within the undergraduate nursing program, students must overcome any tendency to view textbook, lecture, tests, and clinical experiences as being at odds with one another.

**When do nursing students gain confidence with reading and studying?** A career as a registered nurse is the ultimate goal for students enrolled in the undergraduate nursing program, and it is a goal that is primarily reached as a result of learning to read, study, and take tests in the undergraduate nursing program. A question I asked early-on in the first focus group meeting of the Level 4 nursing students involved when, exactly, students

began to feel confident in their ability to handle the reading and studying required to master the domain knowledge of nursing—the requisite knowledge for clinical practice. Upon my asking the question, though, the group broke out into laughter! It appeared that being a nursing student and possessing confidence did not go hand-in-hand. But, once the laughter subsided, the students attempted to pinpoint moments when their level of confidence shifted. For the majority of Level 4 students, Level 3 seemed to be the point at which confidence increased. There was also indication that the level of background knowledge a student possesses on a given topic influences that student's confidence as a learner. Based on the focus group discussion with Level 4 participants, my understanding is that confidence with reading and studying can be gained as a result of having reached a certain level within the nursing program or as a result of having obtained a sufficient level of background knowledge on a given topic. It is easy to see that these are not mutually exclusive ways to reach confidence, as background knowledge is amassed as a result of prior experience.

The first student to respond to my question, Brigitte, said that it was during the third level when she first began to feel more confident, and Brittany agreed with this statement. What follows is the response of these two participants when I asked why they felt confident once they reached the third level. Brigitte explained: "Well, second level was just a big jumble. First level, you're just starting out, and then [during the] third level [things] just started coming together and making sense." Brittany then added: "Third level for me, too, mainly for the same reasons. Like she said, second level was just a disaster, and first level was

just all the basic things that you needed...Like, it wasn't even really 'nursing,' and then third level brought everything together and things started to make sense. You started to get deeper into the material." The first level might not have been considered "nursing" according to Brittany, whose response draws attention to the limited clinical responsibilities of Level 1 students and to the cumulative nature of nursing knowledge; however, as Beth pointed out, this does not necessarily mean that Level 1 is easy or that little is expected of the student new to the program.

Beth commented that "First level was kind of like, not a slap in the face, but a lot different than high school." She explained to the group that she came to college directly from high school, and she indicated that because "you had to work for it" as an undergraduate nursing student, it was a lot different than her high school experience. Interestingly, this student reported that she did not struggle as much in her second level as some of her classmates reportedly did. Like many of the other Level 4 participants, though, Beth also cited the third level as being the point in time when things really started coming together. The complete sequence of nursing courses taken by students in the two-year nursing program is as follows:

Level 1

Adult Nursing I (7 credits)

Level 2

Nursing Pharmacology (2 credits)

Nursing of the Family (5 credits)

Level 3

Adult Nursing II (7 credits)

Mental Health Nursing (2 credits)

Level 4

Transition to Nursing Practice (2 credits)

Adult Nursing III (8 credits)

As indicated by this sequence of courses, Level 2 is the first level in which students must manage more than one nursing class in addition to their other college coursework. This places in context the experience of students who reported difficulties at Level 2 that diminished by Level 3, as they likely became accustomed to handling more than one nursing course in a semester.

One of the Level 4 participants, Betty, who had earned a college degree and then came back to college after 14 years to study nursing, explained that she found reading and studying for nursing to be “challenging from the very beginning” and never felt confident. In her own words, Betty explained:

I knew I had to work hard. I have kids, you know. It's just always been hard, and I don't think I've ever felt that I was OK. I always feel that I have to do more because it's just so challenging. I mean, maybe that's 'cause I'm older, umm, you know...It seems like younger people, I don't know, maybe learn a little easier. But, I always have to study a lot. I study all the time just so I can do well. You know, it's just always a challenge for me.

Betty's commitment to studying evidently paid off even though she had to withdraw from the College shortly after midterms because of an automobile accident. She returned to complete her two-year nursing degree, graduated with highest honors, and immediately began working toward completion of her BSN degree (Bachelor's of Science in Nursing). In my mind, she was an ideal student. That said, she shared something during the meeting that truly amazed me: "Truthfully, I only read the book one time last semester (Level 3), the one unit. So, this (Level 4) is the first semester that I've actually been reading the book." Betty managed to master the material without the book for roughly three levels of nursing. I should point out that while she had earned a previous college degree, it was not a health sciences degree, so it would not be logical to attribute her success, and her lack of the need to read, to a high level of background knowledge. She speculated that having "a medical background" probably made reading and studying for nursing easier, but she lacked this background. Betty would, however, have had prior experience reading and studying for college-level coursework, though at no point did she give any indication that learning was easy for her because of her previous education. It is also significant that after she admitted only to now, in her final semester, reading the textbook with any regularity, she pointed out what she viewed as a problem in the way that the textbook is written—specifically, that the discussions taking place within the book "could [be] consense[d]," and the book could be made easier to follow. One likely explanation is that Betty exhibits strength as an aural learner. The fact that nursing lectures are largely textbook-driven helps to explain why Betty was able

to get by for so long without relying on the textbook. If the lectures follow the book, and if a particular student is good at following lectures and remembering what was covered in the lecture, then that student would not need to rely as heavily on what is written in the textbook.

One of the Level 4 nursing students, Ben, contended that there was not one particular moment in time when everything fell into place. Rather, he described feeling more confident or less confident depending on the particular topic he was attempting to learn more about. As he explained:

Umm, like, there were certain things the first semester that I felt comfortable with...Second semester...Each semester. It's more of a topic by topic, not an individual...You know, I can't say I felt comfortable through this or through that...It's based on information I either had previously known and learned more about or something I didn't know anything about and am learning fresh.

In explaining that the issue of confidence with reading and studying is not such a simple matter, Ben used himself as an example, arguing he could more easily or less easily learn about what he was reading or studying depending on his prior experience with the subject matter. Indeed, research supports a view that "Prior knowledge about a topic makes it possible for readers to fill in gaps, read between the lines, and make sense of what they are reading; a developed schema can result in reading ease and increased comprehension" (Smith, 1994; Smith & Swinney, 1992; Richgels, 1982; as cited by Paul & Verhulst, 2007, p. 208). In essence, having knowledge of a given topic makes reading about that

topic easier. Students' confidence when completing reading and study tasks in the undergraduate nursing program is now known to shift not only from level to level, but from topic to topic.

**What advice do level 4 students give for reading and studying?** Level 4 students' reading and studying advice centered on strategies for reading and studying in an academic environment dominated by multiple choice assessment. The Level 4 students were aware that vocabulary knowledge alone is not enough for success on nursing tests, and that students must be active readers who are able to predict test questions and take notes as they read. Level 4 students also reported using additional resources, NCLEX 3500 software being one example, to test their understanding of textbook ideas and to prepare for examinations. Students' responses further indicated that as they read, they continually questioned their familiarity with the material, signifying that they were constantly monitoring their comprehension and adjusting their reading accordingly.

Drawing on his own experience as a student reading and studying nursing, Brad connected the activities of reading and studying to test-taking. This is a valid connection given the reality of the undergraduate nursing program as a test-intensive academic environment. As he explained:

Say if there was fifty points of knowledge you had to know, and you mastered forty-six of them, and you just can't get the last four right no matter what exam it is, you're going to see what you can't get the grasp of.

Basically, Brad made the point that students' weaknesses will be exposed on the examination. If a student comes across a concept in the textbook that he or she really struggles to understand, the student should expect that he or she will see a question related to that material on the examination. There is a very real penalty for comprehension deficits within the undergraduate nursing program.

I asked the Level 4 participants what the "tricks" were for doing well in nursing (quotation marks mine). Brigitte explained that she believed that any "trick" for doing well depends on the individual. To support her claim, she referred to a classmate, who was not a member of the focus group, who had earned A's in her classes even though she has only now, in Level 4, bought *Medical-Surgical Nursing*, which should have been purchased during the first semester of the program. This is the second instance reported in the Level 4 group of students who do well without relying on the textbook itself, with the first instance being the case of Betty who confessed to reading only "one unit" in Level 3 and who had only started to read regularly in her final semester. While Brigitte noted that some of her classmates were able to get by without reading the textbook, she was careful to point out that she was not able to succeed with such apparent shortcuts: "I have to rewrite my notes. I have to see it twice. And I read. That's what I do: Read and rewrite and use all the sources that I can to better understand it." After Brigitte shared this synopsis, Beth added:

I have to read, and I have to look over my notes multiple times. But you have to do it at the end of the week, throughout the week a little bit, and then, like, the day before the test...And even sometimes I get up in the

morning at home and study. And I use all the resources that are on campus, like, they have an NCLEX 3500 that I do questions on.

And while Brigitte explained that she is a dutiful textbook reader in Level 4 of the nursing program, it was possible, at least for her, to succeed as a Level 2 student without heavy reliance on the textbook itself:

Level 2 condensed a lot of it into a black notebook that they handed out to everybody, so a lot of times you really could get away with not reading the textbook. You just had to focus on the notes. If you memorized the definitions, you were good for the test.

Brigitte was quick to point out, however, that vocabulary knowledge alone is insufficient for success in Level 4 nursing. These Level 4 participants reported strategies for learning that involved reading and rereading the textbook; reading, rereading, and rewriting lecture notes; and making time for study throughout the week and not just the day before the examination. In addition, the NCLEX 3500 was mentioned, which is a computer software program designed to prepare students for their licensing examination. This is available on all computers at William Penn College

One of the Level 4 participants, Brad, emphasized the need to determine where examination questions are drawn from in order to decide whether to focus on the book or on one's lecture notes. Brad also cited the importance of studying with a group "to get different viewpoints." Other strategies for mastering the content included making flashcards and utilizing the workbook that came with the

textbook. One additional learning strategy recommended by Brandon involved audiorecording the lecture. As Brandon explained:

You have to get the teacher's permission, but I took a class [that would fulfill a requirement for the BSN if I chose to further my education] two semesters ago, and I tape recorded everything, and then I would go through my notes and listen. And it was a really hard class, and that really helped me to do well, and this semester, I started doing it, too.

Brandon's comment on the helpfulness of a strategy that he used in the past and continued to use was followed by Brad's claim that it is important "To try to remember what you've seen before, and tie it together because a lot of times we've seen the same information given in different aspects." Brad then went on to give a specific example of what he meant, which was that different instructors might approach various topics from different angles, or they might use a different method for solving a medical mathematics problem. This notion of instructional variation even within a highly structured program like undergraduate nursing surfaced in the Level 1 focus group, too, and it points to the reality that successful students must learn to be flexible and must not lose sight of ideas and concepts learned earlier because instructors will continue to return to these ideas and concepts, sometimes—perhaps even oftentimes—approaching them from different angles.

During the focus group meeting, I asked Brigitte what advice she would give to me, personally, were I to enroll in the undergraduate nursing program. She responded that I should "Read everything. Read every box. Read every

nursing care plan. Read every single thing in the book because they take questions from the rationale[s] for the care plan[s]...They take questions from any little [thing]." Another participant's comment was simply this: "There are no shortcuts." Brigitte, in encouraging me basically to "read everything," including text boxes and care plans, gave an extremely practical explanation for why I should be doing this: The instructors will pull test items from just about anywhere. And, as indicated by the "shortcuts" comment, overlooking anything in the textbook can be costly. However, at least two participants in the Level 4 group had adopted a less regimented approach. As Brandon explained: "When I read the book, I just do the stuff that I don't know. If I missed something in class [for example]. I just skim over it, but I don't read the whole thing, like front-to-back." While Brandon may seem less conscientious when comparing his approach to textbook reading to some of his fellow participants, closer examination reveals a certain level of sophistication on the part of this learner. Here was a student who understood the importance of knowing what gaps existed in his knowledge, and he reported that he utilized the textbook as a reference, concentrating his efforts on only those parts that contained information that was new to him or that he did not completely understand from the lecture.

Ben described a similar approach. He viewed the textbook as a supplemental resource to the textbook-based lecture. After Ben finished speaking, I asked a quick follow-up question: What allows you to make the decision as to whether or not you know something? Ben's response to my question was as follows:

If I can recite it. Like, if the topic is arterial (inaudible), if I can know all the values and everything like that, then I'll just skim over it and make sure I didn't miss anything. But if it's how to do something that I have completely no idea, I'll read over it just so I get a better understanding.

Ben's response indicated that he tested his comprehension by orally reciting what he knew about the various topics and subtopics within a given chapter, and he was mindful of the need to compare what he knew—or what he thought he knew—with what was stated in the textbook to be sure “[he] didn't miss anything.” More involved reading was only necessary if he was unfamiliar with one of the topics or subtopics. This points to a student who is making strategic choices when it comes to studying from the textbook so as not to waste unnecessary time and energy. Even though this student utilized the textbook more sparingly than some of his classmates, he still relied on the textbook as a legitimate source of authoritative information (Apple, 1991; Apple & Christian-Smith, 1991; Bourdieu, 2001; Silverman, 1991; Woodward, 1993) that he accessed to fill in any gaps in his content knowledge. Ben's response also indicates that he possesses “metacognitive knowledge” (Cao & Nietfeld, 2007, pp. 31-32). As Cao and Nietfeld (2007) explain in a recent article:

Metacognitive knowledge allows students to become aware of what they know and what they do not know about a certain topic. This awareness affords students a baseline for planning for learning and allocating time and effort to study. Metacognitive skills refer to intentional regulation of study strategies. (p. 32)

Ben was not the only student to possess metacognitive knowledge or employ metacognitive skills; indeed, even the Level 1 students I spoke with offered me insight into their metacognitive knowledge and skills. Ben, like successful students in general, was aware of his strengths and weaknesses as a reader and learner.

Within the Level 4 focus group, there were a handful of participants like Ben—specifically Betty and Brandon—who seemed to possess good listening skills that helped them learn the material at-hand. Since the nursing lectures were textbook-based, students with a strong proclivity toward aural learning might in some cases be able to succeed without reading the textbook as diligently as some of their classmates. That said, even students who were able to pass much of their required coursework with minimal textbook reading were faced with instances in which they needed to become more conscientious readers. Evidence of this is found in Breanna’s realization that as test questions became more complex over the course of the undergraduate nursing program, textbook reading, as opposed to reliance on textbook-based lectures, became more important.

As addressed in detail in a previous section, *The Sophistication of the Level 1 Nursing Students*, the Level 1 students were not inferior in terms of their reading and study habits. No fewer than 14 out of the total of 17 reading and study strategies mentioned by Level 1 and Level 4 students over the course of this research study were cited by both groups. The reading and study advice offered by Level 4 students in this section is advice given for mastering and

displaying domain knowledge in a test-intensive academic program. The fact that the Level 1 students reported reading and studying in much the same way as the Level 4 group testifies to the fact that the Level 1 students were aware of the literacy skills needed to achieve success. This study of Level 1 and Level 4 students enrolled in the undergraduate nursing program is a study of strong students. The very strategies that the Level 1 students reported using are strategies that they will in all likelihood continue to use and to refine over the course of the two-year nursing program, and the strategies that the Level 4 students reported using are no doubt the time-tested strategies that have allowed them to remain in this challenging program for four semesters.

### **The Influence of Intensive Testing in Shaping Advanced Literacy**

The undergraduate nursing program at William Penn College is not for students who struggle with multiple choice assessment. From even the earliest focus group meeting of the Level 1 students, which took place only a few weeks into their first semester, there was an explicit awareness among participants that academic success in the nursing program is to be measured almost exclusively through multiple choice examinations. During my focus group discussion with the Level 1 participants, it became readily apparent that they faced a great deal of anxiety as they attempted to read and study so that they were able to prove their comprehension by earning a passing score of 79 percent or higher on their exams. For both the Level 1 and Level 4 students, the reality of multiple choice assessment influenced their approaches to reading and studying in the

undergraduate nursing program. The tests ubiquitous to the nursing program are the accepted measures of that discipline's domain knowledge. In that regard, the examinations serve a gatekeeping function in that they effectively weed-out students who do not comprehend the material discussed in the textbook and through lecture in ways that are validated by those charged with serving as gatekeepers to professional nursing. The test-intensive environment of the undergraduate nursing program has a profound influence on the literacy practices of Level 1 and Level 4 students. Indeed, students' reading comprehension is gauged almost exclusively by their performance on these examinations, which are designed to prepare students for their licensing examination. It is simply not possible to discuss the literacy practices of undergraduate nursing students without taking into account the overarching influence of the examinations that so dictate how they utilize resources like their textbooks.

#### **Multiple choice tests as a measure of reading comprehension.**

Multiple choice tests are the dominant measure of reading comprehension in the two-year nursing program leading to the associate's degree in nursing. If a student is not able to pass these types of examinations, that student does not stand a chance for success in the program. There is no extra credit. There are no written assignments that can effectively bring up a low grade, and neither can a student depend upon clinical performance to boost a class grade. Students must,

therefore, approach reading and studying with multiple choice assessment in mind.

The Level 1 students were aware of strategies for taking multiple choice tests, such as the strategy of using process-of-elimination to avoid falling for distractor items. There was also an awareness, though, that this strategy alone cannot save a student who does not have a solid understanding of the material. In the words of Anna, “there’s only so much of that ‘eliminate two [choices]’ you can do.” There was much talk among participants about how one answer choice is slightly better than the other alternatives, requiring a degree of test-savviness on the part of the student. Anna commented about the nursing instructors being “more worried about [the students] getting good board scores than they are actually teaching [them] how to be nurses.” Her perception offers evidence of the tension between the classroom and the clinical. Specifically, does a student’s display of knowledge on an exam prove that he or she is a competent nurse? It is worth noting that at least one member of the group expressed disagreement with Anna’s comment regarding board scores. However, Anna’s perception is put into greater perspective when the purpose behind this multiple choice assessment is taken into account: The quizzes and exams are designed to prepare students for the NCLEX. Any student wishing to join the ranks of professional nurses must pass this licensing exam. Even in Level 1 nursing, the students were being trained to answer questions like the ones that appear on the licensing exam, which, for them, is two years away.

The reading habits of the Level 1 students were greatly influenced by the reality of objective assessment, as indicated by statements like this one from Abigail:

That's how I study. Every night or day before the test, I always go through the study guide for each chapter, and I answer every single one of the questions: the knowledge [questions], the mastery questions, and the critical thinking questions. That honestly helps me out a lot because it helps me test my understanding of what I was reading, 'cause I have a hard time comprehending what I read right away. I have to read, like, five times. It's not all, like, common sense, either.

Abigail reported that her approach to studying is very much influenced by how and when she is to be assessed. In essence, her method of studying relied heavily on answering questions, which she claimed was helpful to her because she is often unsure as to how much of the reading she comprehends.

Using questions to assess comprehension was a common study technique. One participant in the Level 1 group described her method of study quite simply: "When I'm studying, I try to think of how they're going to ask me stuff." However, answering and predicting possible test questions did not appear to reduce the stress of reading and studying in nursing entirely. The Level 1 students as a whole reported a great deal of worry over examinations, especially in regard to how test questions will be worded. As Alice lamented, "Their wording is just awful!" Another Level 1 student, Allison, voiced frustration over how best to interpret test questions in recounting her experience with an instructor who would

tell students that they sometimes are reading “too far” into a question but, at other times, aren’t reading “far enough.” The reading difficulties experienced by students in the undergraduate nursing program were not limited to textbook reading. As indicated by Allison’s comment, learning how to read exam questions is a skill that requires some degree of sophistication. Academic success in the undergraduate nursing program depends in part on students’ ability to read test questions as strategically as they read their assigned textbook.

Another frustration regarding tests that appeared in the Level 1 group involved occasions when instructors were perceived to contradict one another or what was stated in the textbook. One student, Allison, argued that students should “always go by the book [because] the book’s always right.” Anna, though, responded to this by saying that while that may be true, there is still the issue of the test. While Allison indicated that the book is the ultimate authority, the problem of receiving contradictory information remained a real issue for some learners, like Anna, who struggled with conflicting information between instructor and textbook in much the same way as she also struggled with her perception that things done in professional clinical settings are not always done “by the book” (quotation marks mine).

Another remark by a Level 1 student on the topic of the authority of the textbook and what to make of situations where teachers appear to disagree either with one another or with the book was offered by Alice. She observed that “all the testing [for nursing] is based right off the book.” Logic holds that since the

test is based on the book, the book should trump the instructor in cases of disagreement on a given topic, at least as far as the tests are concerned.

During the focus group meeting, Abigail shared her belief that “test-taking is 80 percent confidence.” This student explained that she had previously earned a four-year college degree, and her belief is a result of this experience. As she explained:

You can't sit there and think that you don't know the information or that you're going to fail. You will. You'll psych yourself out. You have to have the confidence that you know the information going in; otherwise, you'll psych yourself out. Be confident in your knowledge.

The issue of confidence—or perhaps more accurately, resilience—was brought up by Allison, who recalled the frustrations of classmates who did poorly on the first exam:

I mean, I know a lot of people took the first test, and they did really terrible, and they were like, “This is the end. I have to drop out.” I'm like, “Don't worry about it! You have all semester. We have 700 some points.” You know, you can't keep doing bad because there's so many points, but you can't get yourself all psyched out on the first one.

Alice, however, did raise the issue that “the pattern is that each test gets worse.” This comment brought about lively discussion over the perceived difficulty of each test taken up to this point in the semester. One student, Annette, mentioned that she has been studying harder as a result of less-than-acceptable performance on previous exams. Students entered into discussion of how they

have had to apply their understanding of textbook concepts in ways they were not yet comfortable. While acknowledging that “there’s no way” a student can get by without knowing fundamental definitions and memorizable facts, there was agreement that “you have to [learn to] apply that in a different way.” At this point in the conversation, there was once again discussion of the wording of test items. One student, Anna, argued that a recent test did not accurately reflect her comprehension of textbook material: “I mean, me, I still got quite a few of them wrong, but I knew the information. It was just the way it was worded. It wasn’t the best answer according to them. It wasn’t necessarily wrong.” And Allison then responded:

You have to apply it in their terms. You can’t just spit it back at them. You have to think about it and say, “OK, so this is what it is.” You have to remember, “OK, am I correct on this?” Read the question, like, five times, so you know what it really wants, and actually answer the question.

The exchange between these two Level 1 participants is significant on a number of levels. First, there is the statement by Anna, who claimed she knew the material, but her knowledge level was not reflected on the exam score. She complained that she fell victim to tricky wording. She defended the answers she chose as not being “necessarily wrong,” just not the best possible choice according to “them.” Her classmate, Allison, also referred to an unspecified “them,” which could point either to the nursing instructors or the creators of the exam, which in most cases is the textbook publisher.

Much like the students who shared that they read and reread from the textbook and read and reread from their notes as they study, Allison cited the need to read each question multiple times in order to “*actually* answer the question” (emphasis mine). Both Anna and Allison, in referring to an unspecified “them” as being the judges of right and wrong answers, acknowledged that there are gatekeepers to the community of professional nurses. These gatekeepers include nursing instructors, with whom students interact daily, but also test makers and licensing boards who do not interact directly with students. To achieve academic success in the undergraduate nursing program, students must be able to demonstrate their comprehension of material covered in the textbook and discussed during class by means of multiple choice assessment. Allison’s response that reading test questions several times was necessary to “actually answer the question” is evidence of a perspective in opposition to Anna’s. Allison, unlike Anna, proposed that there is an *actual* right answer whereas Anna indicated only that one answer is more preferable to the gatekeepers who created the test.

The difficulty of nursing tests was also discussed by the Level 4 participants who, like their Level 1 counterparts, approached reading and studying with multiple choice tests in mind. Initiating the conversation, Beth noted that the nursing program at William Penn College was “a lot different than high school,” and she learned as a result of the first exam during her first semester that her approach to reading and studying needed to change. Another participant, Brad, warned that the tests will expose a student’s weaknesses. In

his words, “you’re going to see what you can’t get the grasp of.” Brad also mentioned the danger of overlooking “something that is simple and easy [in the textbook], and then you see it [on the test], and you don’t know what it is.” He explained that this happens whenever “you don’t take the time to look at [something] from a different direction.” Nursing students must not only monitor their comprehension of the textbook carefully because they will see test questions related to difficult material, but they must also avoid the temptation to gloss over the less difficult material because that, too, can result in a loss of points on the exam.

The Level 4 participants talked of the importance of trying to figure out from where test questions are drawn, and Brandon noted that “there are questions on the test that do come from the book but aren’t in the lecture.” Another participant then shared that she saved her textbook reading for closer to test time. This, as well as Brittany’s observation that test items can be drawn from any part of the assigned chapters, supports a connection between textbook reading and examination performance and, in general, the relevance of the textbook-as-tool to students pursuing the nursing major.

In my discussion of the Level 1 participants’ experiences with tests in nursing, I shared the realizations of the participants that the tests are designed to prepare students for the licensing exam. The Level 4 students offered me the same explanation. However, Brad raised this point: “You may think that you know the material, but you may not be able to handle the test question.” Brad seemed comfortable with the notion that a student does not truly know the material if he

or she is not able to answer questions on the material. This is a contrast to the Level 1 learner, Anna, who argued along the lines that the tests did not adequately represent her level of knowledge. One possible explanation is that over the course of time, students like those in the Level 4 group learn to accept that as far as the discipline of nursing is concerned, a student's level of comprehension is, to a great extent, assessed through objective measures. These objective examinations not only serve as a means of assessing students' reading comprehension, but they also serve a gatekeeping function in that the examinations pose an insurmountable hurdle to weaker students who are unable to answer questions at an accuracy rate of 79 percent or higher. Level 1 students, as a group, were not as comfortable with the notion that judgments about them as readers and potential nurses were made based on tests the likes of which they were still largely working to decipher. That is not to say, however, that the Level 1 students agreed unanimously that the tests were unfair or that the Level 4 students found the nursing examinations to be easy as a result of their senior status in the program; on the contrary, Level 4 students, like the Level 1 students, readily acknowledged the difficulties inherent in their nursing examinations.

In order to do well on their objective, multiple choice assessments, the Level 4 group discussed the need to read the test question several times, just as the Level 1 group did. In the words of Beth, "you have to be able to sift through it" in order to really understand what is being asked. Brad mentioned that rereading test items is not always a sure-fire strategy because there are times when "you

can read the question three times and not be sure what they're asking you."

Brad's reference to "what *they're* asking you" (emphasis mine) is reminiscent of statements made in the Level 1 group by Anna and Allison. Brad's comment, like comments by Anna and Allison, offers additional evidence that nursing students are subjected to assessments by known (in the case of the classroom instructor) and unknown (in the case of anonymous test-makers) gatekeepers to professional nursing. Comments like Brad's reveal that objective assessments remain a challenge to nursing students even as they near the end of their two-year program.

The students in the Level 4 focus group offered advice for any nursing student grappling with objective assessment. Ben claimed:

You have to keep yourself from reading into the question. If it's not on the test question, don't think about it! Think about what's black and white in front of you. There's no other thing other than that question. You read that question.

To which Brad then added, "And sometimes you have to rule out little things that don't have anything to do with what they're asking. They might say a person has diabetes, but they're not asking you about diabetes at all." This was followed by a participant who explained that test-taking strategies such as those described here are "something you have to learn." These comments by Ben and Brad underscore the challenge of taking objective, multiple choice tests in the undergraduate nursing program. Students must read exam questions closely, determining what information in a hypothetical clinical scenario is relevant and

not relevant in terms of choosing the correct answer. Through pencil-and-paper exams, students are required to make connections between textbook concepts and hypothetical clinical scenarios. Nursing students must learn to “sift through” information and “rule out” that which is irrelevant to the problem at-hand. Such skill is required for clinical competence, and the difficulties faced by healthcare students as they acquire such skill is noted in Bowen’s (2006) article on facilitating diagnostic reasoning skills among medical residents.

In elaborating upon his test-taking strategy, Brad drew attention to the need to read every word carefully:

Sometimes, on questions I can’t answer, I’ll look at the answers, you know, [to] define what they’re actually asking. Like you (referring to another member of the group) said, “Will” or “Will Not.” If you read it as “Will,” you’ll pick the wrong answer. Where there’s key words, there’s two answers that fit, depending on how you read the question. And if you’re missing the “Not” or you’re reading the “Not,” you’re right or wrong. It’s how you comprehend what you’re reading. You know, basic comprehension: Are you reading everything you’re reading, or are you just skimming key words?

Nursing students, like students in other academic programs that rely heavily on multiple choice assessment, must be careful readers of test questions. As Brad explained, one word can make the difference between the correct answer and an incorrect answer. More importantly, as one of the nursing faculty I surveyed stated, “The difference in one or two words can be the difference between life

and death” for a patient. Comprehension of text, then, is crucial both for passing examinations in the classroom and for ensuring safe patient care in professional healthcare settings.

Students in the two-year nursing program must be able to correlate information contained in textbooks to tests and to clinical experiences, requiring a high degree of sophistication on their part. The Level 1 and Level 4 students who participated in this research were immersed in a test-intensive academic environment; this test-intensiveness profoundly influenced their literacy practices as they attempted to remain in good academic standing and gain entrée into the field of professional nursing.

### **Social Influences on Advanced Literacy in the Undergraduate Nursing Program**

New Literacy Studies scholarship (Barton & Hamilton, 2000, 2005; Gee, 2000, 2001a, 2001b, 2002; Newman, 2002; Street, 1984, 2001a, 2001b) stresses the social nature of *all* literate activities, and it is in keeping with the importance of literacy’s social dimension that I offer insights into how students’ social experiences in the undergraduate nursing program influenced their literacy practices. “Advanced literacy,” as articulated by Colombi & Schleppegrell (2002), incorporates a view of “literacy as social activity” (pp. 06-08). In their discussion of the social component of acquiring advanced literacy, the authors note that “Becoming a member of a community of practice means adopting the discourse that is recognized and used by the established members of the community”

(Colombi & Schleppegrell, 2002, pp. 07-08). Acquiring the discourse privileged in the undergraduate nursing program was made possible for students through the nursing textbook and supplementary print and online resources, instructors' textbook-focused lectures, and through interactions with classroom and clinical nursing instructors, tutors, and with other members of the community of professional nurses.

Any given text—or textbook, for that matter—must be viewed in light of its social function. Lemke (2002) privileges a view of texts not as conveying meaning in-and-of themselves, but as being made meaningful as a result of the broader social context within which they are used. In this sense, the authority of the textbook is maintained by virtue of the fact that the classes and clinicals that are part of the undergraduate nursing curriculum provide opportunities for students to demonstrate mastery of the concepts and skills contained within the textbook. The status of the textbook in the undergraduate nursing program is therefore unassailable because it is utilized within a community that recognizes its content to be representative of the field that it reifies.

**The influence of classroom and clinical nursing instructors and other professional healthcare workers.** Those who worked in healthcare, including those who taught the classroom and clinical components of my participants' curriculum, shaped students' textbook literacy practices in powerful ways. There was a clear awareness among Level 1 and Level 4 participants of their instructors' expectations of their accountability for what they read for class. In

addition, student-participants witnessed the modeling of literate behavior by the healthcare professionals who trained them at their clinical sites.

Nursing is unique even among the other healthcare majors offered by William Penn College in that nursing students begin their clinical experiences by the third week of their first semester. An informant at William Penn College who provides academic counseling to at-risk students shared with me that this is a real source of stress for some nursing students because they lack the social and linguistic skills required in healthcare settings. In comparison, students studying radiology do not begin their clinical experiences for at least two months into their first semester. As this early clinical experience is unique to the nursing program, I would argue that any scholarly analysis of the literacy practices of nursing students must address the fact that they are forced to interact with professional nurses from an early point in their formal course of study. Because the students are “pushed out of the nest” so early, there is little room for error as they go about reading and studying the concepts, definitions, and theories that are essential to their enculturation (quotation marks mine). In short, a nursing student who is not quickly able to determine the best way to go about reading, studying, taking tests, and functioning in the classroom and clinical environment will not remain a nursing student for long as the program is characterized by high academic and preprofessional standards. Those failing to meet these standards face either compulsory remediation of their deficiencies or dismissal from the program.

Learning the language of nursing begins early on. It is acquired through interactions with texts and people. During the first focus group meeting with my Level 1 participants, Abigail offered the following statement:

What [my classroom instructor] told us before about knowing the terminology because if they mention a word in a chapter, and it shows up on a test, you can't argue that you didn't know what that word meant 'cause you should have learned it in the chapter when you read it.

At the time this statement was made, the students were less than one month into the semester, so the advice given here can be understood as cautionary advice given to students by faculty early on in the semester. Abigail was taught explicitly by the classroom instructor that one is accountable for the terminology introduced in the textbook. This instructor was credited earlier during the same meeting with explaining to students how to move from the book to the electronic resources in order to understand the content, and it was also noted by students that this instructors' test questions were drawn from the textbook.

In classes like the one described here, Nursing 130: Adult Nursing, students are held accountable for the content of their textbooks. This course, which is taken during the first semester of the undergraduate nursing program, requires not only a textbook (which comes in two volumes) but resources beyond the textbook to facilitate learning (e.g., study resources on CD-ROM, DVDs, and also a workbook/study guide). The instructor of this class reminded students to use both the book and the adjunct resources, which, according to the Level 1 student who shared this information, is what the instructor reportedly did as she

herself reviewed the material. Furthermore, students knew that they needed to read carefully because if something was mentioned in the book that later appeared on the quiz or exam, there was no excuse for not knowing it. The literate behavior required of successful nursing students was clearly being modeled by this Level 1 nursing instructor. The instructor advised students to tackle the material in much the same way that she herself did in preparing to teach the class.

The first step toward becoming a professional nurse is learning to learn as the experts do in that discipline. This Level 1 instructor provided explicit instruction to students on how to learn from the textbook and textbook-supplementing resources. By offering direct and explicit instruction on reading and study habits, she demonstrated a level of commitment to helping students achieve success in the program. In such a test-intensive environment as the two-year nursing program, the advice given by this instructor was an effort to give students a fighting chance. Knowledge of textbook content is assessed on a weekly basis throughout all four levels of nursing, and this particular Level 1 instructor was offering advice intended to encourage students to adopt active reading and study habits from the beginning. The instructor shared with me during a follow-up conversation that she and her colleagues made a conscious effort to introduce good study habits in Level 1 because of their perception that students do not intuit how to go about reading and studying and, in many cases, underestimate the amount of reading and studying required for success in the nursing program. The modeling of literate behavior, however, was not limited to

the classroom. The Level 1 students were also able to identify occasions when literate behaviors were modeled on-the-job.

There is no doubt that nursing is an information-dense field of study. Textbook content must be mastered, and that mastery must be displayed not only on quizzes and exams in the classroom, but in the clinical arena. Consider the following two statements by Abigail and Anna that were made at different points during my second meeting with Level 1 students. Abigail stated: “Our clinical instructor is awesome. She knows her stuff. She knows everything. Everything I’ve ever had a question on, she’s been able to answer, or she immediately looks it up and gets back to us.” And Anna observed that: “Reference [reading] is a huge part of [being a nurse] because one of the nurses that I work with will [consult reference books], and physicians use their reference constantly.” The literate behavior of a professional nurse was being modeled in the professional setting in both of these examples. In the first statement, Abigail does not equate the clinical instructor’s need to look up information as a sign of scholarly weakness, but rather as an example of what a conscientious, or in the words of the student, an “awesome,” clinical instructor does. This understanding of reference reading as a reality among professional healthcare workers is reiterated in the second statement, where Anna offered the observation based on personal experience that professional nurses must refer to reference sources constantly, just as physicians do. Such statements based on observations of real-world “literacy events” (Heath, 2001) are significant in that they demonstrate an awareness even at Level I that professional nurses don’t stop reading once

they are on the job. Reference texts are identified by these nursing students as being essential tools for accomplishing day-to-day tasks in medical settings. In short, these reference texts make practice within the domain of nursing possible. The Level 1 students, despite their being relative newcomers to the study of nursing, were attuned to the modeling of literate behavior offered in the classroom and in healthcare settings, thus establishing a view of textbook and reference reading as being relevant to the academic study and professional practice of nursing.

**The helpfulness of previous experience in the healthcare.** A few of the students in the Level 1 group had previous medical experience, including formal study of medical transcription and surgical technology. Consider the following dialogue between two Level 1 students, Annette and Anna. Annette stated:

This is new to me. I'm coming right out of high school, so I have no experience whatsoever in the field. So, it's a lot harder for me than her [referring to a classmate] who's already been in the field for several years. Maybe she wasn't doing nursing, but she was around medical things. Terminology. But I have no idea.

Anna then responded:

Personally, I find it extremely hard. Not the blood pressures and all that, which I know. I'm having such a hard time applying it. I'm so used to going and doing it. Now I have to stop and think, "This is why I do this." I've done

it for years, but now I have to think of why I do it. That is the hardest thing for me. I'm just so used to doing it that it's second nature to me, you know, like the patient bath. I'm just so used to doing it, but now I have to stop and think, "OK, it's this scenario," when before, I never thought about it. I just did it.

And consider this statement made by Anna much later in the interview. In this statement, Anna reaffirmed that she was one of the members of the group with previous medical experience, but the helpfulness of that experience has been minimal:

Whenever students have like an LPN or they have an MA [i.e., a degree as a Licensed Practical Nurse or a Medical Assistant], and they're like, "This semester is going to be so easy for me because I have this experience!" And I've come to learn that it's not. If it is any easier for them—you might know how to do things, but everybody learns differently. You learn things a total different way. I mean, I don't think they have any . . . I know, obviously, medical terminology, which helps me with things—what some things are for, and this. . . But it doesn't help me any. I can't imagine where a certain position would. . . You think it's going to, but it doesn't really end up that way. Sometimes, once you've been trained one way, to learn how to do it a different way is twice as hard. So, and I keep seeing that with people who have experience, and they're like, "Oh, that isn't how we do it!" So. . . we have to put that out of our mind.

This statement reflects the difficulty faced by a learner struggling to reconcile new information with existing schema. As Casazza (2003) explains, “Learners use their experiences to develop sets of beliefs, theories, and assumptions. These, in turn, become the filter through which incoming information is processed” (p. 188). Anna’s experience in the field of surgical technology created difficulties for her in terms of her attempt to reconcile her experiences studying and practicing surgical technology to her experiences in the nursing program.

There was also speculation on the helpfulness of previous medical experience during a meeting with the Level 4 group. Consider the following statement offered by Betty, a Level 4 student without previous medical experience:

Some people come from a medical background. They have medical experience, and I came from retail. I didn’t know anything about the medical field, so everything was new to me. Some of the students have a lot of previous knowledge, which I think helps them. Maybe they don’t have to study as hard. Like Brandon. He didn’t...he had criminology, so he probably had to start from the beginning, too.

Unlike the conversation that took place in the Level 1 group, this particular Level 4 student’s statement went unchallenged, so there was likely a general level of agreement with the statement. Betty’s perception is that classmates with medical backgrounds might have an edge when it comes to reading and studying for nursing. In Chapter 1, I reviewed literature to establish how students’ prior experiences with language come into play whenever they engage with print text.

In the words of Troyka (1987), readers are engaged in a “dynamic process of interaction between what is on the printed page and what [those] readers bring to the printed page” (p. 310). The nagging question, then, is this: Why would a student with healthcare training and experience not be helped by that experience when it comes to the study of nursing? The answer lies in difference in academic rigor and personal accountability between certain other healthcare professions and nursing.

Anna had some knowledge of medical vocabulary as a result of previous training and experience. She believed that this knowledge is somewhat helpful, but that it by no means made her study of nursing substantively easier. While it would stand to reason that having a foundational grasp of the vocabulary used in medical settings would give this nursing student an edge over students who lacked that knowledge, Anna said that she was not at a significant advantage.

Terminology, while being a foundational part of the knowledge required for students in the nursing program, is not all that is needed to do well in either the classroom or in the clinical setting. This was generally agreed upon by both the nursing students who participated in the focus groups and the nursing instructors I surveyed. Anna’s previous course of study and professional experience involved the field of surgical technology, which I discussed in a previous section, *Bridging the Gap*. In that section, I offered a nursing instructor’s perception that the study of surgical technology is not as rigorous in terms of the difficulty of tests, and a career as a surgical technologist does not entail the same degree of personal accountability as a nurse. For example, the nursing instructor with

whom I spoke explained that the work world of the surgical technologist, namely the operating room at a hospital, is one characterized by a high level of control. The surgical technologist, unlike a registered nurse, is not required to operate autonomously. Therefore, in the case of Anna, study and experience in surgical technology was different enough from the study and practice of nursing so as not to make her experience in the undergraduate nursing program significantly easier. A student with experience in a healthcare field other than nursing, like Anna, is likely to find that the degree to which he or she is helped by that experience depends on the degree to which the literacy demands of that given field do or do not correlate with the literacy demands of nursing.

The importance of reading is not limited to academic study. Abigail offered a response that emphasized the importance of reading on-the-job. In the debate that took place during the second group meeting of Level 1 participants over booksmarts versus clinical competence, Abigail argued: "There's no way that one person can know all that and remember all that information...Especially when you're in a specialty facility like the Cancer Center or Urology..." Abigail was issuing a rebuttal directed at another member of the focus group who argued that hands-on skill was more important than booksmarts. Abigail's argument is that even professionals in the field of healthcare who have had formal training and clinical experience must often engage in reading on-the-job because, to paraphrase the student, no one can remember everything. Abigail's rebuttal is also significant in that she associates being booksmart not just with knowing the information contained in books but with knowing when it is necessary to look up

information and where to turn for the information one needs. Abigail cited specialized medical facilities as requiring an especially high level of commitment to reference reading, indicating that the more sophisticated a nurse's work environment, the more necessary it becomes to rely on print text.

While students may enter the undergraduate nursing program with previous medical training and experience, they are likely to find that it does not diminish the need to read and study in the undergraduate nursing program. The community of professional nurses requires its members to exhibit hands-on, clinical competence that is informed by the content knowledge found in nursing textbooks. While previous training and experience in healthcare was not reported to be entirely unhelpful, an analysis of the discussion points to the fact that nursing students must engage in the task of textbook and reference reading to understand the concepts and theories that inform their clinical practice. Furthermore, even first-semester students within the Level 1 group, like Abigail, were aware that once they enter into professional practice as registered nurses, they will need to engage in on-the-job reading to carry out their assigned duties.

**Challenges in the social environment: Dissatisfaction with classroom instructors, clinical instructors, and the undergraduate nursing program.**

Students in the Level 1 group reported negative interactions with or impressions of their instructors, other professional healthcare workers, and their fellow nursing students. A review of the transcripts from the Level 4 focus group uncovered no similar issues, leading me to conclude that members of that group

had adopted a more mature perspective or had otherwise moved beyond many of the issues that plagued their Level 1 counterparts. No doubt, some of Level 1 students' remarks might be discounted as grumbling remarks that college students make whenever they are stressed as a result of the academic and personal demands placed on them. However, the Level 1 students' remarks should not be dismissed prematurely, as they do offer insight into the problems faced by introductory students when it comes to social participation in the academic and clinical components of the undergraduate nursing program.

Anna reflected on one of the frustrations that she and another member of the Level 1 group had regarding the format of Nursing 130: "[The lecture] doesn't need to be as long as it is to cover the material. Like, they're wasting half our time. Just because we're there six hours doesn't mean they need to lecture six hours!" But not all students in the Level 1 group were instructed using the same lecture to on-campus clinical ratio of time, as this statement from Abigail makes clear:

Whenever we go into the classroom, we just discuss what the chapter's on...I mean, very briefly...And then, we go right over to the [on-campus clinical] room to see the mannequins, and we practice on the mannequins, and then we go back to class, and we cover the material, and we can ask questions because we just saw what was going on, and we went back into the room, and then we can ask questions because we actually knew what we were looking at 'cause if you were watching a video on somebody

inserting a catheter, you don't know 'cause you're not doing it, but once you work with the mannequins, you can say, "OK."

This comment reflects Abigail's interest in hands-on learning involving mannequins, and it also serves to reinforce an understanding of the literacy required in an undergraduate nursing program as multimedia literacy, which is outlined in the work of Lemke (2002). As the literacy habits and skills required by the very nature of the nursing program involve multimedia approaches, individual learners are likely to react more positively to some facets of any given lesson plan and less positively to others depending on the individual learner's preferences.

This research project, I should make clear, was never intended to explore effective or ineffective teaching methods in undergraduate nursing. These examples are used to illustrate a tension that cropped up at other points during the Level 1 interview: namely, despite the fact that the nursing program is highly regimented with a codified knowledge base, students still grappled with differences in instructional technique. In keeping with this topic, I will offer the advice given by Brad in the Level 4 group:

If you're struggling with [an instructor], and then someone asks you, you say, "They're no good! They're no good!"...The next thing you know, you've got ten, twelve people in the room that don't like the instructor and never had her. So, you've got to watch [...] And, if you're not doing good, guess what? "Oh, it's her fault! It's her fault!" ...And the guy or girl sitting

behind you may have got an “A.” So, you know, it comes down to commitment.

The above statement is significant in that it shows Brad's awareness of an individual's responsibility for his or her academic success or failure, and it emphasizes the idea of commitment, which is important for the nursing student who wishes to excel in the classroom and in his or her future career. Brad's comment is also illustrative of the “bad apple spoiling the bunch” phenomenon, pointing out that while fellow students can be a great resource for learning, there are also instances in which they might exert negative influence (quotation marks mine).

While there were differences in instructional technique associated with the NU 130 course that displeased some students, there was evidence that Level 1 students realized the parameters within which instructors teach in the undergraduate nursing program. Furthermore, when comparing one nursing program with another, students from the Level 1 group perceived that there is more homogeneity than some of their classmates not present in the focus group realized. Consider Anna's remark that:

[Dissatisfied] people try to point fingers at this program, but I keep reminding them, “Look, [the] school is told by the state what they have to teach and how they have to teach it, and this whole critical thinking, they're told that they have to teach it, they have to test it. It's not something that the school decides to do because they want our money.”

There was widespread consensus among the Level 1 students that nursing programs are the same everywhere. Allison mentioned that a friend of hers attended a hospital-based nursing program and “there’s no difference” between the program her friend attended and the program at William Penn College. She explained that she and her friend “do the same things in school, [and] we take the same tests.” The students’ perception of a high degree of similarity between nursing programs is supportable in that the textbooks they read and the tests they took were conveyors and assessors of knowledge within a domain dependent on a structured hierarchy of stakeholders and decision-makers. Consider the following:

The National Council of State Boards of Nursing

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The Pennsylvania State Board of Nursing

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The Division of Nursing at William Penn College

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The Instructor of Nursing

The above listed individuals and organizations offer a way of considering the transmission of competencies from the highest organizational level to the individual classroom instructor. However, this listing is oversimplified in that it does not include the professional organizations, like the National League of

Nursing, that set the competencies for the NCLEX. Dr. Sharon Tanner, Executive Director and CEO of the National League for Nursing Accrediting Commission, explained this to me in a personal conversation, and she also pointed out that it is The National Council of State Boards of Nursing that invites nurse educators on a yearly basis to write test items that reflect the competencies set by professional nursing organizations, like The National League of Nursing. In setting the minimal competencies for entry-level nursing practice, these professional organizations also take into account the realities of clinical practice, as surveys are given to recent graduates of nursing programs to learn about the specific skills needed by new graduates. Dr. Tanner explained during our conversation that with nursing, no one person is *the* gatekeeper. Rather, what is required to become a member of the community of professional nurses is sanctioned by numerous groups of people who work in collaboration with one another to create what Dr. Tanner termed a “profession [that] regulates itself.”

The Level 1 students realized that it was not individual classroom instructors or William Penn College’s Division of Nursing responsible for setting the competencies or for mandating the content and format of their assessments. Because of this, they were critical of the grass-is-greener attitude that they claimed to have heard from some students in the program. Allison explained: “I think that a lot of people think that it’s harder here, and it’s going to be easier somewhere else.” In short, it is reasonable to expect little in the way of variation since, as one Level 1 participant put it, “Nursing is nursing.” However, there are still differences in how concepts and skills are taught—differences significant

enough to be noticed by students, as evidenced in the previously cited discussion of various instructors' use of time spent in class versus time spent in on-campus clinicals.

The Level 1 students seemed to face real challenges when it came to negotiating the complexities of social interactions at off-campus clinical sites, like nursing homes and hospitals, which again were challenges not addressed by the Level 4 group. While some of the Level 1 students reported that the licensed practical nurses, registered nurses, physicians, and other medical staff at their off-campus clinical sites were of tremendous help, others reported not-so-pleasant interactions, as I learned when a student recounted the story of one of her classmates who, when unable to find what she was looking for in a cabinet, asked one of the full-time staff nurses where the item might be located and was consequently chastised by her clinical instructor, apparently either for not knowing where the item was in the first place or for bothering the full-time staff nurse. During the focus group interviews, other Level 1 students recalled their classmates' frustrations that stemmed from not being able to see more or do more, no doubt due to their first-level status, at their clinical sites, where they were relegated to the periphery of the community of professional nurses. These reported frustrations, along with the account of the chastised student mentioned previously, are symptomatic of what Lea (2005) argues is an understudied aspect of community of practice membership. Namely, that dominant perspectives on communities of practice "[do] not take account of the more contested nature of participation in communities of practice" (Ivanic, 1998; Lea,

1998; & Lillis, 2001, as cited by Lea, 2005, pp. 183-184). Efforts to participate in the community of professional nurses is not going to be “simple and smooth” (Lea, 2005, p. 184) for Level 1 students able to do little more than the most menial of hospital tasks and struggling to learn the rules governing social interactions.

### **The Influence of Family, Friends, and Classmates in Shaping Advanced Literacy**

Relationships with family, friends, and classmates influenced students as they prepared to become professional nurses. In some cases, having family members or friends attend the college was a contributing factor in the decision to attend William Penn College in the first place. As Allison explained, “I had friends who came here and recommended it to me.” Another Level 1 student decided to come to this particular college because she grew up in the area, and this college was the school her father attended. Two of the Level 4 participants, Bryan and Brad, shared the fact that they had family members involved specifically in the field of nursing. Bryan mentioned that both of his parents were nurses, and they encouraged him to study nursing. In his words, “I did it 'cause both my parents told me 'cause they're both nurses.” At one point, Brad explained that his mother was a nursing instructor who imparted helpful study tips to him as a result of her own training and experience. While it was conceded that having a family can pose difficulties for students, especially if they have children, family was, in many cases, a positive influence in terms of students' choices to study nursing, attend

William Penn College, and to use specific strategies and resources for reading and studying in the undergraduate nursing program.

**Family influences on literacy and overall success as a nursing student.** My research uncovered familial influences on students' literacy and on their academic success in the undergraduate nursing program. For example, Brad's mother played an important role in shaping his literacy practices. During one of the focus group meetings, Brad proudly mentioned that he often consults the *Merck Manual*, which he argued is helpful because it gives him information "from a different perspective." This *Merck Manual* was given to him by his mother and was not an assigned or recommended text within the undergraduate nursing program. Brad's mention of the *Merck Manual* is significant in that it points not only to the helpfulness of family members when it comes to furthering a student's education, but it also points to the helpfulness of reading beyond what is required within the curriculum. The *Merck Manual*, for Brad, is another tool for mastering the domain knowledge of undergraduate nursing. Reading beyond the classroom textbook underscores "the multimedia literacy demands of scientific education" (Lemke, 2002, p. 24) and the related need on the part of students to draw from numerous resources to reinforce textbook learning, thereby facilitating classroom and clinical competence. For that matter, families or individual family members could be considered part of the bundle of resources available to a nursing student. However, family can also contribute to difficulties in earning a nursing

degree, especially if that family involves children who depend on the nursing student.

Having children or having to work for personal or family reasons while being enrolled in the undergraduate nursing program was a perceived barrier to obtaining an education. Brigitte offered an example of the stresses faced by some of her classmates:

When you're a nursing student, you have to put 100 percent into it, and I think a lot of people that aren't in nursing anymore don't want to do that...Or, they have jobs and families, and they can't do that.

Betty, who had children and graduated from the two-year nursing program with honors, is proof that it is possible to be a student with a family. Several members of the Level 4 group made the point that it is possible to succeed with a job or a family, but these extracurricular responsibilities lessen a student's ability, in Brigitte's words, "to put 100 percent into it." Brigitte's choice of phrase is indicative of her belief that being a student in the nursing program is a full-time job requiring commitment and dedication and that family responsibilities in some cases can lessen the commitment and dedication a student can give to the study of nursing.

**Peers-as-resources.** Students from the Level 1 and Level 4 groups reported that their classmates served as valuable sources of information. During a meeting of the Level 4 focus group, Brad mentioned that nursing students should "Find a group of people to get different viewpoints. That way, if you're

stuck thinking one direction, someone else may change your way of thinking, so you can come at it from a different angle.” Studying with a friend or with a group of friends seems like solid study advice in that it would allow students the opportunity to talk about nursing concepts and skills and, in so doing, assess their level of comprehension regarding textbook, lecture, and clinical concepts. The notion of getting information “from a different angle” is also at the heart of Brad’s explanation for why the *Merck Manual* is so helpful, and it points to the multiplicity of semiotic resources required for making the domain knowledge of undergraduate nursing more comprehensible.

The importance of effective communication among friends within the undergraduate nursing program cannot be overstated. As Bryan explained, friends are helpful because “If you don’t understand something, they’ll explain it to you.” And friends were also reported to be helpful when it came to accomplishing tasks in the clinical setting, especially if the clinical site was understaffed and “kind of crazy,” to use the words of a Level 1 student during our second group meeting. She and another member of the group explained that in that type of environment you “just learn how to help each other out.” As Allison put it, “We have to rely on each other.” Abigail agreed, stating, “We do. We’re always like, ‘Hey, do you know about [a particular patient]?’ And we help each other out if we’ve already had the patient.” One of the other participants, Anna, then stated that “We help each other out a lot. We’re telling [our fellow nursing students], like, so they know specifics if there’s something that we think they should know about.” Such responsible communication on the part of these Level

Level 1 nursing students is critical because, as Anna explained, “Most of our patients have dementia and Alzheimer’s and can’t do anything for themselves.” Anna’s description of patients suffering from dementia and Alzheimer’s was reflective of her assignment to clinical sites where a modicum of medical knowledge and skill is required. However, while Level 1 students found themselves in these types of medical settings, they recognized the need for collaboration—for the need to talk to their fellow students to ensure proper patient care.

**Policing the ranks in level 1 nursing.** In the section of this dissertation entitled, *Bridging the Gap*, I noted that nursing students’ comprehension of textbook concepts was strengthened as a result of clinical experiences, and students’ understandings of clinical experiences were likewise strengthened as a result of reading the textbook. Nursing students “act within a textually mediated social world” (Smith, 1990, as cited by Barton & Hamilton, 2005, p. 24). This means that the world of the nursing student, similar to other academic and professional worlds, “is full of texts, they have a central role and most communication is about texts” (Barton & Hamilton, 2005, p. 24). The world in which these students were immersed is a world that continually pays homage to a body of resources that make work within that world possible. The textbook is one such resource, but, as I have said before, it is not the only resource for making meaning in and working in the undergraduate nursing program.

The Level 1 students cited instances in which they reportedly observed the modeling of poor literate behaviors by their classmates. What follows is an

issue described by Anna, who drew attention to another kind of literacy artifact commonplace in academic and professional nursing: The patient's chart:

We had a problem a few weeks ago where one of the students didn't fill in their...I don't know...Something wasn't done...And they said, "Well, I didn't give them their breakfast!"...And they were complaining about it because they weren't told about it. And I said, "Whenever you become a nurse, it's your job to know that the patient has their food. You have to know that even if you're not the one that did it. If it was done, and it wasn't done by you, you still have to know that." I always compare it to being a restaurant manager. If you manage your own restaurant, you have to do every position before you get that job, and you have to know how to do it 'cause if somebody's not there, if somebody's sick, and they go home, what are you going to do? You have to know how to do it yourself, and I think that's wrong whenever people think they don't have to do things.

Here, Anna voiced her frustration over a classmate who demonstrated a level of disregard for filling out paperwork properly and being up-to-speed with a patient's food consumption. Assuming a voice of authority over her classmate, Anna asserted the importance of clear communication and effective collaboration among healthcare providers and the importance of maintaining accurate documentation to ensure appropriate patient care. Nursing students—and nurses—must rely on reference texts when needed, and they must also document relevant patient care information. These reference texts and forms for documentation are all tools that make the practice of nursing possible.

A degree of frustration over the perceived lack of competence of some classmates was also evident when a Level 1 participant, Abigail, complained:

I've seen people [ . . . ] at my clinical that are doing good, like, on the test but at clinical it's just like...They're not comprehending what they're learning in the book. If it's something we've been doing for months now, you should just know how to do it. And I wonder how they make it through the tests, and they know all that information, but once they get there, they can't apply it. And that's a big part of it.

Abigail's concern over students not applying textbook concepts to clinical practice is a phenomenon documented in the literature (Bowen, 2006; Gaberson & Oermann, 2007). One cause of this problem, according to Bowen (2006), is that of underdeveloped schema, or "failure to generate an appropriate problem representation" (p. 2221). The role of schema for enabling learning and problem solving in "knowledge-rich domains" is also found in the research of Gerjets, Scheiter, and Catrambone (2004, p. 33). Abigail described a problem—that of connecting textbook concepts to clinical situations—that is a significant one for students pursuing a career that demands professional practice informed by ideas and procedures codified in texts. The Level 4 group did not cite similar concerns based on their observations of other Level 4 students, leading me to conclude that by the time students reach the final semester of the program, there are far fewer of them who are not able to apply textbook concepts to clinical practice routinely and consistently.

## **Information Gathered from Nursing Instructors and Select Focus Group Participants**

I surveyed nurses who teach in William Penn College's nursing program. Ten nursing instructors returned surveys to me. These surveys were open-ended, and they offered insight into the reading habits of professional nurses, reading strategies sanctioned by professional nurse educators, the perceived link between textbook comprehension and academic success, identifying characteristics of successful nursing students, resources available for struggling nursing students, and the perceived relationship between textbook content and lecture content. I compared this data with student responses where relevant. Information about how nursing textbooks have changed over the course of the past few decades, which was furnished by one instructor who returned her survey to me in-person, is also included.

This section further contains information gathered from e-mail communications and personal conversations with a select subgroup of focus group participants. I randomly selected three students from the Level 1 group and three students from the Level 4 group. These follow-up communications were planned to allow me, as a researcher, to ask additional questions regarding students' textbook and related literacy habits that would not have been possible within the time constraints of the focus group interviews. As nursing students are faced with very significant demands on their time, I relied on e-mail contact and would talk to students face-to-face if I could catch them for a few minutes between classes. I received e-mail responses to my first round of questions from

two of the Level 1 respondents and three of the Level 4 respondents; however, one of the Level 4 students, Betty, was involved in an automobile accident and withdrew from classes for the remainder of the semester, though she would later re-enroll and graduate with honors. It should be noted that when the final round of e-mail questions were sent to students near the end of the semester, a single Level 4 student, Breanna, was the only one to respond.

**What do professional nurses read?** When asked what kind of reading the professional nurse relies upon to keep current in the field, only three of the ten nursing instructors identified textbooks or “reference texts” as being a relevant source of information. Other sources of information included various nursing journals, including those available online, as well as, to use the words of one respondent, “some .net and .org sites by specialty or nursing organizations.” Newsletters from professional organizations and even daily newspapers aimed at the general public were also cited. This data indicates that the nursing instructors perceived less need for textbook reading among seasoned professionals and a greater need to keep current using resources specific to their particular nursing specialization, like pediatric, psychiatric, or geriatric nursing. Based on the data, it seems likely that nursing students will become less textbook-focused once they become professional nurses, relying on other sources of information to obtain knowledge relevant to various specialty areas.

One respondent explained that journal reading has recently been incorporated into the two-year nursing program. Level 4 students are now

required to complete a few assignments in which they need to reference “at least one” nursing journal to earn a satisfactory score. This is a new development that is aimed at reinforcing the importance of evidence-based (i.e., research-based) practice. The Level 4 students I worked with would not have had to complete assignments involving nursing journals, but this is no longer the case. According to my nursing colleague, there is a national need for nurses to understand how their practice is shaped by research in the field—research that is published in journals. This new incorporation of journal reading into the undergraduate nursing program shows that the nursing instructors were responding to what they saw as an important step in preparing nursing students for the profession.

**Which reading strategies are recommended?** The survey I distributed to the nursing instructors also asked them to indicate what they themselves learned about reading and studying as a nursing student that they share with students in the program. More than one instructor cited that students must be organized and effective at time management so that they do not fall behind. One instructor noted that “the successful student must be able to cover a large amount of content rapidly. This especially applies to two-year nursing programs.” This same instructor was careful to point out that students must not only understand what they read, but they must also retain that material. Other instructors noted the helpfulness of end-of-chapter study questions to guide a students’ reading, and one instructor wrote that she advises students to compare

what is written in the textbook to their lecture notes. The need to reread was also cited by this particular instructor.

Two of the instructors mentioned the need to take note of any unknown vocabulary item and determine its meaning. One of these instructors also offered advice to “use the chapter headings to understand the relationship [between] topics” and to “use illustrations, graphs, and tables in [the] text to increase [your] understanding.” Other advice aimed at increasing students’ comprehension was offered by an instructor who reported that she advises students to “read their textbook but also cover lecture data and rewrite [the ideas] in their own words.” As she explained, “re-stating, especially in writing, helps cement the idea.” This instructor made clear that this approach worked well for her when she was a nursing student. Based on what the Level 1 and Level 4 students shared during their interviews, both groups were employing these and other strategies to improve their comprehension in the undergraduate nursing program. These reading and study habits are, in fact, the “domain and content dependent” (Garner, 1988, as cited by Holschuh, 2003, p. 317) habits required for academic success in the two-year nursing program. They are habits explicitly advised by instructors and utilized by students to comprehend the various topics and subtopics within the domain of nursing.

In a study by Holschuh (2003) of students enrolled in a biology course, data indicated that “High performing students were more likely to report using domain-specific strategies” (p. 322). Moreover, these students were “able to articulate . . . why each strategy was appropriate” (Holschuh, 2003, p. 323). The

“high-performing students,” according to Holschuh (2003), “reported reading for understanding, studying diagrams, comparing their text to their lecture notes, and using [a] computerized test bank as a final review for exams” (p. 322). The habits of these students stood in sharp contrast to their struggling peers, who, in most cases, “focused [almost entirely] on the importance of learning key terms” (Holschuh, 2003, p. 323). While knowledge of vocabulary is important to the study of nursing, vocabulary knowledge alone will not lead to academic success. Both students and instructors who participated in my study were cognizant of strategies beyond that of memorizing vocabulary in rote fashion. Indeed, the Level 1 and Level 4 students were being exposed to and were engaging in the literacy habits required for success in the undergraduate nursing program.

**Is there a link between comprehension of the textbook and academic success?** The third question on my survey to the nursing instructors asked to what extent a student’s ability to comprehend textbooks determined that student’s grade. Ten out of ten respondents indicated that there is a strong correlation. One of the respondents explained that “[she] did have an excellent textbook [that she taught from], but it was upper college-level reading, [so she] chose a text with explanatory pictures and a 12<sup>th</sup>-13<sup>th</sup> grade reading level to encourage students to read.” The instructor who taught the Level 4 students participating in my study stated directly that “reading ability relates to academic success.” Furthermore, she noted in her response that students who are required to take College Reading run a “high risk of being unsuccessful in the nursing

program.” This is not the first time that I have heard such a comment. It stands to reason that if a student has weaknesses in reading, that student is not likely to have an easy time in nursing courses that require a high level of literacy.

One of the instructors to respond to this question also acknowledged a link between comprehension of the textbook and academic success, though she then offered a sobering example of why close, careful reading is required of nursing students and professional nurses: “The difference in one or two words can be the difference between life and death.” Any oversight or carelessness on the part of the professional nurse can cost more than points on an examination.

**What resources are available to help struggling students?** On the survey, I asked two somewhat related questions in an attempt to gauge instructors’ awareness and recommendation of resources available to help students learn in the nursing program: (1) Other than the textbook, what “tools” or resources are available to help students learn nursing?; and (2) What options are there for the struggling student? While the survey respondents made reference to many of the resources mentioned during the Level 1 and Level 4 focus group meetings, like workbooks, DVDs, and the NCLEX 3500, ten out of ten also mentioned individual or group tutoring with one of the two professional nursing tutors employed by William Penn College. At no point during any focus group interview did any participant even mention tutoring even though institutional data revealed that tutoring services were utilized by eight of the participants from the combined Level 1 and Level 4 groups. This may be evidence of a stigma

attached to tutoring even though it is a service highly regarded by the nursing faculty.

**To what degree are the textbook and lecture related?** A question I posed to the Level 1 and Level 4 students involved the interconnectivity of textbook and lecture. I posed a similar question to the nursing instructors, asking what percentage of a lecture is based on the textbook. Nine out of ten nursing instructors claimed that a minimum of 50 percent of lectures are textbook-based or otherwise indicated that lectures follow the textbook.

Six of the respondents framed their response in terms of a percentage, just as my question asked. The respondent who cited the lowest percentage of a lecture based on the textbook was a Level 1 instructor who estimated that 33 percent to 50 percent of lectures are based on the textbook. Many, though, perceived that the percentages are higher. One respondent stated that approximately 50 percent to 75 percent of a lecture is based on the textbook. Three respondents believed that 75 percent of a lecture is based on the textbook, and one respondent went even higher, claiming that 85 to 100 percent of a lecture is based on the textbook. The respondents who did not frame their responses in terms of a percentage basically stated that lectures follow the textbook, which is congruent with what the nursing students reported.

Based on this survey of instructors, there appears to be a close connection between textbook and lecture. Students' perceptions that lectures were largely textbook-driven appear to be well-founded.

**Nursing textbooks in retrospect.** One of the nursing instructors I surveyed began her teaching career in 1981 at a hospital-based nursing program. She explained that she believes today's textbooks are written for "a greater audience than they were . . . years ago." When she began teaching close to thirty years ago, she and a colleague thought that the textbooks were tough, but she recalled that the students did quite well. She remarked that today's textbooks are more reader-friendly in terms of vocabulary and the explanations offered. When I asked what she thinks has brought about such changes, she speculated that these changes might have come about as a response to a more diverse body of learners than in the past, including non-native speakers of English. She also speculated that these changes might be a response to what she believed to be poor academic preparation at the secondary level.

**What accounts for attrition in the undergraduate nursing program?**

Only one of the students who participated in the focus groups was dismissed from the undergraduate nursing program. Annette, a Level 1 student, earned less than a 79 percent in NU 130 and was therefore dismissed for academic reasons. She appealed her dismissal, but the appeal was denied on grounds that she did not take full advantage of resources available to help her, like tutoring. In terms of her participation within the focus group, she was extremely reserved and did not contribute to discussion to the degree that most of her classmates did. In my survey of faculty, I included a question related to the issue of attrition to gauge faculty perception of why students leave the program to see if the reasons cited

for students leaving the program at William Penn College are similar to reasons cited in the literature (Deary, Watson, and Hogston, 2003; Uyehara, Magnussen, Itano, & Zhang, 2007).

The responses to my question of why students cease to remain in the nursing program centered around academic difficulties, including the inability to pass the requisite science courses and the inability to maintain a “C” in the nursing courses, but other issues were also cited by a number of respondents. Instructors noted that students may learn that nursing is not for them or that the program, in general, did not meet their expectations. Respondents also noted that family obligations and lack of financial resources also present obstacles for some learners. Three of the respondents specifically mentioned inferior reading ability or a general inability to comprehend essential domain knowledge as leading to dismissal. Reasons such as those given by the faculty I surveyed are consistent with the literature on attrition in nursing programs (Deary, Watson, and Hogston, 2003; Uyehara, Magnussen, Itano, & Zhang, 2007).

**The stress of being a nursing student.** The undergraduate nursing program requires that students, in as little time as two years, acquire the classroom knowledge and clinical skills required for participation in the community of practice of professional nurses. The degree of stress some—if not most—students in the nursing program experience was evident in the responses of both of the Level 1 participants with whom I communicated through e-mail correspondence and face-to-face discussions in the hallways of William Penn

College. Anna remarked that the program “is not quite what [she] expected the nursing program to be.” In elaborating upon this answer, she explained that “[she] was not used to the idea of having to critically think [her] way to an answer, [and that she was] so used to black and white or right and wrong answers, [and] it is a big adjustment.” In responding to my question about whether or not the nursing program was what she expected, Anna framed her response solely in terms of her experience taking tests, an inextricable part of the undergraduate nursing curriculum.

The second Level 1 participant who responded to my follow-up questions, Alice, seemed to grapple with even greater stress than Anna. She wrote in her e-mail response that “[she] thought [she] would enjoy it somewhat, [and that she] wouldn’t feel discouraged and depressed all the time.” She went on to cite a level of constant exhaustion and illness that resulted from her stress level.

**Reading across disciplines.** While Alice struggled with the stress of being a student in the undergraduate nursing program, she wrote in an e-mail that she considers herself to be a strong reader. While she explained that her nursing class required the most reading, two of the required liberal arts courses, Cultural Literacy and Rhetoric I, contained rather difficult reading, and she perceived that this difficult reading helped her to become a better reader. Anna, on the other hand, cited Psychology as having reading assignments that were

both difficult and “very dull.” She also said that she struggled with her required theology class because she found the topics to be “out of [her] element.” Like Alice, Anna, too, felt her nursing class required the most reading, but she explained that the developmental writing class she was required to take “had a huge impact on [her] reading [because] if you understand the proper grammar and proper sentence structure, you can better understand what you read.”

Both of these Level 1 students remain in good academic standing in the nursing program. In spite of her stress level, Alice earned nothing lower than a “C+” during the semester of this study, and one semester after this study, she earned nothing lower than a “B,” taking such classes as Human Growth and Development, Nursing of the Family, Nursing Pharmacology, and Rhetoric II. The participant who mentioned that she struggled in Theology, Anna, pulled a solid “A” out of that course, and she managed a respectable “C” in her Level 1 nursing class. A semester after this study, she earned nothing lower than a “C+” in her coursework.

**Increased reliance on the textbook.** The response from all three Level 4 students in regard to my general question about whether or not the experience of being a nursing student was what they expected was basically that they were surprised at how well they had done over the course of their studies. None of these students was willing to describe himself or herself as being a good reader, like Alice, but each of them identified the nursing textbook as being a necessary tool for learning. Interestingly, the student who during the group meeting

confessed only to reading regularly during Level 4 of the program, Betty, was perhaps the most emphatic. She wrote that “in order to get ready for tests, [she has] to read, read, and read some more.” When it comes to the textbook, she wrote that she reads that material “at least three times [because] there is absolutely no way around not reading the textbook.” The comments offered by her classmate, Breanna, might help to explain this new-found focus on the textbook:

I would have to say that fourth level has required the most reading. The most difficult reading was from my third level of nursing, and also this semester. Third level was the first level that I really needed to read the textbook. The questions on tests started getting more in-depth in third level, and I wasn't used to that, so I had no choice but to read the book. This statement offers another example of the recurring perception among both students and instructors that students' comprehension of the textbook is related to their performance on the tests they take as undergraduate nursing students. Some students are able to succeed in beginning levels of nursing by focusing on lectures as these are a means of communicating textbook ideas; however, it seems that eventually most learners will become more textbook-focused as the complexity of the material to be read and tested on increases, and, relatedly, as the level of knowledge and skill required for practice in clinical settings increases. These Level 4 students did not have a background in the health sciences prior to enrolling in the nursing program; therefore, in this particular case, it cannot be said that an especially high level of background knowledge contributed to these

particular participants' ability to master essential concepts without the aid of the textbook up to a certain point in the program. These three Level 4 participants—Betty, Brandon, and Breanna—performed well in their fourth level nursing class: two earned “A’s” and one earned a “B.”

### **Educational support by family and resources beyond the textbook.**

One of the requirements that the Level 4 students were required to fulfill involved a teaching project. According to the syllabus, this assignment was worth only five points (there were 400 total points for the class), but I wanted to know if the textbook was used for this assignment in any way. In the case of Breanna, the only student to respond to the question, the textbook did not play any role.

Breanna explained that she obtained most of her information “off of the internet, [and she] did not use any of [her] textbooks for anything.” The focus of this student’s teaching project was child safety and immunizations. According to Breanna, “for child safety, [she] just got everything off of some sites, and for the immunizations, [she] got the information from the CDC website.” In addition to these information sources, Breanna was assisted by her father who “is an insurance agent and a volunteer firefighter,” and was therefore perceived by Breanna to be a good source of information for issues related to child safety.

Breanna also helped me to understand what kind of reading the typical nursing student might rely on during clinical rotations. The sources of information she reportedly carried with her to clinicals included the *Nurses’ Quick Reference to Common Laboratory and Diagnostic Tests*, *Lippincott’s Nursing Drug Guide*,

and the *Medical-Surgical Nursing Student Handbook*. This *Handbook*, as she explained, is “a smaller version of the textbook” used in her Level 4 nursing class. This further reinforces an understanding of nursing students as participants in a “textually mediated social world” (Smith, 1990, as cited by Barton & Hamilton, 2005, p. 24) that extends beyond the classroom.

Out of the total of five students who participated in follow-up interviews, only one student felt that she was a good reader. Three of the respondents perceived that their need to reread to facilitate comprehension was a sign they were not especially good at reading. A fourth participant simply indicated that while nursing topics interested her, she did not like to read and “[has] never really been a ‘reader.’” These individual interviews, then, offered me, as a researcher, an additional opportunity outside of the focus group format to understand the experiences of students enrolled in the undergraduate nursing program. The information I obtained through this effort further reinforces my understanding that students involved in this study struggled with the literacy demands of the undergraduate nursing program, limited not only to nursing courses but also including requisite science and humanities courses. In spite of their struggles, though, these students were able to succeed academically. Furthermore, while the textbook had an important role to play in helping to prepare students for their future careers in nursing, it was not the only resource at students’ disposal. These follow-up individual interviews, like the focus group interviews, identified the importance of other online and print sources of information. Furthermore, like

Brad's mother who taught nursing, Breanna's father was able to offer educational support to his daughter as a result of his professional and volunteer activities.

## **Conclusion**

My efforts in conducting this research project were geared toward understanding the function and use of the textbook in the two-year undergraduate nursing program at William Penn College. This study of volunteer Level 1 and Level 4 participants uncovered students who employed a variety of strategies to facilitate learning from their textbook. In addition, the nursing instructors reported that they shared many of these strategies in the classes they taught and used many of them when they themselves were nursing students. Citing Collins (1998), Lenski and Nierstheimer (2002) define a strategy as "a sequence of cognitive steps to accomplish a specific goal" (p. 127). These researchers, building on the work of Pressley (1995), observe that "the judicious, flexible use of strategies when reading . . . is a prime characteristic of expert readers" (Lenski & Nierstheimer, 2002, p. 127). The majority of reading and study strategies described by the students participating in my study were common to both the Level 1 and Level 4 groups. The strategies for learning textbook content used by Level 1 students were the same strategies relied upon by the Level 4 group. This study, then, identified a core body of textbook-focused literacy practices that were employed by students over the course of their two-year program as they prepared for high-stakes multiple choice examinations (including the NCLEX) and for clinical practice. Furthermore, both groups of students were

notable for their commitment and dedication to the study of nursing, and only one student was dismissed from the program. This is, therefore, a study of strong readers.

The students participating in this study took charge of their own educations. Hand and Payne's (2008) study of first generation Appalachian college students talks about the importance of an internal locus of control in helping to contribute to students' success (p. 8). I would argue, based on the active, engaged reading and study strategies that these Level 1 and Level 4 students employed, along with comments shared during the focus group meetings that stressed the importance of responsibility and accountability, that these participants exhibited an internal locus of control. That said, it would be remiss not to mention the occasions when some of the Level 1 participants seemed to struggle with maintaining an internal locus of control. Those occasions had to do firstly with the clinical, hands-on component of the program and secondly with the reality of high-stakes testing. In each of these, one finds among the Level 1 group certain participants who struggled to reconcile external factors like unfriendly hospital staff or harsh clinical instructors or feeling that they were at the mercy of tests. Such reconciliation occurs as students progress through their program, as was evidenced when the Level 4 students cited the third semester as being the semester when most of them began to feel more confident. Indeed, confidence—and competence—are not gained overnight.

The literacy practices of the students participating in this study cannot be talked about meaningfully without recognizing the social influences at play. In his

contribution to *Developing Advanced Literacy in First and Second Languages*, Lemke (2002) writes that “The acquisition of advanced literacy is a social process of enculturation into the values and practices of some specialist community” (p. 21). The Level 1 and Level 4 students who participated in this study were actively involved in that social process. My discussion of sociocognitive apprenticeship in Chapter 2 included Rogoff’s (1990) observation that there exist “material supports” that assist in the “handling [of] information . . . passed from one generation to the next” (p. 51). Lemke offers a similar observation when he talks about a “material artifact that . . . circulates in a community . . . [and] comes to play a role in many specific short-term activities in which it is semiotically interpreted” (p. 23). The textbook is such an entity. The Level 1 and Level 4 students described not only numerous strategies for increasing their comprehension, but they also contextualized their discussion of their literacy practices by citing the influence of nursing instructors, family members, and peers. The participants also made it clear that the reality of intensive testing within the undergraduate nursing program has profoundly shaped their literacy practices.

I assumed prior to conducting my research that I would uncover a Level 1 group who were subjugated to the periphery of the academic community of practice of the two-year nursing program. This was not the case. The high level of motivation found in the Level 1 group and the fact that many of the Level 1 students had postsecondary educational experience prior to enrolling in the nursing program are likely reasons why the group seemed, on the whole, to be

so sophisticated in terms of their reading and studying habits. This study did, however, establish that the domain knowledge of nursing is reified in nursing textbooks and in the various print and electronic resources relied upon by students to increase textbook learning. The study also identified the textbook as a tool that maintains and even increases in its importance as students progress through the course of their studies.

Success in the undergraduate nursing program at William Penn College depends on students' ability to master textbook content and to display their mastery of content on multiple choice exams and in clinical situations. Students' ability to transfer textbook-based information to tests and clinical scenarios is necessary for reaching their desired goal of becoming registered nurses, but such transfer can be difficult even for good students. Without an advanced level of literacy on the part of students, the goal of becoming a registered nurse is unattainable. In many instances, reading not only from the textbook but reading beyond the textbook was required to achieve classroom and clinical competence. In making textbook ideas meaningful, the students utilized additional print, electronic, and social resources. These resources, and the nursing textbook, are interconnected, bundled resources that students relied upon to meet the intense literacy demands of the two-year nursing program.

## CHAPTER 5

### SIGNIFICANCE OF THE STUDY

#### **Introduction**

This dissertation research into the function and use of the textbook in the undergraduate nursing program at William Penn College adds to scholarship in the field of literacy studies concerned with the acquisition and use of discipline-specific literacy. Both social and linguistic activity angles on literacy, as described by Colombi and Schleppegrell (2002, pp. 06-12), were uncovered through my research. Students articulated numerous strategies for comprehending and applying what they read from textbooks, but their efforts at reading, studying, and applying textbook-based content were not linguistic activities undertaken in isolation from the social world.

The students who participated in my focus group interviews and individual follow-up interviews were members of a community of practice. As members of the community, they were committed to a common goal of becoming registered nurses. In an effort to reach the common goal, student relied upon a multitude of reading and study strategies and learning resources. Significantly, the members of the community of practice were themselves a resource for reaching their goal; indeed, students from both groups unanimously voiced the opinion that they needed to help each other out and that they were, in essence, all in it together. It is within the social environment—within the community—of the undergraduate

nursing program at William Penn College that activities surrounding the nursing textbook were made meaningful.

The literacy practices surrounding nursing textbooks were practices with which students engaged to demonstrate mastery on multiple choice exams and to demonstrate competence in clinical settings. The Level 1 and Level 4 students were enrolled in a nursing program that privileged performance on multiple choice examinations over other measures of competence. This influenced how students viewed and used their nursing textbooks. There is a need to recruit and retain qualified students to join the ranks of professional nurses. I learned as a result of this dissertation research that successful nursing students adopt and use an array of strategies and resources for making sense of print text. While nursing is often perceived by students to be a vocational, hands-on field of study, the high level of literacy required for advancement in the two-year nursing program no doubt bars many from becoming registered nurses. The inability to transfer textbook-based information to answering questions on multiple choice exams is a major contributing factor to students who leave the program for academic reasons.

Students drawn to nursing because they perceive themselves to be hands-on, kinesthetic learners are no doubt in for a shock when they learn of the high literacy demands of their program. The primacy of textbook content measured through multiple choice tests forces students to master the discipline's academic demands or be faced with dismissal. Those desiring to become nurses but who are unable to acquire and use the requisite literacy practices of the

undergraduate nursing program will not only fail to realize their personal goal of becoming registered nurses, but they will also not be helping to alleviate the shortage of nurses in the United States.

## **Investigating a Community of Practice: Basic Research Questions**

### **Revisited**

Two basic questions guided the research: (1) What is the role of the textbook in the undergraduate nursing program at William Penn College?, and (2) How do students utilize the textbook as they train to become nurses?

The domain knowledge associated with the two-year nursing program is reified in textbooks and in the various print and electronic resources that serve to supplement, but not replace, them. My analysis of the conversations that took place with the Level 1 and Level 4 students and my review of surveys given to nursing instructors point to the textbook as serving a central function within the community of practice of nursing students as they attempted to master the textbook-based skills and concepts required in their two-year program.

This research project identified the textbook as being a vital tool for members engaged in the literacy practices essential for success in the undergraduate nursing program. The textbook, however, was not meaningful in isolation; it was used by a community of learners working within the “textually mediated social world” (Smith, 1990, as cited by Barton & Hamilton, 2005, p. 24) of the undergraduate nursing program. While the nursing textbook served as a primary repository of information related to nursing practice, making sense of

textbook content often required nursing students to reference one or more of these types of literacy artifacts:

- (1) Other textbooks (e.g., an anatomy and physiology textbook) and workbooks.
- (2) Instructor-generated notes.
- (3) Reference books, like medical dictionaries, drug guides, and manuals.
- (4) Electronic resources (e.g., CD-ROMs, DVDs, and websites).

And comprehension of textbook content was further helped as a result of interaction with the following people:

- (1) Other students.
- (2) Classroom and clinical instructors.
- (3) Professional tutors.
- (4) Other healthcare workers (e.g., physicians, nurse's aides, LPNs).

In addition, family members often played important roles in students' educational experience when it came to reading and studying, completing assignments, and in choosing William Penn College and nursing as a major. Texts and people worked hand-in-hand to make practice in the undergraduate nursing program possible.

My research uncovered evidence that students from both groups actively sought to learn from textbooks by utilizing strategies that included analyzing text structure to determine important information, reciting information to assess comprehension, previewing chapters before close readings, rereading, and

predicting test questions. The fact that students from both the Level 1 and the Level 4 groups relied on a majority of the same strategies for making sense of textbook content offers evidence that the same strategies relied upon for success in early levels of nursing are those that students will continue to refine and rely upon as they reach more advanced levels of study.

There is no evidence based on this research that a suitable textbook substitute exists. That said, there is evidence that the textbook is a resource intricately connected to other print and electronic resources and to the people associated with the practice and the community of the undergraduate nursing program. This study revealed that students' lives within the undergraduate nursing program are textbook-centered; however, the textbook is a literacy artifact often used in conjunction with a multitude of other resources. This study also revealed that successful students are those able to bridge the gap between the classroom and clinical components of the two-year program.

### **Suggestions for Further Research**

A review of the data collected and analyzed for this dissertation points to several areas that could benefit from further research. First, as this study focused on academically strong nursing students who for the most part were not required to participate in formal reading remediation, it would be helpful to learn about the textbook perception and literacy practices of those nursing students required to undergo formal remediation, especially those required to enroll in three-credit developmental reading courses.

Another topic of exploration for the interested researcher involves educational technology. Specifically, are a majority of nursing students utilizing the CD-ROMs and DVDs packaged with the textbook to supplement their reading? How are students using the resources? And, finally, are these resources perceived to be helpful?

My research identified a link between advanced literacy practices and students' ability to become professional nurses. Knowing that a high level of literacy is required for success in the two-year nursing program at William Penn College, I would encourage other researchers to explore what interventions either are in place or should be in place to assist nursing students who find themselves struggling with the literacy demands of undergraduate nursing.

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## Appendix A: Informed Consent

### **Informed Consent Form**

You are invited to participate in a research study. The following information is provided in order to help you make an informed decision regarding whether or not you wish to participate. You are eligible to participate because you are a nursing student at William Penn College.

The purpose of this study is to understand the role of the college textbook in the everyday life of an undergraduate nursing student; therefore, if you choose to participate, you can expect to talk to me, Ryan Costanzo, about such things as your decision to become a student of nursing, your general study habits, and your experiences with college reading assignments. Please know that I am recruiting student participants as a doctoral candidate at IUP, not as an agent of the college. Your decision to participate or not to participate will not adversely affect your grade in this nursing class or in any other class. It will not affect your relationship with your instructor(s), and it will not affect your ability to request or receive any services available to you as a student of this college.

Participation in this study should not require a great deal of your time. There will be two group meetings, one at the beginning of the semester and one shortly after midterms. These groups should each last between 60 and 90 minutes. In addition, you may or may not be asked to participate in follow-up, individual interviews. The individual interviews will be an extension of the focus groups whereby we will talk about some of the issues raised during the group meetings in greater detail. There may well be a few phone calls or e-mail correspondences between us, too.

There are no known risks or discomforts to you as a participant in this research project. Since the broad focus of this research project is student learning in the field of nursing, I will be talking to your professors about your academic progress. Agreeing to participate in this study means that I will be asking you about your progress in college, and your professors may share with me such things as your test scores, essays, and other information about you that is kept at this institution, such as your high school GPA, your SAT scores, other standardized test scores, your college GPA, your grades in all college classes, etc. Please know that this information is handled very carefully by me, by your other teachers, and by the institution. I will not be sharing anything about you publicly at the group meetings. It is up to you to decide what you want to share during our meetings and what you do not. I am only interested in the information described above so that I might better understand your experiences as a learner.

This research project is intended to understand students' experiences with reading and other academic tasks in nursing. You may find participating in these group interviews and/or individual interviews to be beneficial. It will be a great opportunity to hear what others have to say about their reading and studying in college; therefore, participation in this project may help you to improve your grades.

Participation in this project is entirely voluntary. You are free to decide not to participate in this study or to withdraw at any time without negatively affecting your relationship with me, your other teachers, or William Penn College. Your decision not to participate will

not result in any loss of benefits to which you are otherwise entitled. If you choose to participate, you may withdraw at any time and for any reason by notifying me. If you choose to withdraw from the study, you may request that any reference to you as a participant prior to your date of withdrawal be destroyed. You are free to let me know if that is your wish.

If you choose to participate, all information regarding you as a student will be held in strict confidence. That is, while I may ask your instructor(s) to share with me some information about your academic progress or show me some samples of your class work, that information or sample of class work will be treated as sensitive information not to be shared openly with a wider audience, including your fellow students. The information obtained from this study will be included in a doctoral dissertation, and it may be published in other academic journals or presented at academic conferences; however, your real name will never be used. Your identity will be kept strictly confidential.

I will randomly select candidates from among the overall body of willing participants. Please indicate your preference to participate or not to participate on the separate Waiver Form and place the form upside-down at the designated location. You may keep this form for your records.

This research project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-7730) and has also been approved by the Institutional Research Office at William Penn College. If you would like to know more about this project, please do not hesitate to ask. You may request to review a short summary of this research project.

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## Appendix B: Focus Group Questions for Nursing Students

1. Why have you chosen to study nursing?
2. Why have you chosen this college?
3. How confident are you feeling right now in your ability to handle the reading and studying required for nursing? (For Level 1)
4. When did you first begin to feel confident in your ability to handle the reading and studying required for nursing? (For Level 4)
5. What are the “tricks” for doing well in school?
6. When you’re reading a nursing textbook, how do you know what to focus on?
7. What is the role of student representatives in the nursing program? How do they help you?
8. What do you know about the students who are no longer in the program? Without naming any of them, can you give any reason as to why they aren’t here?
9. Other than your textbook, what “tools” do you rely on to learn course content?
10. What can you tell me about the on-campus clinical experiences versus off-campus clinical experiences? Basically, help me to understand what you would be learning or doing in each of these settings.
11. Can you cite an instance in which something you read in the textbook made greater sense to you after your clinical experience?

12. Is your academic success as a nursing student determined by your ability to understand the textbook?

### Appendix C: Individual Interview Questions for Nursing Students

1. Whether you have just started the nursing program or are about to finish, is the experience of being a nursing student what you expected?
2. What, if any, difficulties have you experienced in your nursing classes this semester? Are any of your difficulties related to reading and studying? What about difficulties in your non-nursing classes?
3. Describe your basic reading and study habits: Where do you most often read and study? When do you read and study? And, do you always need the textbook to prepare for tests (is there any way around it)?
4. Do you personally consider yourself to be a good reader? Why or why not?
5. Out of all the classes you are taking now or have taken in the past, which (a) required the most reading? (b) contained the most difficult reading? and (c) helped you to become a better reader?
6. Would it be possible for me to get a copy of the “culture paper” you wrote for your nursing class? (For Level 1)
7. Would it be possible for me to get a copy of any handout or other materials that you distributed as part of your “teaching project”? (For Level 4)
8. What was the topic of your “culture paper”? What resources did you use to write this paper? Was your Level 1 nursing textbook used as a resource? Why or why not? (For Level 1)

9. What was the focus of your “teaching project”? What resources did you use to prepare for it? Was your current textbook used? Were textbooks from earlier nursing classes used? (For Level 4)
10. Tell me about the clinical paperwork you had to deal with this semester. What documentation did you need to refer to in order to complete your clinical paperwork? Was your textbook used at all? Why or why not? (For Level 1)
11. Tell me about the clinical paperwork you’ve dealt with throughout your nursing studies. What documentation have you referred to in order to complete this clinical paperwork? Have you used your current nursing textbook? Have you used other textbooks? (For Level 4)

## Appendix D: Survey Questions for Nursing Instructors

1. What kind of reading does the professional nurse rely upon to keep current in his or her field?
2. Is there anything you learned about reading and studying when you were a nursing student that you share with students at William Penn College?
3. Does a student's ability to read and comprehend textbooks largely determine his or her grade?
4. In terms of an average lecture, what percentage of that lecture is based on the textbook?
5. Other than the textbook itself, what "tools" or resources are available to help a student learn nursing?
6. What skills does the successful nursing student possess?
7. What options are there for the struggling student?
8. What are the primary reasons that students leave the nursing program?