

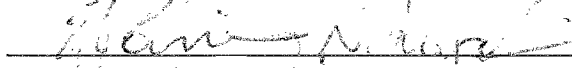
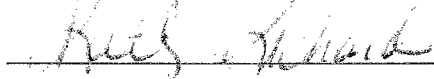

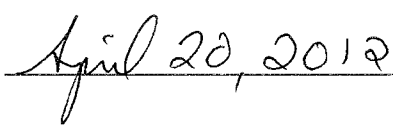


THE EXPERIENCE OF AFRICAN STUDENTS STUDYING NURSING IN THE
UNITED STATES IN RELATION TO THEIR USE OF CRITICAL THINKING

by

Donald Lee Tyson
A Dissertation
Submitted to the
Graduate Faculty
of
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of
Doctor of Philosophy
Nursing

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Dedication

This dissertation is dedicated first to my wife, Julie, my children Ben and wife Rebecca, Josh, and Phil and wife Pratiksha. They have journeyed with me through this process over the last eight years and coped with me through the many years of work on this project. I could not have accomplished this pinnacle in my life without Julie's unwavering support, dedication, and love, as she walked with me through the doctoral education process, making many sacrifices along the way.

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Abstract

THE EXPERIENCE OF AFRICAN STUDENTS STUDYING NURSING IN THE UNITED STATES IN RELATION TO THEIR USE OF CRITICAL THINKING

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This qualitative study explores the critical thinking experiences of African nursing students enrolled in several universities in the U.S. Using a semi-structured interview approach, twelve African students discussed their experiences using and learning a western critical thinking approach, as well as described their educational experiences in Africa. Three major frameworks guided the study including van Manen's interpretive hermeneutical approach to qualitative research, the conceptual models of critical thinking described by Sheffer and Rubenfeld's (2000) nursing consensus statement and Barnett's (1997) description of criticality, and the African concept of Ubuntu. Seven themes and a variety of subthemes emerged including learning experiences in Africa, using new learning tools to adapt to critical thinking, fear, desire for faculty interaction, cultural factors impeding critical thinking, evolving self-awareness, and the voice of those afraid to speak. The themes suggest that the majority of students interviewed experienced

significant differences in educational styles and environments between Africa and the United States; and that these differences, in concert with their own cultural assumptions, created challenges for being successful in their nursing program. While faced with these challenges, the students strongly desired to become academically successful and to utilize a variety of adaptive tools for learning critical thinking from a western perspective.

Implications for both educational institutions and further research were discussed that may help nursing educators better understand the African student experience and assist the students successfully complete their nursing education.

Chapter 1 – Introduction to Study

While it is difficult to find statistics that identify the percentage of international students studying nursing in the United States (U.S.), there are approximately 35,000 international students in all health professional programs. This represents over 5% of the 671,000 international students in the U.S. in 2008, and has increased 20% increase over 2007 (IIE, 2009a). This increase in health-related international students in the U.S. reflects a continuing increase in all international students studying in the U.S. during the latter part of the first decade of the 21st century. The Health Resources Services Administration (HRSA) reported that in 2004 minority nurses made up 15.1% of the total nursing population (HRSA, 2006). In contrast, the American Association of Colleges of Nursing (AACN) reported that as of 2007, the number of nursing students from minority backgrounds represented 26% of students in entry-level baccalaureate programs (AACN, 2007). These data did not, however, differentiate between foreign-born and educated students and nonforeign-born students.

Guhde (2003) reported that between 33% and 47% of English-as-a-second-language (ESL) nursing students passed NCLEX on the first attempt, compared with 67% to 95% of non-ESL students. Jeffreys (2007) found that minority and foreign nursing students were at higher risk to drop-out, or take longer to progress through a nursing program. These disparities suggest a need for better understanding of the unique

characteristics of how foreign students learn, as well as a need for identifying teaching and learning strategies specifically for foreign students (Brown, 2008).

When considering issues related to international students, unfortunately little research has been completed. Cummins (2001) stated that research related to international students is not considered a priority among researchers; he described the extant research as “sporadic, non-cumulative, and tends to be carried out by national organizations as part of advocacy projects” (p.2). After performing a meta-analysis of research related to learning and international students, Watkins (2001) concluded that while much research has been done about teaching, learning, and outcomes in Western countries, little has been done regarding outcomes of students in developing countries, or with international students from developing countries studying in Western schools. He called for research to be conducted with international students in Western countries to identify the factors affecting learning.

A small but growing body of researchers have investigated some of the challenges faced by international students that include language (Abriam-Yago, Yoder, & Kataoka-Yahiro, 1999; Brown, 2007; Ikeguli, 1999), learning environments (Bhattacharyya, 2008; Chavez, 2007; Fuss, 2007), engagement in educational practices (Ramburuth & McCormick, 2001; Zhao, Kuh, & Carini, 2005), psychological adaptation (Davies, 2005; Gloria, Castellanos & Orozco, 2005; Omotosho, 1998; Robertson, Line, Jones & Thomas, 2000), and acculturation (Atri, Sharma, & Cottrell, 2007; Cernalcilar & Falbo, 2008; Nilsson & Anderson, 2004; Ward & Rana-Deuba, 1999; Ward & Kennedy, 1994) .

International nursing students experience similar difficulties to those described above. Based on a review of the literature, Brown (2008) concluded that issues unique to ESL nursing students have largely been ignored. Given the NCLEX pass rates for ESL nursing students and the lack of systematic monitoring of ESL attrition rates, she emphasized that these students are at high risk and warrant further attention. Researchers described issues such as language difficulty, writing skills, socialization and cultural adjustments, learning and teaching styles, ability to practice critical thinking, family background, gender and past educational experiences (Carty, Hale, Carty, Williams, Rigney, & Principato, 1998; Gardner, 2005; Pardue and Haas, 2003; Sanner, Wilson & Samson, 2002). Understanding the challenges international students face is a critical task for nursing programs, as more international students are coveted by universities.

Facione and Facione (1997) defined critical thinking as a “non-linear and cycled process that allows people to make decisions on what to believe and what to do within a given context” (p. 131). Critical thinking has been an important concern and outcome of higher education in the U.S. over the last thirty years (Facione, Giancarlo, Facione, & Gainen, 1995). Likewise, critical thinking has become an important outcome of nursing education as reflected by Cody (2005): “Just as a lawyer has an obligation to apply critical thinking to the practice of law [...] the nurse has a professional obligation to exercise and apply critical thinking to the practice of nursing” (p. 332). Because of the increased complexity of patient care and greater accountability placed on nurses, critical thinking has been an important part of both nursing education, research, and practice

since the 1980s (Benner, Hughes, & Sutphen, 2008; Haffer & Raingruber, 1998; Simpson & Courtney, 2002; Tanner, 2005).

While scholars have focused on critical thinking issues of international students in other disciplines in the U.S., as well as the critical thinking characteristics of nursing students in other Western countries, there is minimal research related to critical thinking characteristics of international nursing students studying in the U.S. In addition, most of the research related to international nursing students related to critical thinking and other issues has assessed Asian, African American, or Middle Eastern students, with very little research focusing on African students (Brown, 2008; Choi, 2005; Sanner, Wilson, & Samson, 2002; Sparks, 2009). Within the literature about non-African foreign-born nursing students, researchers have demonstrated that international students have lower critical thinking scores on standardized tests than Western students (Ayala, 1999; Shin, Jung, Shin & Kim, 2006; Suliman, 2006; Tiwari, Avery & Lai, 2003). Researchers have also used qualitative data to demonstrate the difficulties non-nursing students face learning Western critical thinking skills (Durkin 2008a & 2008b; Gardner, 2005; Sanner & Wilson, 2008).

Given the multi-cultural demographics of nursing students in the U.S., research related to critical thinking strategies of a variety of cultural groups is essential for colleges and universities to provide relevant education and teaching strategies that prepare nurses to meet the global nursing workforce needs (Pardue & Haas, 2003). Biggs (1997), a broadly published educational philosophy scholar, emphasized the need to investigate further the critical thinking struggles of international students. He stated that

identifying such problems are not enough. In his view, not moving beyond identifying the problems will do little to overcome the difficulties faced by international students.

Researchers need to analyze the prior learning of students and identify overlaps in the thinking skills and strategies used by international students, such that successful strategies that engage the student and lead to better educational outcomes can be adopted.

Focusing on international nursing students is an important issue in nursing for several reasons. In 1997, the American Association of Colleges of Nursing (AACN, 1997) set a goal to increase the number and diversity of minority cultural groups represented in nursing. Likewise, other organizations, including the Institute of Medicine (IOM, 2004), have called for increasing the diversity of health care providers. This call is based both on identifying a strategy to meet the ongoing shortage of nurses, as well as to match the projected increased cultural diversity of the U.S. population (Grossman & Jorda, 2008). As Choi (2005) emphasized, “Deliberate inclusion of students who are culturally and linguistically diverse in nursing education programs can affect the ultimate goal of providing better health care to all North Americans” (p. 263). Researchers have described a significant relationship between health care disparities and the lack of a diverse workforce (The Sullivan Commission, 2004).

Statement of Problem

Many researchers have demonstrated the critical thinking issues of international students. In addition, a small body of literature exists regarding international nursing students in relation to critical thinking; however, most of that research has been done in the United Kingdom, Australia, and Asia. Very little research has been undertaken

regarding international nursing students in the United States, and in particular African students (Brown, 2008; Omotosho, 1998; Sanner, Wilson, & Samson, 2002; Sparks, 2009). Most of the research that has been done has been qualitative, and the majority of that research has focused on the psychological adaptation of international students to a Western culture, rather than focusing on critical thinking issues.

Critical thinking as described in Western literature is a foreign concept to students from non-Western countries. Based on teaching and advising international students in Australia, Vandermensbrugghe (2004) hypothesized that critical thinking is culturally constructed, primarily from a Western perspective. He found that Asian students in Western academic settings struggled with critical thinking, largely because of an academic style of rote memorization and teacher-centered educational systems. As a result, it may be difficult to measure critical thinking with current Western-oriented quantitative instruments. Based on extensive experience working with international nursing students, Brown (2008) agreed that international students learned primarily through memorization in their native countries. In addition, she asserted that as a result, students are not adequately prepared to apply higher level cognitive skills such as critical thinking, are not familiar with forced-response tests, and are more accustomed to a collaborative style of learning. Thus, international students struggle with Western educational approaches that emphasize independent learning.

International Students in Their Native Country

The comparison of critical thinking skills and characteristics between non-nursing international students and Western non-nursing students has been the focus of a variety of

research studies. A number of scholars have examined the critical thinking scores on a variety of widely accepted instruments between international college students in their native country and native students attending Western colleges and universities (Bateineh & Zghoul, 2006; Davidson & Durham, 1996; Grosser & Lombard, 2008; Zhang & Sternberg, 2001). Except for one study of Jordanian students, all of these researchers examined students from a variety of Asian countries. In these studies, international students consistently and significantly scored lower than Western students, and had scores well below the accepted norms for strong critical thinking skills. A major concern with these studies is the use of and reliability of Western-developed critical thinking measurement instruments in non-Western settings.

When comparing critical thinking scores of non-Western nursing students in their native country with Western nursing students, the results were similar (Ip, Lee, Chau, Wootton, & Chang, 2000; Shin, Lee, Ha, & Kim, 2006; Tiwari, Avery, & Lai, 2003; Yeh, 2002; Zhang & Lambert, 2008). Also using a variety of critical thinking instruments, these researchers found that non-Western nursing students had lower critical thinking scores than Western students in previous studies, most of the time with scores below the accepted levels for demonstrating strong use of critical thinking skills.

Two studies specific to nursing students examined critical thinking in non-Asian populations. Ayala (1999) measured the critical thinking skills of nursing students from six nursing programs in Puerto Rico, and found their scores to be significantly lower than students' scores in the U.S. reported in other identical research. Comparable results were found with nursing students in Saudi Arabia (Suliman, 2006).

Assuming cultural influences play a significant role in the characteristics of thinking processes, several researchers have examined the characteristics utilized by students attending college from non-Western cultures with the characteristics of Western students. Zhang and Sternberg (2001) found that Asian students who had higher levels of student achievement in colleges in their native countries utilized thinking characteristics such as conformity, hierarchy, and working independently. Those Asian students, who focused on Western modes of critical thinking such as argumentation, self-direction, challenging norms, and working in groups, were less successful. Chiu (2009) found that while coaching and mentoring by faculty at Asian colleges improved the utilization of Western critical thinking skills, students entered college from secondary school utilizing critical thinking skills that reflected an Asian cultural heritage. This required an additional adaptation for college students.

International Students in Western Colleges and Universities

Similarly, researchers have examined critical thinking of international students, almost exclusively non-nursing, studying in Western countries such as the U.S., the United Kingdom (U.K.), Canada, and Australia. While the majority of the studies were of non-nursing students, a few studies could be found in the nursing literature. In these studies, researchers usually examined the ability and process to learning and adopting critical thinking skills, the measurement of critical thinking skills in comparison to Western students, as well as the perception of the difficulty of utilizing critical thinking.

Chiodo and Tsai (1995) and Jones (2005) examined Asian students in the United States and Australia respectively. Utilizing several critical thinking instruments and

comparing the results to native students, they found Asian students scored significantly lower on the instruments utilized. Similarly, Pawloski and Danielson (1998) in Nebraska, and Melles (2009) in Australia found lower critical thinking scores with diverse populations of international students. In each of these studies, the researchers found that the international students scored lower than native students, but the international students scored below the established norm considered for high level critical thinking.

In several studies the process of adapting to Western styles of critical thinking by international students was investigated. Chiodo and Tsai (1995) found that 69% of Taiwanese students in the U.S. reported never having been taught Western critical thinking skills in their native secondary education. Durkin (2008a, 2008b) found that while Asian students in the U.K. were able to adopt some aspects of Western critical thinking – all of which were new skills, they only adopted those characteristics that they perceived culturally appropriate. In fact, Durkin theorized that Asian students adopted a new style of critical thinking that melded the cultural influences familiar from Asia with the popular styles from Western cultures. Melles (2009) found that students from Latin America, the Middle East, and Asia were able to adopt such skills as analysis and integration of information; however, on an ongoing basis they struggled with skills such as synthesis, summarizing, and applying theory to practice.

Researchers in two studies examined faculty perspectives of critical thinking skills of international students, especially relating to overall international student difficulties (Lee & Carrasquillo, 2006; Robertson, Line, Jones & Thomas, 2000). In both cases, faculty identified critical thinking abilities as problematic for international

students. The authors also concluded that the lack of being able to utilize Western critical thinking skills played a significant role in the students' reasons for failures. Interestingly, in both studies students identified non-critical thinking related issues as having more significance in relation to academic difficulty and failure than critical thinking.

No studies could be found in which the critical thinking skills and characteristics of international nursing students in Western academic settings were explored. Rather, research completed on international nursing students in the U.S., Australia, and the U.K. focused primarily on student adjustment and acculturation, social and financial difficulties, language issues, and learning styles. Scholars alluded, however, to critical thinking issues as contributing to the results obtained in these studies. Gardner (2005) interviewed racial and ethnic minority students at several BSN programs in California, many of whom were from Asia, India, Philippines, and Africa, about the difficulties they experienced. While a number of other themes emerged, on deeper analysis, Gardner conjectured that students struggled with critical thinking as a result of their past educational experiences and cultural practices, however, this was not explored further. Wang, Singh, Bird, and Ives (2008) interviewed Taiwanese students enrolled in a nursing program in Australia, focusing on a broad range of student issues. Many of the themes that emerged were related to critical thinking issues. Students expressed difficulty with challenging a teacher's assertions, raising questions in class, building a reasoned argument, and forming judgments and their own opinions.

Critical Thinking and African Students

A small but growing number of researchers have begun examining African students in relation to critical thinking, however, almost all have focused on African students in their native country, primarily in South Africa. After the emergence of apartheid in South Africa during the early 1990's, educational transformation was identified as a means for social growth and development. One component of educational transformation was the development of educational outcome criteria, including an emphasis on critical thinking among secondary and university students (Grosser & Lombard, 2008). Two studies were found that illustrate critical thinking among African college students in South Africa. Van Heerden (1995) found that Black South African college students, almost all of whom were first generation college students, lacked critical thinking skills such as analyzing, integrating and presenting, or applying data as well as distinguishing between main points and less important points – all important characteristics of critical thinking in the modern literature. Van Heerden attributed this issue to economic, socio-cultural, and prior educational influences. Grosser and Lombard reinforced this conclusion when comparing the critical thinking skills of South African students from a variety of cultural and economic backgrounds. Critical thinking scores of students from more rural, traditional African backgrounds were significantly lower than those of students from urban, more affluent backgrounds. The researchers concluded that cultural environments and past educational experiences had a strong influence on African students' ability to utilize Western critical thinking skills.

Three studies were found that related specifically to African Nursing students in

the United States, but again, the researchers' main focus was not related to critical thinking. As with other studies discussed previously, deeper analysis of the data reflected critical thinking related issues. Faculty at Clayton College and University in Georgia have conducted two studies related to the experience of African nursing students in the U.S. (Sanner, Wilson, & Samson, 2002; Sanner & Wilson, 2008). While both studies focused on acculturation and stress, a number of students' comments reflected difficulties with critical thinking analysis, problem solving, and the application of knowledge. The authors conjectured that this lack of critical thinking skills reflected the students' past learning experiences in Africa in which memorization and highly structured teacher-directed class environments with few textbooks were the norm. They concluded that such backgrounds hindered the African students' abilities to function in a Western educational system that emphasized critical thinking and application of knowledge as central to a nursing curriculum. The only other nursing-related study of African students was an interpretive phenomenological study by Sparks (2009) in which she examined the challenges African nursing students faced. Students reported major challenges including language, emotional distress, and lack of social support as causes of academic difficulties.

Conclusions

Several conclusions can be drawn. First, the vast majority of studies related to international students and critical thinking involve Asian students. Second, when using quantitative critical thinking instruments, students from non-Western cultures and educational backgrounds consistently scored lower than Western students. Third,

researchers have concluded that instruments for measuring critical thinking lacked cultural sensitivity. All of the quantitative studies utilized instruments developed by Western scholars, often translated into other languages, but not necessarily reflecting non-Western cultural values.

There is virtually no research that explores or describes the African student perspective on their use of critical thinking and methods, especially among nursing students in an educational system in which the importance of critical thinking is emphasized. Rather, most of the research related to critical thinking and international students examines Asian students traveling to countries such as the U.K. or Australia. Therefore, this study examined the perspective of African students facing situations in which critical thinking is required in educational and clinical settings.

Purpose

The purpose of this study was to describe the lived experiences of African nursing students in U.S. BSN programs as it relates to making critical patient care decisions in the academic and clinical settings. This included the development of an understanding of the critical thinking paradigm utilized by African nursing students. Finally, the relationship between critical thinking, demographics, past educational experiences, and academic success was explored. The research questions include:

1. What are African students' experiences of learning and utilizing critical thinking in the academic and clinical settings?
2. How do cultural and past educational factors influence the understanding and utilization of, Western style critical thinking?

Conceptual Framework

Three major concepts guided this research: interpretive hermeneutics, critical thinking, and the African philosophy of Ubuntu. Interpretive hermeneutics as a theoretical perspective within the field of phenomenological qualitative research was chosen because of its approach to examining the experience, meaning, and significance of life events. Van Manen (1990) described the main purpose of interpretive hermeneutics as the bringing to one's consciousness and making visible what is often not understood. This approach to qualitative research is an excellent starting point for understanding the African nursing students' encounters with critical thinking in unfamiliar Western academic settings, as the interviews attempted to make the student experience more visible. This reflects van Manen's concept of making visible as described: "[...] the nature of the experience has been adequately described if the description reawakens or shows us a lived quality and significance of the experience in a fuller and deeper manner" (1990, p. 10).

Van Manen is a Canadian phenomenologist and Professor of Education at the University of Alberta, Canada. His method of phenomenology combines Husserl's philosophy of describing the phenomenon in objective and isolated ways as the primary objective, with Heidegger's emphasis on understanding the meaning and context of the phenomenon. Phenomenology as a research method encompasses six key activities, according to van Manen (1990): 1) singularly focusing on the lived experience; 2) investigating the experience as the participant uniquely lives; 3) the researcher reflecting on essential themes; 4) describing the phenomenon through writing and rewriting; 5)

maintaining a strong pedagogical relationship to the phenomenon rather than settling for superficiality; and, 6) balancing the research context by considering parts and wholes (van Manen, 1990, pp. 30-31). Interpretive hermeneutics has been used widely to guide the research of nurse and other health care professional scholars because of its versatility in diverse settings, the focus on context, and the examination of the meaning of the experience.

Critical Thinking

Critical thinking has been widely defined and researched in the fields of education, psychology, and nursing over the past 100 years. After extensive review of the evolution and development of the concepts of critical thinking, Barnett's (1997) model of "criticality" as critical thinking from the educational philosophy literature was chosen as the framework by which to examine critical thinking in this study. The nursing perspective was added to this conceptualization of critical thinking by also utilizing the consensus statement written by a panel of nursing experts in 2000, led by Scheffer and Rubenfeld (2000).

Barnett, a professor of Higher Education at the University of London, developed his model of *criticality* as a response to what he perceived as a narrow characterization of critical thinking in Western literature (1997, p. 2). He envisioned criticality as a multidimensional phenomenon that goes beyond individual decision making based on knowledge to include self-reflection and action in the world. *Criticality* is seen as occurring in three domains with each domain's representative manifestations which includes: 1) knowledge manifested by the traditional concept of critical reasoning; 2) the

self manifested by critical self reflection; and 3) the world as manifested by critical action. He hypothesized that these three domains could be envisioned as three interlocking circles, where the overlap represented the critical person, a fully integrated person with strong critical thinking dispositions (p. 7). Within each domain Barnett described four developing and increasing levels of criticality: critical thinking skills, reflexivity, refashioning of traditions, and transformational critique (p. 103). Barnett's model seems to be more person-focused and holistic than other descriptions of critical thinking, thus was chosen for this nursing study.

Within the nursing profession, Scheffer and Rubenfeld were called on by a number of nursing scholars to convene a panel of international experts in the fields of nursing education, research, and philosophy to develop a nursing consensus statement regarding critical thinking. Using a Delphi method, 86 nursing and educational psychology scholars developed a statement that described critical thinking. Critical thinking was characterized as an essential component of nursing professionalism and care encompassing a mixture of cognitive skills (e.g., analyzing, discernment, information seeking, logical reasoning, prediction, and transforming knowledge) with "habits of mind" (p. 357) (e.g. confidence, creativity, flexibility, inquisitiveness, perseverance, and reflection). While such a broad depiction of critical thinking in nursing lagged ten years behind other disciplines, Scheffer and Rubenfeld believed this to be an important document; it added a nursing perspective to a similar document completed by a panel of educational experts in 1990 sponsored by the American Philosophy Association (Facione,

1990). For this study, the 2000 nursing consensus statement adds discipline-specific value to Barnett's model of *criticality*.

Ubuntu

The African philosophy of *Ubuntu* served as the third leg of the theoretical construct for this study. The decision to include an African worldview arose from believing that one's cultural environment strongly influences the development and use of critical thinking (Grosser & Lombard, 2008; Tweed & Lehman, 2002; Vandermensbrughe, 2004) and that significant differences exist in the thinking patterns of people from Western and non-Western cultures (Davies, 2007; Durkin, 2008a; Sternberg, 2004; Tweed & Lehman, 2002). Thus, it was important to attempt to find a theoretical framework to facilitate understanding of the influences of African culture and of the thinking process of students. Consideration of cultural influences in general and the concept of Ubuntu specifically, was also important to avoid approaching the African students from a Western point of view - often mistakenly perceived as a universal perspective - such that their methods of thinking would be interpreted as incorrect.

Ubuntu has been identified as a philosophy that permeates much of Western and Sub-Saharan traditional African cultures and lifestyles (Barrett, 2008; Grosser & Lombard, 2008; Mbigi, 1997; Metz & Gaie, 2010). This concept is expressed in southern Africa as "Umntu ngumntu ngabantu," and translated into many African dialects; it essentially says that "A person is a person through persons" (Haegert, 2000, p. 496). In other words, people reach their fullness through community. *Ubuntu* accentuates both the communal perspective of personhood and morality. Further, Ubuntu underscores the need

for all people to be treated with respect and dignity as well as the holding the community good to a higher value than the good of the individual (Prinsloo, 2001).

Ubuntu, as a worldview equal in importance to Confucianism or European American worldviews, is not necessarily to be tested. Rather, such worldviews provide a framework for understanding phenomenon within the world (Tweed & Lehman, 2002). Ubuntu is often seen as a moral philosophy, as reflected by the predominant writings regarding it within the philosophical and ethics descriptive literature (Morove, 2009; Wiredu, 2004). In its emphasis on collectivism, Ubuntu is often compared to East Asian ways of thinking in contrast to the Western worldview of individualism and provable findings (Nisbett, Peng, Choi & Norenzayan, 2001; Muwanga-Zake, 2001).

Several studies were found that demonstrated the use of Ubuntu as a worldview, influencing the methodology or interpretation of findings. Muwanga-Zake (2009) evaluated a computer educational program for South African teachers, and recognized the presence of Ubuntu while interviewing participants. He stated that recognizing Ubuntu as a value preventing the distancing between the researcher and the researched during interviews and observations. Nama and Swartz (2002) discussed how Ubuntu impacted the research study and design while examining controlled-trial mother and infant interventions for treating HIV/AIDS. The emphasis of Ubuntu within the communities examined raised the issue of needing to break the research protocols on numerous occasions in order for the researchers to intervene. As well, Green, Dlamini, D'Errico, Ruark and Duby (2009) explained that while performing research on the prevention of HIV/AIDS, any ideas or interventions to be researched needed to be

sensitive to the philosophy of Ubuntu rather than ignoring its existence, in order for the results to be applicable to the community studied. Gough and Gough (2004) discussed the importance of Ubuntu concepts of locality and community as an important value while interpreting results of a study examining environmental education in southern Africa. Based on the experience of these scholars, Ubuntu appears to be an important worldview to keep in mind when designing a study and analyzing data related to African nursing students in the U.S.

Placing this philosophy within the context of education, Venter (2003) stated that in the African view, education strives for the common good rather than the good of the individual. After examining the development of new educational models that emphasize critical thinking in post-apartheid South Africa during the 1990's, Scholtz, Braund, Hodges, Koopman, and Lubben (2008) concluded that the Western conceptualization of critical thinking might not be compatible with the Ubuntu beliefs of community and harmony (p. 31). Thus, while examining African student's experience with attempting to learn and utilize Western models of critical thinking in nursing, it will be important to view the students from a deeply ingrained philosophy that is very different than Western views.

Completing this study from the perspective of Ubuntu is important in demonstrating value to the student's cultural background and history. In coming to the U.S., African students are asked to transcend cultural boundaries and adopt Western critical thinking skills in order to be successful. Western schools may not merely be asking the African student to learn a new way of thinking, as expected of native students.

Rather, African students may be expected to disregard both their former ways of thinking, as well as the values inherent in that thinking. Thus, the perspective of Ubuntu will help to see the students' experience through their eyes.

Definition of Terms

For the purposes of this study a number of terms need to be clearly defined before progressing further.

Critical thinking: Watson and Glaser (1964) broadly defined critical thinking as “a composite of attitudes, knowledge, and skills including attitudes of inquiry [...] knowledge of the nature of valid inferences, abstractions, and generalizations [...] and skills in employing and applying the above attitudes and knowledge” (p.1). For this study, however, a broader definition and conceptualization of critical thinking was utilized incorporating the works of Barnett (1997) and Scheffer and Rubenfeld (2000) as briefly described above. Barnett described critical thinking, also labeled criticality, as a multidimensional phenomenon that goes beyond individual decision making based on knowledge to include self-reflection and action in the world. The background and details of the descriptions of critical thinking by Barnett as well as Scheffer and Rubenfeld will be discussed in Chapter 2.

Baccalaureate program of nursing: A public or private college or university with a school of nursing that admits students into the academic program with the goal of completing a Bachelor of Science in Nursing (BSN) and has been approved by either the National League of Nursing (NLN) or the American Association of Colleges of Nursing (AACN).

Senior Nursing Student: A college or university student designated as being within the Nursing major who has completed at least two upper-level semesters of Nursing courses that include both more than two adult related medical-surgical practicum rotations, as well as at least one academic course related to pathophysiology of adult related diseases.

Academic success: Refers to students completing any nursing course, required for graduation, with a grade that is defined as having successfully being completed such that the student does not need to repeat that course in order to graduate with the BSN. The lack of success would be failing at least one or more courses.

African student: A college or university student who holds citizenship in a country on the continent of Africa, has completed at least nine years of primary and secondary education in that country, and has been in the United States for less than ten years.

Western: The term “Western” or “West” refers to Europe, North America, Australia, and New Zealand in relation to the “traditions of thought and practice with a specific historical trajectory” (Durkin, 2008a, p. 16). This will at times also be identified in this study as “culturally Western” described by Tweed and Lehman (2002) as referring to “culturally Western English-speaking individuals” (p. 89). This term contrasts with such terms as “non-Western”, “Asian”, or “African” and will be further described in the Assumptions section below.

Assumptions

A number of assumptions have been made by the author in this study. First, critical thinking skills are necessary for nurses and can be learned by students through the formal nursing education process (Adams, 1999). Believing that critical thinking is a taught ability rather than an innate ability seems to be central to all of the critical thinking literature in nursing (Facione, Facione & Sanchez, 1994; Tanner, 1997).

Second, while critical thinking in the nursing profession shares similarities with other disciplines, there are discipline-specific aspects within health care. Because each discipline has distinct roles and perspectives, the specific dimensions of nursing mean that nurses' critical thinking is focused on those nursing skills and dispositions necessary to assure the outcomes of quality nursing care (Tanner, 2005). Thus, critical thinking in nursing is unique in that it applies nursing-specific knowledge to providing nursing-specific care (Scheffer & Rubenfeld, 2000).

In an attempt to re-conceptualize the role of critical thinking in nursing education and practice, Walsh and Seldomridge (2006) emphasized that while general depictions of critical thinking were useful, there was a need to identify aspects of critical thinking that were pertinent specifically to nursing such as clinical and diagnostic reasoning. Such has been the driver behind the literature that attempts to distinguish between critical thinking and clinical reasoning as separate entities. Rather, in this study these two concepts are seen as sharing significant characteristics. The unique critical thinking perspective in nursing also is important due to the unique and specific knowledge needed by the nurse

in “direct, semi-direct, and indirect nursing care roles” (Kataoka-Yahiro & Sayler, 1994, p. 352). Benner, Hughes, and Sutphen (2008) emphasized the role of critical thinking as essential in nursing care as the mechanism to assure safe patient care.

A meta-analysis of educational research by Marshall and Barritt (1990) informed a third assumption in this study: assuming that the critical thinking skills and dispositions of African students are seen as a unique style rather than as lacking and a problem that needs to be solved or ameliorated. Marshall and Barritt attempted to identify the unstated attitudes, values, and assumptions of educational scholars who published in the *American Educational Research Journal*. They concluded: “[...] the articles operate from an assumption that there is a particular problem to be solved, and, once solved, that education will be improved” (p. 599). As a result, researchers have focused on finding ways to solve the problem, rather than on better understanding the underlying reasons for the assumed problem.

Marshall and Barritt (1990) conjectured that labeling a phenomenon as a problem categorizes people into boxes, rather than acknowledging the complicated and varying nature of human phenomenon. This limits one’s ability to understand the essence of a phenomenon such as critical thinking better, and, according to Marshall and Barritt, also creates a hierarchical system: “Furthermore, the separation of one group studying other groups creates a hierarchy that operates to make one dominant over the other. Those who study get to say how things are” (p. 602).

In this study, the skills and dispositions of African nursing students are approached not as a problem to be fixed, but rather as a unique approach that needs to be

understood. Developing this understanding will allow faculty to mediate the challenges faced by African students as they experience a Western critical thinking model in a Western educational environment. In considering Asian students studying in Australia, Vandermensbrugghe (2004) emphasized this need for further understanding by stating that international students should not be considered as “misabeled by their lack of familiarity with English and the learning conventions that exist in Australia, but as students who come with different strengths who have a contribution to make” (p. 417). Such an attitude of perceiving the African student’s unique critical thinking skills and dispositions as strengths rather than as problems to be fixed was the starting point for this study.

Gutierrez and Rogoff (2003) stated that when examining educational approaches in a variety of cultural contexts, there is a need to abandon “deficit-model thinking in which cultural ways that differ from the practices of dominant culture are judged to be less adequate” (p. 19). Moving beyond such hierarchies allows the researcher to describe the characteristics of the students without making value judgments that suggest value hierarchies and problems.

This leads to a fourth and very important assumption: the assumption that there is heterogeneity among African cultures, though there may likely be some similarities that can be captured. It is not the intention of this study to characterize all African students in one particular way or to make generalizations about all African students. This is important partly because of the diverse histories, economies, cultures, and countries that constitute the African continent, but also because of recognizing rather than obscuring

differences between individual students. Thus, the viewpoint of this author is that a cultural practice is not a characteristic of all members of a particular country or continent, but rather a characteristic of a group of people who share similar backgrounds, education, and life experiences (Durkin, 2008b). Gutierrez and Rogoff (2003) cautioned against stereotyping students from specific cultures to avoid treating them as a homogenous group; rather, they emphasized the need to view participants as individuals with dynamic and variable approaches to thinking.

A fifth assumption is that thinking and critical thinking are culturally influenced. A number of scholars have theorized and demonstrated through their research that culture does influence the thinking patterns of individuals, and that the processes used for critical thinking are based on the cultural context (Davies, 2007; Sternberg, 2004; Vandermensbrugghe, 2004). Vandermensbrugghe theorized that critical thinking is a socially-constructed and Western concept, more valued in Western culture than other cultures. This occurs because of the focus of Western cultures on individualism and argumentation, rather than on the consensus and community focus of Asian and African cultures. Recognizing that culture influences thinking approaches, this study was not an attempt to evaluate the cultural practices but rather describe the practices and investigate the students' experience using those culturally learned practices in a foreign setting with its own unique expectations.

Significance of Study

The origins of the significance of this study lie within the attempts to lessen the nursing shortage in the United States, as well as to lessen the struggles and better

understand the struggles international students experience in their attempts to succeed academically. In 2001, four powerful nursing organizations – AACN, the National League of Nursing (NLN), the American Nursing Association (ANA), and the American Organization of Nurse Executives (AONE) developed a position statement that called for increasing the cultural diversity of the nursing workforce by developing opportunities for minority and international students in university nursing programs (AACN, 2001). The creation of a more diverse workforce would not only be one component of lessening the nursing shortage, but would also address the increasingly culturally diverse patient population emerging in the U.S. health care system (Gardner, 2005; Grossman & Jorda, 2008). Increasing the proportion of racially and ethnically diverse nurses in the health care workforce will not improve sensitivity towards minority patients, but it is hypothesized, will improve access and lessen serious health disparities of minority patient populations (Sullivan Commission, 2004).

Research focused on better understanding of the thinking patterns and processes of international students can also be important because of the growing numbers of international students enrolled in universities in the U.S. and other Western countries. Durkin (2008a) and other scholars have questioned whether Western styles of thinking “may be counterproductive in a multicultural classroom” (p.15), especially as much of academic philosophy encourages the understanding and respect of other cultural groups. According to Cummings (2001) and Chavez (2007), as the face of the university student body grows evermore multicultural, educators will need to find mechanisms for

understanding the values, perspectives, and academic practices familiar to international students.

Competition between U.S. universities for international students has become more intense, and has become the focus of a significant U.S. policy initiative, even after the events of September 11, 2001 (Johnson, 2007; NAFSA, 2007). The Association of International Educators (NAFSA, 2007) reported that as of 2007, international students and their dependants contribute over \$15 billion to the U.S. economy annually. In 2008, the Department of Homeland Securities published a report, in response to the decreases in enrollment between 2001 and 2006, in which they called for national policy that attracts international students to come to the U.S. for their college education (Secure Borders Committee, 2008). In this report international education was cited as a key component of U.S. international diplomacy, to foster both improved understanding of other cultures and increased collaboration between the U.S. and other countries. With an increased influx of international students, understanding the methods of thinking utilized by such students is essential for student success.

Finally, this study is important because of the rates of academic success reported in regard to international students. Jeffreys (2007) demonstrated that foreign nursing students were at higher risk for failing out of nursing programs, took longer to progress through the nursing programs, and had lower first time pass rates on the national RN NCLEX licensing examination. While no statistical data could be found specific to African students, it is likely that they experience similar outcomes. It is hoped that the lessons of this study provide an increased understanding of the African nursing student's

critical thinking processes, and that these data in turn will help to improve their retention, progression, and licensure success.

Summary

International university students come to the U.S. in increasing numbers to obtain knowledge and skills that promote both economic, professional, and personal benefits. The admission of international students into BSN programs allows for increasing the multicultural make-up of the U.S. nursing population as well as assisting to solve the U.S. and global nursing shortage. Substantial research using quantitative instruments for critical thinking have demonstrated significant differences in critical thinking scores between Western students and non-Western students. Much of this research has focused on Asian students; there is little research examining non-Asian, non-Western students. Research of African nursing students enrolled in Western nursing programs and the utilization of critical thinking has not been undertaken. Because of the paucity of this research, a qualitative phenomenological approach was undertaken to develop an understanding of the experiences of African students, through their own descriptions of the methods and experiences using critical thinking as nursing students. This study was framed around Barnett's (1997) depiction of critical thinking, the consensus statement developed within the nursing discipline in 2000 related to critical thinking, and the African philosophy of *Ubuntu*. In Chapter Two, a deeper description of the conceptual frameworks used for this study, as well as a review of the research literature related to critical thinking and international students will be presented. In Chapter Three, the methodologies by which this research was completed will be described.

Chapter 2: Review of Literature

In Chapter Two the theories and applicable former research related to phenomenology and critical thinking in relation to international students have been described. This study was framed around two theoretical frameworks: phenomenology and critical thinking. Descriptive and interpretive phenomenology will be compared with a focus on the hermeneutic interpretation perspective of van Manen. Several nursing studies are described that illustrate van Manen's approach to research design and data analysis. The evolution of the utilization of critical thinking outside of and within nursing education has been examined. As a result of this description of critical thinking, the Barnett model of critical thinking integrated with the 2000 consensus statement related to critical thinking in nursing was used for this study. Finally, research related to academic success and critical thinking of international students in general have been reviewed; this leads to an examination of research specific to international nursing students and critical thinking.

Phenomenology

Because this study utilized a qualitative phenomenological approach, it is important to understand the components of phenomenology. In the introduction to the third edition of the *Sage Handbook of Qualitative Research*, Denzin and Lincoln (2005) provided a definition of qualitative research:

A situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. [...] At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomenon in terms of the meanings people bring to them. (p.3)

In other words, the main purpose of qualitative research is to bring to consciousness aspects of the participant's experience with phenomena. Qualitative research makes visible what is often not understood or known to those around the individual experiencing the phenomena of interest. Second, the role of the researcher in qualitative research involves the researcher working within the contexts of those being studied. This leads to a third point regarding qualitative research, which involves where the phenomenon are studied. Not in an objective laboratory, but rather the phenomenon and participants are studied in their own contexts where the phenomenon occurs in its natural setting.

This definition serves as an excellent starting point for understanding the African nursing students' encounters of critical thinking in the western academic setting. Using qualitative research allowed the methods of critical thinking utilized by these students to become more visible. This will allow educators to understand better how African students process information, problem solve, and think critically both in the academic and clinical settings.

A phenomenological approach was chosen because it is a means to understand the “the meaning of the lived experiences for several individuals about a concept or the phenomenon” (Creswell, 1998, p. 51). *Phenomenology* derives from the Greek *phanenesthai* which means “to show itself” (Dowling, 2007, p. 139). Phenomenology then will allow researchers and educators to understand uses of critical thinking as experienced and revealed by Africans studying in the U.S. to become nurses.

The identification of phenomenology as a method implies the use of phenomenology in the design, data collection, and analysis of the study. Dowling (2007) emphasized the importance of a connection between philosophy and research method by stating that “good science emanates from a solid philosophical base wherein the ends determine the means, rather than the other way around” (p. 139). Thus, as this study evolved, the goal of better understanding the critical thinking processes of the African student begged for a method in which the phenomenon could emerge in a way that as precisely as possible revealed the students’ lived experience and at its own pace. Identifying the philosophical foundation of phenomenology early in the research design process, before decisions are made regarding method is important. As Denzin and Lincoln (2005) pointed out: “Choices regarding which interpretive practices to employ are not necessarily made in advance. The choice of research practices depends upon the questions that are asked, and the questions depend on their context, what is available in the context, and what the researcher can do in that setting” (p.2). As the design of this study evolved, the need to understand students’ experiences and the perceived meaning of those experiences led to the recognition of the fit of phenomenology.

This need for understanding the philosophical foundation of phenomenology is reflected in the nursing literature. Thomas (2005) indicated that many phenomenological researchers devote more space to methodology than to philosophy, and called for nurse scholars to demonstrate a philosophical commitment as much as a methodological commitment. In the following section, the phenomenology philosophies of Husserl, Heidegger, Merleau-Ponty, Gadamer, and van Manen are very briefly described and differentiated. This overview will demonstrate the rationale for choosing van Manen's hermeneutical interpretation perspective as a basis for this dissertation.

Husserl and descriptive phenomenology

Husserl (1859-1938) was a German mathematician, philosopher, and writer credited with introducing the concept of the *lived experience* as well as the phenomenological movement (Creswell, 1998; McConnell-Henry, Chapman, & Francis, 2009). Husserl believed that philosophy should become a more rigorous science "that would restore deeper contact with deeper human concerns" (Streubert Speziale & Carpenter, 2007, p. 78). He emphasized separation of the mind and body, reflecting the Cartesian concept of duality that dominated scientific thinking during that time (McConnell-Henry et al., 2009).

Husserl's philosophy was part of the positivist paradigm that focuses on maintaining objectivity. Thus, he stressed the need for phenomenology to be "a rigorous and unbiased study of things as they appear in order to arrive at an essential understanding of human consciousness and experience, free from cultural context" (Dowling, 2004, p. 132). Thus, the primary objective of phenomenological research is the

critical understanding of an experience, what people believe to be real about an object. Husserl worked from the assumption that an experience has intrinsic value and should be the object of scientific study (Lopez & Willis, 2004). As a result, his perspective on phenomenology is often labeled *descriptive phenomenology*. Several key concepts of Husserl's phenomenology included bracketing, intentionality of consciousness, universal essences, and atemporality.

Bracketing emerged from the Greek *epoche* meaning "refraining from judgment or staying away from perceiving things" (Dowling, 2007, p. 134). It means the removing of all prior personal knowledge such that the researcher can grasp at the essential lived experience. For Husserl, bracketing the researcher's perspective reflected his emphasis on objectivity, and thus provided scientific rigor for phenomenological study (Hamill & Sinclair, 2010). His goal was to understand the phenomenon as it presents itself to the participant (Drew, 1999). For researchers, this means identifying and setting aside any presuppositions or preconceptions about an experience, and negates the use of literature review prior to starting research (Lopez & Willis, 2004).

Husserl adopted *Intentionality of consciousness* from the German philosopher Brentano (1838-1917). Intentionality refers to the internal experience of being conscious of something. This experience represents the phenomenon of study and needs to be examined by the researcher before interpretation of its meaning (Creswell, 1998; Dowling, 2007).

Husserl emphasized the concept of *Universal essences*. This concept reflected Husserl's reductionist perspective, as he assumed that there are features to any lived

experience common to all people who have that experience (Lopez & Willis, 2004). The universal essence refers to aspects of an experience that are shared by all who live it. Thus, the aim of research is to discover these universal essences that constitute the significant features of a particular lived experience, which has not been previously described via phenomenological research (Wojnar & Swanson, 1997).

One final concept central to Husserl's phenomenology is *atemporality*. Husserl placed little importance on the concept of time and context. For Husserl, the experience was the experience regardless of time and context. Any awareness of time or context needs to be set aside from the experience in order to fully understand the truth of the person's experience (McConnell-Henry, Chapman & Francis, 2009).

Heidegger and interpretive phenomenology

Heidegger (1889-1976) was a student of Husserl. Heidegger's work, while emerging out of Husserl's, questioned Husserl's description of a person's relationship with the world (Streubert Speziale & Carpenter, 2007). Heidegger's ideas comprise the research tradition known as interpretive or hermeneutic phenomenology. The central focus involved people as interpreting beings. This is contrary to the idea of empirical science and promotes the subjective nature of human existence. This divergence from Husserl's focus on objectivity has resulted in considerable diversity in the philosophical positions of qualitative researchers (Wojnar & Swanson, 2007).

Heidegger focused on human experience rather than on their knowledge. He placed considerable emphasis on the question of the subjective meaning of the experience rather than on describing the objective experience. This emphasis on meaning has been

termed *hermeneutics*, derived from the Greek god Hermes, who was responsible for interpreting messages between the gods. Lopez and Willis (2004) defined hermeneutics as “ a process for making manifest what is normally hidden from the human experience [...] goes beyond the core constructs and essences to look for meanings embedded in the experience” (p. 728).

While Heidegger accepted Husserl’s conclusions regarding the importance of describing phenomenon, Heidegger also advocated for the utilization of hermeneutics as a research method with an ontological (nature of meaning) perspective rather than an epistemological (nature of knowing) perspective. As mentioned previously, this shifted the central focus of philosophy from how something is known to what it means (Dowling, 2007; Welch, 1999).

Dasein, translated from the German as being-in-the-world was of primary importance to Heidegger (McConnell-Henry, Chapman, & Francis, 2009). *Dasein* centers on how one makes sense of the world by attaching meaning to a phenomenon. Rather than knowing a phenomenon through description, one places value on the phenomenon through understanding the meaning of the phenomenon. Thus, the context in which the individual experiences a phenomenon becomes important as the context influences the meaning of the lived experience. Heidegger believed that individuals could not separate themselves from their contexts, as context influences the choices one makes, and the meaning of the lived experience (Wojnar & Swanson, 2007). As a result, researchers attempt to understand the participants’ meanings of the lived experience (being-in-the-world) rather than attempting to discover what is known about the phenomenon.

Another important aspect of Heidegger's philosophy included the concept of *forestructure*. Heidegger believed that the researcher brings assumptions and prior knowledge to the phenomenon being studied; this allows for interpretation of the phenomenon. As a result, the knowledge and presuppositions of the researcher serve as valuable guides to the topic being studied. A literature review is thus appropriate as it serves to lead the researcher to determine the need for the research (Lopez & Willis, 2004).

Because of this prior knowledge of the phenomenon that the researcher brings to a study, the researcher becomes part of the research as a participant. Heidegger believed that there is no possibility of research free of judgment, thus there is no place for bracketing with the hermeneutic approach. Lopez and Willis (2004) postulated that the hermeneutic approach allows for different interpretations of narratives depending on the individual interpreting.

Finally, Heidegger believed that research analysis, rather than being linear, was a circular process (Streubert Speziale & Carpenter, 2007). Thus the concept of the hermeneutical circle emerged. Within the concept of the hermeneutical circle, analysis proceeds from interpreting the parts of data to interpreting the meaning of the whole data, which allows the researcher to better understand the parts of the experience. Analysis is never ending as the researcher attempts to discover the true meaning of the experience (McConnell-Henry, Chapman, & Francis, 2009).

Merleau-Ponty and the French phase of phenomenology

Merleau-Ponty (1905-1980) is considered part of the French phase of phenomenology whose primary concepts involve the concept of embodiment as well as being-in-the-world (Speziale & Carpenter, 2007). Merleau-Ponty's service in the French army during World War II, including imprisonment and torture, influenced his beliefs that the lived experience needs to be described. For Merleau-Ponty, the goal of phenomenology is to rediscover the first experience with the phenomenon and view the experience in a new way without the participant reflecting on the meaning of the experience. He termed this concept the *primacy of perception* (Dowling, 2007, p. 134). The researcher seeks to discover the participant's perception of their lived experience, but in contrast to Husserl, this perception has a cultural context.

In addition to perception, Merleau-Ponty refuted Husserl's Cartesian concept of duality through his description of *embodiment* as a key aspect of being-in-the-world. He theorized that one cannot separate the mind from the body as the body is the place from which perception occurs (Thomas, 2005). Besides embodiment, Merleau-Ponty emphasized the connection of individuals through relationship with others as key to being-in-the-world. He envisioned research as a dialogue with persons, forming a common ground towards understanding the lived experience.

While disagreeing with Husserl on several key points, Merleau-Ponty advocated for Husserl's concept of bracketing by the researcher (McConnell-Henry, Chapman & Francis, 2009).

Gadamer and hermeneutics in research

Gadamer (1900-2002) was a student of Heidegger's, developing further the concept of hermeneutics and the research process. Scholars claim that with the writing of his book *Truth and Methods* in 1960, Gadamer revived the role of early philosophy related to hermeneutics, especially the ideas articulated by Schleiermacher in the early 19th century (Abulad, 2007; Dowling, 2007). Schleiermacher is credited with developing the concept of "[...] universal hermeneutics, a hermeneutics that does not relate to one particular kind of textual material such as the Bible, but to linguistic meaning in general" (Ramburg, 2009, para. 15). With Schleiermacher, hermeneutics and the art of interpretation and understanding could be applied universally to any written text or phenomenon. Gadamer was significantly influenced by Schleiermacher's belief in the strong connection between understanding, language, and history (Abulad, 2007). Combined with Heidegger's depiction of *Being*, Gadamer explored how language influences the researcher's understanding and interpretation of *Being* (Mass-Rapport, 2001).

Gadamer advanced several important positions in his writings. First, he emphasized the concept that one's prejudices are important aspects of one's understanding of phenomenon. Gadamer argued that researchers bring a history that formulates prejudices to the research environment that cannot be ignored (McConnell-Henry, Chapman, & Francis, 2009). The researcher's understanding occurred, however, when the researcher detaches "fruitful prejudices" from "prejudices that obstruct understanding" (Dowling, 2007, p. 134). Second, taken from the writings of

Schleiermacher, he posited the idea of “universality” (Dowling, 2007, p. 134) also labeled a “fusion of horizons” (Ramberg & Gjesdal, 2009, para, 41). This *fusion of horizons* involved a dialogue between the horizon of the interpreter and the phenomenon being studied. Finally, from Heidegger’s concept of Being, Gadamer emphasized that being only occurs in the context of language and history. Gadamer believed that one could only understand the world through the use of language in a historical and cultural context (Ramberg & Gjesdal, 2009).

Thus, this *fusion of horizons* and understanding the context of a phenomenon formulated Gadamer’s understanding of the hermeneutical circle. He believed that a researcher’s involvement in studying phenomenon becomes part of the understanding of the phenomenon. Thus, a movement between the historical past and the present existence of a phenomenon (Ramberg & Gjesdal, 2009); where the researcher resides in the “midst of the lived experience, where each affects the other” (Abulad, 2007, p.18). Dowling (2007) stated that researchers who base their work on Gadamer’s perspective utilize the hermeneutic circle as a dialogue between the researcher and the participant.

Van Manen and the Dutch tradition

Van Manen is a Canadian phenomenologist currently serving as Professor of Education at the University of Alberta, Canada. His type of phenomenology is located in the Dutch school of thought and is often labeled as *hermeneutical interpretation* (Omotosho, 1998). Van Manen has combined the descriptive phenomenology of Husserl with an emphasis on interpretation to understand the meaning of a phenomenon. In his

book *Researching Lived Experience* (1990), he reflected this combination of Husserl and Heidegger:

What first of all characterizes phenomenological research is that it always begins in the lifeworld. This is the world of the natural attitude of everyday life which Husserl described as the original, pre-reflective, pre-theoretical attitude. In bringing to reflective awareness the nature of the events, we are able to transform or remake ourselves in the true sense of *Bildung* (education). Hermeneutical phenomenological research edifies the personal insight [...]" (p. 7).

Van Manen (1990) described phenomenological research as exploring the structure and complexity of the human lifeworld. According to Dowling (2007), van Manen reflected the ongoing transformation of phenomenology by incorporating Husserl's perspective with the reflective characteristics of Heidegger's phenomenology, and thus offers the broadest view of phenomenology. While van Manen embraces Husserl's emphasis on describing the experience and studying essences, he does not advocate for bracketing or reductionism. Van Manen accepted Heidegger's belief in the importance of understanding the meaning of the experience and the importance of context of the world in which the experience is lived (van Manen, 1990).

Van Manen believes that four themes, called *existentials*, pervade everyone's lifeworld; existentials can be utilized as guides for reflection by the researcher during interviewing, reflecting, and data analysis. These four themes include the lived space (spatiality), lived body (corporeality), lived time (temporality), and lived human relations (relationality). He emphasized that the existentials can be differentiated but never

separated as they form an “intricate unity which we call the lifeworld” (p. 105). He comments that one existential always influences or enhances another – thus he demonstrated the importance of the contextual nature of a phenomenon.

Much of van Manen’s writings focus on phenomenology as a research method comprising six key activities: 1) turning, or singularly focusing on the lived experience; 2) investigating the experience as the participant lives it rather than as the researcher conceptualizes it; 3) reflecting on essential themes; 4) describing the phenomenon through writing and rewriting; 5) maintaining a strong pedagogical relationship to the phenomenon rather than settling for superficiality; and 6) balancing the research context by considering parts and wholes (van Manen, 1990, pp. 30-31).

Van Manen’s philosophy has been used widely by nurses, other health care professionals, and social scientists (Dowling, 2007; Maggs-Rapport, 2001). Van Manen (1990) described how his methods of interpretive reflection could be used to understand the experience of illness. Maggs-Rapport (2001) explained that van Manen’s philosophy is utilized by nurses and other social sciences because of methodological flexibility allowing for adaptation in diverse situations without undermining van Manen’s foundational values. This versatility is useful in the wide range of situations in which nurse-researchers may find themselves with participants. Dowling (2007) stated that van Manen’s approach is useful for nurses who find themselves limited by the phenomenological reductionism of Husserl’s philosophy. In addition, van Manen’s four existentials provide for nurses to focus on the context of the phenomenon rather than bracketing the context out of the analysis of the phenomenon.

Omotosho (1998) examined the experience of eleven African students in a bachelors and masters nursing program. Utilizing van Manen, Omotosho both explored both the description and the meaning of the student experience and intentionally did not bracket his own experience as an African student who had come to the U.S. to complete his nursing education. In their study of the experiences of mental health nurses administering medications to patients considered to be non-adherent, Winjveld and Crowe (2010) demonstrated the use of van Manen's four existential levels of temporal, spatial, relational and corporeal to guide the analysis of the data and structuring the themes that emerged, revealing richer data than had they use a context-free methodology. In addition, they indicated that van Manen's methodology allowed for the description of the nurses' experiences "while acknowledging their interconnectedness with the environment where they practice and their relations with others in that environment with the environment in which they practice" (p. 1380).

Gardner (2005) examined the educational experiences of minority students in predominantly white nursing programs. By allowing for the "voice of the minority students" (p. 155), she was able to identify themes of loneliness, discrimination, and determination for success. She both described the students' educational experiences and explored how the students made sense of the meaning of these experiences. Spence and Smythe (2008) utilized van Manen's (1990, 1997) suggestion that stories can provide a method for identifying meanings of a phenomenon and feelings associated with experiencing the phenomenon that are at a noncognitive, deeper level by analyzing stories written by nurses about "feeling like a nurse" (p. 243). In addition, they utilized

van Manen's reflective principle of "questioning, writing, rereading and rewriting" (p. 246) as they analyzed their data. As a result of this process, Spence and Smythe felt drawn deeper into the text and were able to see the themes in fresh ways with new insights while staying true to the experience of the nurse participants.

Van Manen's utilization of both the descriptive and the interpretive dimensions address central dimensions of the experiences of African nursing students and their use of critical thinking methods. In the current study, it was important to have the students describe their critical thinking experiences, but it was at least as important to explore the meaning of these experiences in relation to past educational experiences.

Critical Thinking

Numerous definitions of critical thinking exist. In this section, several of these definitions will be examined, the evolution of critical thinking in nursing will be described, and research related to critical thinking of international nursing students will be analyzed. From this literature, a model for critical thinking will be identified as a framework for this research study.

History of Critical thinking

Researchers from the Foundation for Critical Thinking (2009), a non-profit organization with the mission of advancing research related to critical thinking and education, described that the concept of critical thinking can be traced back 2500 years to the teachings of Socrates (c496-399 B.C.E.). Socrates "established the fact that one cannot depend on those in 'authority' to have sound knowledge and insight[...] and established the importance of asking deep questions that probe into thinking before we

accept ideas as worthy of belief” (para 2-3). In other words, Socrates believed that understanding the foundation of ideas is paramount to understanding the ideas themselves. Socrates emphasized several characteristics that later became important components of critical thinking; these included seeking evidence, examining assumptions, analyzing basic concepts, and describing implications of one’s actions. His method of questioning became known as *Socratic questioning*, which has become the central tenant of Western critical thinking philosophy (Foundation for Critical Thinking, 2009). Following Socrates, Plato, Aristotle, and other Greek philosophers emphasized “that things are often very different from what they appear to be and that only the trained mind is prepared to see through the way things look to us on the surface to the way they really are beneath the surface” (para 5). From these ancient Greek perspectives emerged the foundational concept of systematic thinking as the search for deeper meanings. Since the time of Socrates and other Greek philosophers and scholars, there has been a march of hundreds who have extended the concepts, tools, and resources related to critical thinking. Each major discipline has contributed to the development of the understanding of critical thinking.

William Graham Sumner (1840-1910) and John Dewey (1859-1952) are credited with the first major influences on the modern concept of critical thinking during the 20th century (Foundation for Critical Thinking, 2009; Gordon, 2000; Simpson & Courtney, 2002). In his study of the foundations of sociology and anthropology entitled *Folkways* (1906), Sumner described the tendency of educators to foster the uncritical function of indoctrination: “Schools make persons all on one pattern, an orthodoxy. School

education, unless it is regulated by the best knowledge and good sense, will produce men and women who are all of one pattern, as if turned on a lathe” (p. 630). Sumner then described what he termed “criticism”, an important component of education:

“Criticism is the examination and test of propositions of any kind which are offered for acceptance, in order to find out whether they correspond to reality or not. [...] It is a prime condition of human welfare that men and women should be trained in it. It is the only guarantee against delusion, deception, superstition, and misapprehension of ourselves and our earthly circumstances” (pp. 632-633).

Sumner supported the belief in the early 20th century that criticism as critical thinking was an extension of democraticization in education: “The critical habit of thought, if usual in a society, will pervade all of its mores, because it is a way of taking up the problems of life. Men educated in it cannot be stampeded by stump orators and are never deceived by dithyrambic oratory. Education in this critical faculty is the only education of which it can be truly said that it makes good citizens” (p.633). Sumner believed, then, that criticism can become a personal habit which provides the individual with the ability to make decisions not swayed by others, and which allows for individuals to be contributing members of society. If this is adopted, society will benefit.

Dewey, in his works *How we think* (1910) and *Democracy and Education* (1916) supported Sumner’s conclusions. Dewey proposed that critical thinking involves the suspension of judgment along with the suspension of skepticism (Simpson & Courtney, 2002). Dewey coined the term “reflective thought” which he described as “Active, persistent, and careful consideration of any belief or supposed form of knowledge in the

light of the grounds that support it, and the further conclusions that support it” (Dewey, 1910, p. 6). In other words, *reflective thought* involves serious thinking about what one knows, in light of supportive information and the implications of the knowledge. This then, is the essence of critical thinking, according to Dewey. Being the first person to suggest that reflective thought was an essential component of critical thinking, he described *reflective thinking* as “the kind of thinking that consists in turning a subject over in the mind and giving it serious consecutive consideration (Dewey, 1933, p.66). As will be seen in later discussions of critical thinking theory, this definition, especially in its introduction of reflective thought and the examination of alternatives had an important impact on later understandings of critical thinking.

In the 1940’s Edward Glaser (1911-1993) became a prominent writer and researcher in the area of the modern understanding of critical thinking. His book, *An experiment in the development of critical thinking* (1941), led to the development of the Watson-Glaser Critical Thinking Appraisal (WGCTA) in 1964. The WGCTA was the first widely used tool to assess critical thinking ability (Paul, 1993). Watson and Glaser (1964) defined critical thinking as a:

Composite of attitudes, knowledge, and skills, including:

- 1) Attitudes of inquiry that involve an ability to recognize the existence of problems and an acceptance of the general need for evidence in support of what is asserted to be true.

2) Knowledge of the nature of valid inferences, abstractions, and generalizations in which the weight or accuracy of different kinds of evidence are logically determined.

3) Skills in employing and applying the above attitudes and knowledge. (p. 1)

According to Paul (1993), a current scholar in the field, it was not until the 1980s that critical thinking became an important component and focus in education. During the 1980's, education leaders began advocating for educational reform that fostered "cognitive skills and habits of inquiry associated with critical thinking" (Facione, 1990, p.1). The critical thinking movement in education in the U.S. gained enough momentum during the late 1980s and early 1990s such that critical thinking became evident in several of the objectives described in the National Education Panel report of 1993 (Paul, 1993, p. 38). These objectives included:

- The percentage of students who demonstrate the ability to reason, solve problems, apply knowledge, and write and communicate effectively will increase substantially.
- The proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems will increase substantially. (National Education Goals Panel, 1993)

Since that time, critical thinking has become widely researched and written about in education and other disciplines.

Critical Thinking Definitions:

Many have described different facets of the concept of critical thinking over the last twenty years. Four theorists are prominent and continue to research and write about the importance and characteristics of critical thinking: Ennis, Paul, Barnett, and Facione. Each theorist's description will be explored identifying how their perspective contributes to an understanding of critical thinking.

Robert Ennis.

Robert Ennis, Professor of Education at the University of Illinois, has been writing about critical thinking since the 1960's. He described critical thinking as "practical reflective thinking that is focused on deciding what to believe or do" (Ennis, 1987, p. 10). He was the first to identify critical thinking skills and critical thinking dispositions as separate but dependent concepts. This distinction between skills and dispositions would later be adopted by the American Philosophical Association in its 1990 definition, which will be explored below. Based on Bloom's highest levels of thinking of analysis, synthesis, and evaluation, Ennis developed a taxonomy of skills and dispositions that he believed were essential for understanding critical thinking.

A second dimension of the concept of critical thinking described by Ellis relates to critical thinking as a reflective process, not unlike Dewey's early conceptualization. Ellis (2004) wrote:

Critical thinking is here assumed to be reasonable reflective thinking focused on deciding what to believe or do[...] relevant not only to the formation and checking of beliefs, but also to deciding upon and evaluating actions. It involves

creative activities such as formulating hypotheses, plans, and counterexamples; planning experiments; and seeing alternatives. Furthermore critical thinking is reflective – and reasonable (para 1).

Richard Paul.

Richard Paul is an education philosopher, currently the Director of Research and Professional Development at the Center for Critical Thinking in California, who has written extensively about critical thinking. Paul emphasized thinking for the purpose of self-improvement and the improvement of the quality of thinking. He wrote that critical thinking “is thinking about your thinking while you think in order to make your thinking better” (1993, p. 91). Paul further described the critical thinker as “thinking with the awareness of the systematic nature of high quality thought and is continually checking upon himself or herself – striving to improve the quality of thinking” (p. 20). In other words, Paul believed critical thinking had both content and process elements, requiring excellence in each. Paul currently serves as the Director of Research and Professional Development at the Center for Critical Thinking, an organization that seeks to improve education and society through the emphasis on critical thinking. Paul’s description of critical thinking include several important assumptions: (a) involves self-improvement; (b) the quality of thinking affects the quality of our lives; (c) everyone can learn how to improve the quality of their thinking; and (d) the underlying goal of education is to help students improve their thinking (1993, p. 20). The emphasis on critical thinking as improving the quality of one’s thinking is an important contribution to understanding

critical thinking. Paul also contributed to the emphasis on critical thinking as an essential goal of the education process.

Peter Facione and the American Philosophical Association.

Peter Facione is an education philosopher who has been researching critical thinking since the 1960's. Because of the multiplicity of descriptions of critical thinking by 1990, the American Philosophical Association invited Facione to serve as the principal investigator for a systematic inquiry of the description and assessment of critical thinking. Forty-six experts from a variety of scholarly disciplines in the humanities, sciences, social sciences, and education from the United States and Canada participated in this study (Facione, 2010). This panel of experts included Ennis and Paul in the development of the resulting consensus paper. (Simpson & Courtney, 2002)

Using the Delphi technique, critical thinking experts developed a consensus statement to articulate a conceptualization of critical thinking in two dimensions: 1) cognitive skills; and 2) affective dispositions. In this consensus statement, critical thinking was broadly defined as:

[...] purposeful, self-regulatory judgment, which results in interpretation, analysis, evaluation, and inference, as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based. CT is essential as a tool of inquiry. As such, CT is a liberating force in education and a powerful resource in one's personal and civic life. While not synonymous with good thinking, CT is a pervasive and self-rectifying human phenomenon. The ideal critical thinker is a habitually inquisitive, well-informed,

trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. (Facione, 1990, p. 2)

Beyond a consensus definition of critical thinking, a number of other outcomes emerged from the two-and-a-half year research process. A number of recommendations were made regarding the need for ongoing assessment of critical thinking in both K-12 education and college education. In addition, this study formed the basis for the development of the now internationally used California Critical Thinking Dispositions Inventory (CCTDI) as well as the California Critical Thinking Skills Test (CCTST) (Facione, 2010).

The panel believed that critical thinking is as important as reading and writing. Critical thinking, they concluded is one of many types of “closely related forms of higher-order thinking, along with, for example problem-solving, decision making, and creative thinking” (Facione, 1990, p. 13). In acknowledging the similarity of these concepts, the researchers also identified the concern that the overlaps and differences in types of thinking had yet to be determined.

The panel identified and described six core critical thinking skills that included: (1) interpretation of the meaning of situations, data, events, experiences, beliefs or criteria; (2) analysis to identify inferences and relationships; (3) evaluation of the

credibility of statements or other descriptions; (4) inferences and the drawing of reasonable conclusions; (5) explanation of one's reasoning; and (6) self-regulation or self-consciously monitoring one's own cognitive activities (Facione, 1990, pp. 13-19). Facione indicated that proficiency in these skills was indicative of being adept at critical thinking. The panelists did not, however, believe that a person needed to be adept at every skill in order to be perceived as having critical thinking ability (p. 8).

Critical thinking dispositions were defined as a "critical spirit, a probing inquisitiveness, a keenness of mind, a zealous dedication to reason, and a hunger or eagerness for reliable information [...] the affective dispositions are necessary for the CT skills identified to take root and to flourish for students." (Facione, 1990, p. 20) Twelve affective dispositions were identified including:

- 1) inquisitiveness to a wide range of ideas;
- 2) concern to become and remain well informed;
- 3) alertness to opportunities to use critical thinking;
- 4) trust in the processes of reasoned inquiry;
- 5) self-confidence in one's own ability to reason;
- 6) open-mindedness regarding divergent world views;
- 7) flexibility in considering alternatives and opinions;
- 8) understanding of the opinions of other people;
- 9) fair-mindedness in appraising reasoning;
- 10) honesty in facing one's own biases, prejudices, stereotypes, or egocentric tendencies;

11) prudence in suspending, making or altering judgments;

12) willingness to reconsider and revise views where honest reflection

suggests that change is warranted (Facione, 1990, p. 25; Facione, 2010, p.

10)

Facione (2010) characterized critical thinking as an interplay between skills and dispositions. It involves both one's cognitive abilities and how one approaches life in general. Without the dispositions, the skills would not be properly utilized. The depiction of critical thinking developed by the Delphi panel has served as a benchmark for a number of years in both the education and nursing professions. In 1994, the National Center for Higher Education, Teaching, Learning and Assessment at Pennsylvania State University undertook a validation study of the APA consensus document. Through a replication of the 1990 APA Delphi research, 200 policy-makers, employers, and faculty members affirmed the APA document as accurately depicting the general understanding of critical thinking (Facione, 2010, p. 5).

Ronald Barnett.

While not a participant in the U.S. discussions describing critical thinking, Ronald Barnett, an education professor from the University of London, has been influential in similar conversations in the United Kingdom. In his 1997 book, *Higher education: A critical business*, Barnett presented a very different description of critical thinking, postulating that critical thinking, as a Western concept, was being described too narrowly. He presented a broader concept of critical thinking, labeled as "criticality". *Criticality* was described as a multidimensional phenomenon that goes beyond individual

decision-making based on knowledge, to include self-reflection and action. He characterized *criticality* comprising three domains of formal knowledge, self, and the world. Barnett defined these three domains as:

- Propositions, ideas and theories, especially as they are proffered in the world of systematic knowledge (CT1), that is demonstrated in critical reasoning;
- The internal world, that is oneself (CT2), a form of critical thought that is demonstrated in critical self-reflection;
- The external world (CT3), a form of critical thought that is demonstrated in critical action (1997, p. 65).

Illustrated as three overlapping circles, Barnett hypothesized that the point in which these three domains overlap and become fully utilized, is called the “critical person”. This *critical person* is “a durable self with a critical disposition integrated across all three domains” (p. 105). For Barnett, a critical person involves the full person, the kind of person higher education strives to develop.

In addition to the three domains, Barnett (1997) described four increasing levels of criticality: critical thinking skills, reflexivity, refashioning of traditions, and transformatory critique (p. 103). The first, *critical thinking skills*, is a collection of cognitive skills, usually seen as problem-solving in nature. This corresponds with the critical thinking skills of the 1990 APA characterization, where critical thinking is understood as a cognitive skill, and a process of evaluation with an orientation toward an outcome. These skills often are mastered within a specific discipline or field of knowledge.

The second level, *reflexivity*, is the capacity to reflect critically one's understanding of a phenomenon, idea, or situation. An individual, in Barnett's case a student, when able to utilize reflexivity is able to question knowledge imparted by teachers, but also is able to question one's own beliefs and knowledge.

Barnett's third level, *critical thought* or *refashioning of traditions* comprises the interchange and debates within a discipline or intellectual field. It involves the unpacking of theories or assumptions within a discipline, toward a different understanding of the world.

The fourth and highest level, *transformative critique*, is not well defined by Barnett, but involves a significant reshaping of disciplines, self, or social structures. Different from the third level which involves identifying new understandings, the fourth level involves the use of critical thought to implement radical change. Based on this multidimensional model, Barnett identified specific ways in which the levels of critical thinking were manifested in each of the three domains as illustrated in Table 1.

Barnett believed that higher education incorporating this multidimensional nature of critical thinking is necessary to meet the needs of students in the 21st century: "If higher education does not have and does not practice a proper conception of critical being, it will have little or no prospect of playing its full part in the continuing reshaping of modern society" (p. 7). While Barnett presents a unique and interesting model for critical thinking, few educational research studies could be found that utilized his model. As will be discussed more fully later, Jones (2005) utilized the Barnett model in a qualitative study examining the critical thinking understanding of Chinese international

Table 1
Barnett's Depiction of Levels, Domains, and Forms of Critical Being

<i>Levels of criticality</i>	<i>Domains</i>		
	<i>Knowledge</i>	<i>Self</i>	<i>World</i>
4. Transformatory critique	Knowledge critique	Reconstruction of self	Critique-in-action (collective reconstruction of world)
3. Refashioning of traditions	Critical thought (malleable traditions of thought)	Development of self within traditions	Mutual understanding and development of traditions
2. Reflexivity	Critical thinking (reflection on one's understanding)	Self-reflection (reflection on one's own projects)	Reflective practice ('metacompetence', 'adaptability', 'flexibility')
1. Critical skills	Discipline-specific critical thinking skills	Self-monitoring to given standards and norms	Problem-solving (means-end instrumentalism)
<i>Forms of criticality</i>	<i>Critical reason</i>	<i>Critical self-reflection</i>	<i>Critical action</i>

Note: Adapted from *Higher Education: A Critical Business* by R. Barnett p. 103.
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graduate economics students at a university in Australia. Ford and Profetto-McGrath (1994) proposed a model for teaching critical thinking in nursing curriculum that depicts critical thinking as a function of knowledge and critical reflection resulting in some action. These three elements are defined very similarly to Barnett's model. No research

studies could be found in nursing in which either the Barnett or Ford and Profetto-McGrath model was used.

Barnett's model forms the basis of the general understanding of critical thinking used in this study as it captures the various conceptualizations of the APA Delphi study. His first domain of critical thinking is consistent with the critical skills described in the APA study, while the domains of self and the world, along with the overlapping concept of critical person reflect the critical dispositions of the APA study. Barnett's model, however, illustrates the concept of critical thinking in a more visual, person-focused, and holistic manner by describing critical thinking at multiple levels. Barnett's model is not sufficiently fine tuned to allow examination of the complex nature of nursing, especially within the first level of critical thinking. For that detail, it is important to see how nursing scholars have conceptualized critical thinking.

Critical Thinking Development in Nursing

The emergence of critical thinking as a value in Nursing education and practice mirrors the focus on critical thinking in the rest of the academic environment (Jones & Brown, 1991). According to Benner, Hughes, and Sutphen (2008) critical thinking has been emphasized as an essential nursing skill for more than 50 years. There is, however, little agreement in Nursing about a unified definition of critical thinking.

Early descriptions of critical thinking

In a historical review of nursing education literature from 1895 to the 1930's, Hanson (1991) found that critical thinking emerged as a core goal of what was termed "liberal nursing education" in the U.S. during the 1920's. In her review, Hanson quoted a

nursing professor by the name of Urch who spoke at the 1932 National League of Nursing in Education convention on the need to admit a higher quality of student “[...] with the innate capacity to learn how to solve problems, make judgments, and assume responsibilities and risks of acting on their own judgments.” (Hanson, 1991, p. 346) While Urch did not specifically identify these qualities as critical thinking, the concepts of making judgments and assuming responsibilities mirrors the description of critical thinking by the APA Delphi panel of experts in 1990. Her statement of “innate capacity”, however, runs counter to the works cited previously by other scholars.

Hanson identified one specific definition of critical thinking in an article by Beck in the 1934 American Journal of Nursing. Beck described critical thinking as “a scientific attitude, an attribute that nursing needed to develop. A person with a scientific attitude was open minded, desirous to know the truth; observant, cautious, and independent in thinking; holding only to scientific convictions as tentative knowledge waiting for further explanation” (as cited in Hanson, 1991, p. 347). Critical thinking, then, was understood as a personal attribute that affected one’s ability to be a good nurse.

According to Scheffer and Rubenfeld (2000), by the 1970s critical thinking was characterized in the Nursing literature as an intellectual skill, part of a “repertoire of skills that focused on both intellectual and cognitive skills of thinking” (p. 323). Matthews and Gaul (1979) defined critical thinking as “an attitude of inquiry which involves the use of facts, principles, theories, abstractions, deductions, interpretations and evaluation of arguments” (p. 19). Adams (1999) reported that critical thinking increased in importance

by the 1980s, evidenced by the doubling of nursing research studies related to critical thinking since the 1960s.

In the late 1980s and early 1990s, questions were raised about the need for a new understanding of critical thinking. In 1986, the Society of Research in Nursing Education identified limitations with current nursing education's ability to meet the rapid changes in health care needs of society both in the U.S. and internationally. Based on this need for change, Ford and Profetto-McGrath (1994) called for a shift in nursing curriculum that involved a new understanding of critical thinking, moving from critical thinking as problem-solving via the nursing process, to critical thinking as a process "in which knowledge and action are dialectically related through the mediation of critical reflection" (p. 342). There remained, however, much disagreement about the definition of critical thinking.

Jones and Brown (1991) surveyed deans and chairs of National League of Nursing (NLN) accredited schools of nursing about their understanding of critical thinking and how it was operationalized in their nursing programs. They concluded that "the predominant model in baccalaureate nursing education in the United States is predicated on critical thinking as a problem-solving activity, using principles of objectivity, prediction, and control" (p. 532).

National League of Nursing and the American Association of Colleges of Nursing.

Subsequent to the 1990 APA study, new standards of nursing accreditation were implemented in 1993 by the NLN Council of Baccalaureate and Higher Degree

Programs. Outcome criteria, required to be measured in order to maintain accreditation, were established, one of which involved the measuring of critical thinking. The NLN standards mandated that nursing programs needed to do three things: 1) define critical thinking and how it was applied in their program; 2) identify rationale and methods for evaluating and measuring critical thinking; and 3) report critical thinking outcome data and its use in the development, maintenance, and revision of their academic programs (Boychuk Duchscher, 1999; Videbeck, 1997a & 1997b). In the 2002 NLN accreditation manual, critical thinking was defined as:

The deliberate nonlinear process of collecting, interpreting, analyzing, drawing conclusions about, presenting, and evaluating information that is both factually and belief based. This is demonstrated in nursing by clinical judgment, which includes ethical, diagnostic, and therapeutic dimensions and research. (NLNAC, 2002, p. 8)

Interestingly, in the publication of the 2008 NLN standards, the critical thinking outcome criteria had been removed, however, no information could be found regarding the reason for the removal.

Following the lead of NLN, the American Association of Colleges of Nursing (AACN) included critical thinking as a core competency of BSN students in their 1998 *Essentials of Baccalaureate Nursing* accreditation standards. AACN defined critical thinking as “underlying independent and interdependent decision-making [...] includes questioning, analysis, synthesis, interpretation, inference, inductive and deductive reasoning, intuition, application, and creativity” (p. 9). While similar to the NLN

definition, AACN seems to draw more closely to the 1990 APA Delphi consensus statement by including synthesis, intuition, and inductive and deductive reasoning in their definition. Those core competencies and definitions remain in current AACN standards, although, in the newer standards (2008) greater emphasis was placed on clinical judgment and patient outcomes as evidence of its application rather than on the process of critical thinking. (AACN, 2008)

Conflicting definitions in nursing.

By the late 1990's a myriad of research and review articles had been published in the nursing literature about the application and measurement of critical thinking in students and nurses. Interestingly, no consistent definition of critical thinking had emerged in nursing; rather, a wide range of definitions and conceptualizations emerged in the literature (Walsh & Seldomridge, 2005). Three research studies reflect this inability within the nursing discipline to conceptualize a particular understanding of critical thinking.

Videbeck (1997a) surveyed 55 nursing programs to ascertain the prevailing practices of BSN programs with respect to the NLN outcome criteria related to critical thinking. Videbeck found 10 different definitions of critical thinking being utilized. When characterized more specifically, she found that 43 programs utilized a definition that included both cognitive and affective characteristics, while 12 programs utilized a definition that was primarily cognitive in nature. In addition, she found that schools used a variety of measurement tools, including a number of standardized tests as well as some locally developed instruments, to assess student critical thinking abilities.

Adams (1999) performed a meta-analysis of 20 nursing research studies published between 1975 and 1995 to discern whether nursing education affected critical thinking skills of nursing students. She found no consistent evidence that nursing education contributed to increased critical thinking abilities in nursing students based on the contradictory results among studies. Some researchers had compared critical thinking results over time, others compared institutions, while others compared students from different types of programs. Adams conjectured that the primary reason for these contradictory results stemmed from “the lack of a concise, clearly understood definition of critical thinking” (p. 117). She raised two issues based on this lack of a clear definition: 1) whether critical thinking is related to decision-making, creative thinking and clinical reasoning; and 2) tools to measure critical thinking specifically in the nursing environment had not been well developed. She postulated that general critical thinking abilities are not the same abilities as those used by nursing students and RNs, due to the lack of real life situations in general critical thinking measures (p. 118).

Based on the concern of a lack of consensus among nurse educators regarding the definition of critical thinking, Gordon (2000) surveyed 201 nursing faculty from 83 different BSN programs in the Midwest to identify their perceptions of critical thinking. She also explored whether nursing professionals agreed with the 1990 APA Delphi description of critical thinking as a combination of skills and dispositions. Her results demonstrated that faculty partially agreed with the skills and disposition characterization of the Delphi consensus statement, but found that nurse educators were more likely to include skills such as empathizing, communicating, speaking and sensing than the non-

nurse experts in the APA panel. The nurse faculty surveyed also identified skills such as use of the nursing process, decision-making, and clinical reasoning as reflective of critical thinking (p. 346). Gordon raised the concern that in order to gain understanding about critical thinking from non-nursing experts, the nursing profession needed to develop an understanding of critical thinking consistent with these experts.

Scheffer and Rubenfeld consensus statement.

The most definitive work to develop a consistent understanding and remove the “ongoing confusion” (p. 352) regarding critical thinking was carried out by Scheffer and Rubenfeld (2000). Using the Delphi technique, Scheffer and Rubenfeld set out to develop a consensus statement on critical thinking in nursing. The panel was made up of 86 international nurse experts from education, practice, and research with diverse gender, geographic, cultural and practice characteristics. Most of the participants had published literature related to critical thinking. The Delphi technique was conducted in five iterations over a four year period, focusing on a comprehensive understanding of critical thinking reflecting the views of a diverse group of nursing experts. Peter Facione, primary investigator and author of the 1990 APA consensus statement, served an important role in the process. Questions in the first several rounds of the Scheffer and Rubenfeld study reflected the wording of the APA statement. Two assumptions were made at the beginning of the study that served as filters for participants: “1) Critical thinking in nursing can and should be defined; and 2) critical thinking in nursing can be taught, learned, and evaluated” (p. 355). The understanding of critical thinking as being

taught reflected a significant change from the 1932 NLN statement that critical thinking was innate.

As a result of the project 88.2% of the participants agreed with the following consensus statement:

Critical thinking in nursing is an essential component of professional accountability and quality nursing care. Critical thinkers in nursing exhibit these habits of mind: confidence, contextual perspective, creativity, flexibility, inquisitiveness, intellectual integrity, intuition, open-mindedness, perseverance, and reflection. Critical thinkers in nursing practice the cognitive skills of analyzing, applying standards, discriminating, information seeking, logical reasoning, predicting, and transforming knowledge (Scheffer & Rubenfeld, 2000, p.357).

Through the Delphi technique, Scheffer and Rubenfeld were also able to obtain consensus from the participants on definitions for each of the *habits of the mind* as well as the *skills*. These are provided in Table 2.

Scheffer and Rubenfeld (2000) concluded that the nursing-developed consensus statement reflected the affective and cognitive components of the 1990 APA statement through their categories of habits of the mind and cognitive skills. Compared to the 1990 statement, however, nursing experts in 2000 identified two additional affective components: creativity and intuition. They further concluded that a common understanding and language regarding critical thinking was available for educators to

Table 2

Consensus Study Definitions of Habits of the Mind and Skills of Critical Thinking in Nursing

Habits of the Mind
<i>Confidence</i> : Assurance of one's reasoning abilities
<i>Contextual perspective</i> : Considerate of the whole situation, including relationships, background and environment, relevant to some happening.
<i>Creativity</i> : Intellectual inventiveness used to generate, discover, or restructure ideas; imagining alternatives.
<i>Flexibility</i> : Capacity to adapt, accommodate, modify or change thoughts, ideas, and behaviors.
<i>Inquisitiveness</i> : An eagerness to know by seeking knowledge and understanding through observation and thoughtful questioning in order to explore possibilities and alternatives.
<i>Intellectual integrity</i> : Seeking the truth through sincere, honest processes, even if the results are contrary to one's assumptions and beliefs.
<i>Intuition</i> : Insightful sense of knowing without conscious use of reason.
<i>Open-mindedness</i> : A viewpoint characterized by being receptive to divergent views and sensitive to one's biases.
<i>Perseverance</i> : Pursuit of a course with determination to overcome obstacles.
<i>Reflection</i> : Contemplation upon a subject, especially one's assumptions and thinking for the purposes of deeper understanding and self-evaluation.
Skills
<i>Analyzing</i> : Separating or breaking a whole into parts to discover their nature, function and relationships.
<i>Applying standards</i> : Judging according to established personal, professional or social rules or criteria.
<i>Discriminating</i> : Recognizing differences and similarities among things or situations and distinguishing carefully as to category or rank.
<i>Information seeking</i> : Searching for evidence, facts or knowledge by identifying relevant sources and gathering objective, subjective, historical, and current data from those sources.
<i>Logical reasoning</i> : Drawing inferences or conclusions that are supported in or justified by evidence.
<i>Predicting</i> : Envisioning a plan and its consequences.
<i>Transforming knowledge</i> : Changing or converting the condition, nature, form, or function of concepts among contexts.
<i>Note</i> : Adapted from: "A consensus statement on critical thinking in nursing," by B.K. Scheffer and M.G. Rubenfeld, 2000, <i>Journal of Nursing Education</i> , 39, p. 358.

design learning activities, practitioners to evaluate skills, and researchers to develop instruments for measurement.

In retrospect, whether the consensus statement represented a significant contribution is questionable. Tanner (2005) stated that while the consensus statement “was an important, beginning step in providing a discipline-specific perspective on critical thinking” (p. 47), no research studies had been published or instruments developed in the five years subsequent to the statement. In a review of the literature after the 2000 consensus statement, Walsh and Seldomridge (2005) found that research attention shifted to evaluating measurement tools and utilization of those tools with students.

While the Scheffer and Rubenfeld (2000) model has its limitations and has rarely been used or further studied, it was used as the conceptual framework for this study, in conjunction with Barnett’s (1997) conceptualization as described earlier. It also closely reflects the 1990 APA model from other disciplines in that both have an affective as well as a cognitive component. In addition, the APA model has been used in the creation of several measurement instruments including the CCTDI and CCTST which has been used extensively in the nursing literature. The Scheffer and Rubenfeld consensus model adds the discipline-specific values lacking in the Barnett model, but add an additional level of holism to the multidimensional Barnett model.

Clinical reasoning.

Over the last ten years, many of the authors who have addressed critical thinking in nursing have included the dimension of clinical reasoning or clinical judgment as

different from critical thinking. While some described clinical reasoning as evidence of critical thinking (Adams, 1999; Walsh & Seldomridge, 2005), others distinguished clinical reasoning as different from critical thinking (Benner, Hughes, & Sutphen, 2008; Haffer & Raingruber, 1998; Simpson & Courtney, 2002; Tanner, 2005). Simpson and Courtney stated that “clinical reasoning involves actions, evaluations and judgments that contribute to the achievement of a desired clinical outcome. Clinical reasoning does embrace concepts of critical thinking. However, critical thinking aims to raise questions and critique solutions and is not centered on seeking an answer” (p. 94). In an editorial column to the *Journal of Nursing Education* based on several studies demonstrating no consistent relationship between critical thinking and clinical judgment, Tanner (2005) concluded that: “critical thinking and clinical thinking are different constructs, and the evidence does not support a relationship between these skills” (p. 48). Benner, Sutphen, Leonard, and Day (2010) described critical thinking in terms of decontextualized reasoning and decision-making, while clinical reasoning is more contextualized in a rapidly changing clinical situation. (p. 85)

The focus of this study is evidence of critical thinking by international nursing students in both academic and clinical settings. For that reason, clinical reasoning will not be addressed as a distinct concept. Further, in the reporting of the 1990 APA Delphi study, Facione (1990) stated that not all elements of the identified critical thinking skills and dispositions needed to be evident for an individual to be considered a critical thinker. Scheffer and Rubenfeld (2000) did not address this issue in their report. Given that Facione was an important member of the Nursing consensus group, however, it could be

conjectured that a similar assumption was present. Based on this assumption, and on closer examination of the Nursing consensus definitions of skills and habits of the mind, there appear to be items which would be utilized in the clinical, contextualized, setting. Thus, the frameworks used in this study incorporated both academic and clinical uses of critical thinking.

Research Related to Critical Thinking and International Students

In this section, research studies related to critical thinking of international students in general, as well as international nursing students specifically will be examined. While a significant amount of research has been done in terms of critical thinking and college students, very few researchers have focused on international students and the potential differences among cultural and national groups (Facione & Facione, 1997). Rarely investigating the experience of international students in the U.S., most of the research involving critical thinking and international students centers on college students in their non-Western native countries, or on students from Asian countries who have traveled to Australia for their college education.

In review, the research related to critical thinking and college students in their non-Western native countries are presented, then information about non-nursing international students from non-Western countries who travel to Western countries for college, and then nursing students from non-Western countries who attend college in Western countries are examined. Because most of the studies lacked random selection and were focused on specific nationalities, it is difficult to generalize findings across all international students.

Literature was identified by searching a number of databases; search terms included international student, foreign student, English-as-a second-language (ESL), critical thinking, thinking, college student, and critical reasoning. Databases utilized included Academic Search Complete, CINAHL, Medline, Education Research, ERIC, PsychInfo, Proquest, Dissertation Abstracts International, and JSTOR.

As mentioned in Chapter 1, it is important to be clear about the differentiation of Western versus non-Western. Tweed and Lehman (2002) stated the term *Western* can be problematic as a cultural label because it could be misunderstood to denote the entire Western hemisphere. Western actually refers to those cultures where English is the primary language in an ethnic group (e.g. Australia, Canada, United Kingdom and U.S.). Durkin (2008) clarified the term Western further by stating that it involves more than just language, it involves countries who share the Socratic tradition of thought and practice, such as countries of Europe, North America, Australia, and New Zealand. Socratic tradition in thinking involves an emphasis on questioning, evaluating, generating knowledge from within oneself, focusing on error to evoke doubt, and searching for knowledge as a goal of learning (Tweed & Lehman, 2002).

Critical Thinking of Non-Western Students in Their Native Country

Most of the research involving college students in non-Western countries studied Asian students in their native countries such as China, Korea, Indonesia, Hong Kong, and Taiwan. These authors demonstrated that the critical thinking skills of non-Western college students were weaker than Western college students. Only two studies could be identified in the literature search related to critical thinking and African students in their

native country. Studying the impact of a mentoring system on critical thinking abilities of Asian students enrolled in an online course, Chiu (2009) concluded that the lower critical thinking skills of Asian students resulted from the student having been educated in a Confucian tradition: “Many of the practices associated with the West with the nurturing of critical thinking are alien to the norms which these students have been accustomed” (p. 42). These differences in critical thinking practices are illustrated in the following studies.

Davidson and Dunham (1996) studied first year college students at a private two-year women’s college in Japan who were enrolled in an English language course. The purpose of the study was to determine if students exposed to critical thinking training embedded into an English course would demonstrate improved critical thinking scores by the end of the semester. Half of the group had intentional critical thinking instruction embedded into their English course, while half of the group had the traditional English course as taught at that university which involved no intentional critical thinking instruction. Through a quasi-experimental design, the Ennis-Weis Critical Thinking test was administered to 36 students at the end of the semester. The Ennis-Weis test is an essay test with eight paragraphs that elaborate an argument which commits a variety of common reasoning fallacies. Those taking the examination were to judge the thinking of each paragraph and evaluate the strength of the argument as a whole. No pre-test was administered, because as the authors pointed out, Ennis and Weis had demonstrated that the pretest is not necessary as long as a control group is utilized (p.6). Tests were scored blindly and independently by the two researchers.

Means of the total scores of the treatment group were found to be significantly higher than those in the control group based on using a t-test for comparison (treatment group $\mu=6.6$; control group $\mu = 0.6$; $t(27.72) = 4.9$; $p \leq .000$), indicating a greater use of critical thinking skills. To assure that the difference in scores was related to baseline English proficiency, Chi-square analyses were run comparing English proficiency levels between the two groups. The researchers found no relationship between English proficiency and the group with which the students were assigned ($\chi^2(2, n=36) = 3.204$, $p = .202$). Davidson and Dunham concluded that, controlling for English proficiency, critical thinking skills can be taught as part of an ESL course. Citing similar research with freshman college students by Hatcher (1996) at Baker University in California, Davidson and Dunham reported that Baker freshman had test scores twice as high at the end of the semester as compared to Japanese students. They postulated that the lower Japanese scores were based on the lack of emphasis on critical debate and evaluation of reasoning within the Japanese educational system.

Several concerns arise from review of this research. First, the low number of participants prevents statistical significance. Second, the researchers identified that some of the questions on the Ennis-Weis Critical Thinking test may not have been socio-culturally congruent with the Japanese student's own experience. Test questions that involved how to park a car would have been difficult for Japanese college students given an overall lack of experience with driving. Third, the authors did not demonstrate that the Ennis-Weis test was suitable for college age students from non-Western countries. This study did demonstrate, however, that Western-style critical thinking can be taught

embedded in English language courses, and that weakness in critical thinking as measured in western-designed instruments may reflect cultural characteristics.

Bateingh and Zghoul (2006) administered the Cornell Critical Thinking test to a convenience sample of 50 graduate students enrolled in their second or third semester of a program for teachers at a Jordanian university teaching English as a foreign language. The Cornell test is a 52 item multiple-choice test intended to take approximately 50 minutes, used to measure deduction, semantics, credibility, induction, definition, and assumption of critical thinking (p.38). Each item has three options with one correct answer. Content validity for Jordanian students was obtained through review by a panel of Jordanian members of the Education and Education Psychology faculty at the university. The purpose of the study was to determine the level of critical thinking of Jordanian Teaching-English-as-First-Language (TEFL) students and assess their critical thinking skills controlled for age, gender, and GPA.

Bateineh and Zghoul found that 99% of the participants scored below a 22 ($\mu = 7.41$, S.D. 7.50, range 6.50 to 22), which was identified as less than a satisfactory critical thinking score. Only descriptive statistics were reported with no statistical comparative analysis. The authors conjectured that the lower scores resulted from the Jordanian educational system's emphasis on lecture as the primary means of instruction.

Employing a multitude of qualitative research methods including in-depth interviews, focus groups, and content analysis of student online postings throughout the semester, Chiu (2009) attempted to demonstrate how a "shepherding" method for mentoring Taiwanese students enrolled in an online English course at a university in

Taiwan could be used by faculty to develop critical thinking skills. Based on prior research, Chiu began with the assumption that Taiwanese students had low critical thinking skills due to cultural values and practices of what is termed the *Confucian Heritage Culture*. Social interactions during class and during online discussions throughout the semester provided the instructor the opportunity to model critical thinking skills by fostering debates and critiques of writing. While not identifying the method of qualitative data analysis, Chiu found that most students utilized the critical thinking skills of critique during online discussions, but would not express their opinions in face-to-face discussions. In addition, Chiu found that as the semester progressed, students were more likely to utilize critical thinking skills of clarification, identifying assumptions, supporting claims, and distinguishing facts from opinions. Chiu also found that the more affective support was provided by the instructor, the more a student demonstrated the ability and willingness to express their thoughts.

Using the term “thinking” instead of “critical thinking”, Zhang and Sternberg (2001) completed a series of eight studies with 3040 students from five universities: one in Hong Kong, one in the U.S. and three in China. Based on Sternberg’s general theory of thinking styles called the *Theory of Mental Self-government*, they examined the relationship between thinking styles, academic achievement, learning approaches, student demographic characteristics (age, gender, college major, and college level), and student self-esteem. While thinking is spoken about in general terms in Sternberg’s studies, much of the description of thinking in Sternberg’s theory reflects the characterizations of critical thinking in the 1990 APA consensus statement. Sternberg’s central premise is that

thinking styles are used in many settings including home, academia, and community, and that people need to govern or self-manage their activities by utilizing a variety of thinking styles dependent on the situation (p. 199).

For each of the eight studies, Zhang and Sternberg utilized three tools: the Thinking Styles Inventory (TSI) for evaluating thinking styles, the Study Process Questionnaire (SPQ) for studying learning approaches, and the Coopersmith Self-esteem Inventory (CSI). In addition, a demographic survey was used to capture other information about the student. All three instruments demonstrated significant psychometric analysis in studies with U.S. students prior to the series of studies completed by Zhang and Sternberg. In addition, all three instruments were translated into Chinese and back translated to assure accuracy of the translation.

Zhang and Sternberg (2001) found a number of relationships between the variables used. Thinking styles that facilitated academic achievement in Hong Kong students were “those that required conformity, orientation to a sense of order (e.g. hierarchical structures), and preference for working independently” (p. 208). Thinking styles that were negatively associated with academic achievement included those that allowed for self-direction, challenging of norms, and working in groups. In other words, thinking styles that had previously been associated with critical thinking in the literature were negatively associated with academic achievement in Hong Kong students. Interestingly, for Chinese students, this was not the case. Chinese students demonstrated a negative correlation ($p < .05$) between academic achievement and the executive thinking style of the Sternberg theory. Executive styles of learning involve students

utilizing set guidelines for thinking through problems and implementing thinking tasks. Zhang and Sternberg believed that this challenges the traditional view of Chinese students as conforming in their thinking processes (p. 210).

Zhang and Sternberg concluded that thinking styles are socialized and work differently across cultures, however, they did not examine exactly how thinking styles are influenced by cultural values. They called for further research to investigate the role of culture in thinking style development and utilization.

As mentioned previously, two studies were identified that involved the investigation of critical thinking within the African student population. Through a phenomenological approach, van Heerden (1995) interviewed native South African anthropology students enrolled at the University of South Africa (UNISA) to understand better student lives and the interaction of sociocultural, geographical, and environmental factors in the ability of students to succeed. Open-ended interviews lasting up to 12 hours were carried out with 35 students with diverse language, age, economic, occupational, and residence characteristics. In addition, written anthropology course assignments were analyzed taking note of the instructor comments that indicated student difficulties or struggles. Transcripts were analyzed and case studies were written on all of informants. One theme emerged related to critical thinking. Van Heerden ascertained that students consistently struggled with the “inability to approach, analyze, integrate and systematically present data, make application, distinguish between main and less important points” (p.60), qualities associated with our framework of critical thinking. He

concluded that these inabilities resulted from the type of teaching styles utilized in secondary schools throughout South Africa.

Grosser and Lombard (2008) investigated the critical thinking abilities and the relationship of critical thinking abilities to culture in a purposive sample of 114 first year university education majors enrolled at North-West University in South Africa. Students represented diverse cultural backgrounds including native black South Africans, white South African Afrikaans, and other western-educated Caucasians. The Watson-Glaser Critical Thinking Appraisal (WGCTA), (described earlier in this review), was administered to all students after a pilot study of 40 similar students determined that the instrument was appropriate and clear. Using a t-test for analysis, Grosser and Lombard found that students from traditional black South African cultures scored significantly lower than all white students ($t= 5.090$, $p < 0.01$). In addition, they found that both South African groups, that is both black South Africans and white Afrikaners, scored significantly lower than comparable students from a similar study performed in the U.S using the WGCTA, as well as scored lower than 12th grade high school students taking the WGCTA in the U.S. The authors were concerned that South African students were not even performing at the 12th grade level in relation to critical thinking skills. While critical thinking skills had become an important educational outcome in South Africa ten years prior to this study, Grosser and Lombard concluded that students continue to have comparably lower critical thinking scores due to a lack of opportunity for critical thinking in a teacher-centered educational system. They hypothesized that western concepts of

critical thinking are not compatible with the African cultural values of ubuntu, described as an interconnection between all people, practiced in South Africa.

Critical Thinking of Non-Western Nursing Students in Their Native Country

Because critical thinking has been recognized internationally as an important outcome of nursing education, a number of scholars evaluated the critical thinking levels of nursing students in non-Western countries. As with the non-nursing students studied, most of these studies were performed in Asian countries. None involved African nursing students. In all studies as described below however, critical thinking scores for non-Western students on standardized tests were significantly lower than scores for Western students. One problem in many of these studies of nursing students is the distribution of sample population over the entire four year academic career, not necessarily focusing on students in clinical experiences during the final two year period.

Shin, Lee, Ha, and Kim (2006) investigated the critical thinking dispositions of students enrolled in a BSN program in South Korea to see if there were differences as students progressed through four years of college. This longitudinal, non-experimental study started with 60 students but ended four years later with 32 students. Utilizing the California Critical Thinking Dispositions Inventory (CCTDI) developed by Facione, Facione, and Sanchez (1994), students completed the CCTDI at the end of each of their four years in college. The CCTDI is a Likert response-based test comprising 75 questions to measure the seven subscales of critical thinking disposition as identified in the 1990 APA Delphi study: open-mindedness, inquisitiveness, truth-seeking, analyticity, systematicity, self-confidence, and maturity.

For this study, the CCTDI was translated into Korean then reverse translated into English by bilingual professionals. The authors did not, however, report content validity or reliability for use with Korean students.

Shin, Lee, Ha, and Kim found that CCTDI scores improved as the students progressed over four years of college. Out of a total possible 450 points, the mean total scores were 289.78 for first year students, 295.31 for second year students, 298.34 for third year students, and 300.66 for fourth year students. A repeated measures analysis of variance (ANOVA) indicated a significant improvement in scores as the students progressed ($F = 7.54$, $p = .0001$). Facione, Facione, and Sanchez (1994) reported that total scores below 280 indicate a weak critical thinking disposition and scores above 350 indicate a strong disposition. The population of South Korean students studied, thus initially demonstrated a moderate disposition for critical thinking. Facione, Facione, and Sanchez also concluded, however, that the standard for each subscale should be above a score of 40 in order to indicate strong critical thinking disposition. Shin et al. reported that more than half of the mean subscale scores for all student groups did not reach this 40 score.

Shin, Lee, Ha, and Kim described the Korean educational environment as lacking tolerance for conflicting views, lacking an emphasis on individual decision-making abilities, being structured hierarchically, and utilizing a tradition of rote learning. Based on this understanding of cultural norms within the Korean society and educational environment, they concluded that the ambivalent results between subscale scores and total scores were based on a “product of cultural norms rather than evidence of lower

intellectual capacity” (p. 187). The researchers believed that the scores did not reflect an intelligence issue, rather a different social emphasis on problem solving and education. They rightly called for the development of critical instruments that are more congruent with Korean culture, or for a revision to the CCTDI, in order to more accurately ascertain the critical thinking skills and dispositions of Korean students.

Shin, Jung, Shin and Kim (2006) examined the critical thinking dispositions and skills of senior nursing students based on the type of nursing program in which the students were enrolled. Using a convenience sample of 305 nursing students from five Associate Degree, Baccalaureate degree and RN-to-BSN programs in South Korea, the researchers administered the CCTDI and the California Critical Thinking Skills Test (CCTST) during the students’ final semester of nursing education. The CCTST is a 34 item test that requires the students to choose one correct option from four possible answers. The test, developed by Facione in 1991 based on the 1990 APA Delphi study consensus statement, tests an individual’s cognitive ability to analyze, evaluate, infer, and inductively and deductively reason problems. Scores range from zero to 34 with higher scores reflecting stronger critical thinking skills. As with the study by Shin, Lee, Ha, and Kim (2006), the CCTST was translated into Korean, and then back translated into English to assure accuracy of the translation.

Mean total scores for the CCTDI and the CCTST for all participating students were well below the established means for the tests. The mean total score for the CCTDI was 263.4, with scores below 280 considered to be a demonstration of weak critical thinking disposition. The students’ CCTST mean total score was 11.36, falling short of

the established mean of 15.89, which has been identified as threshold for strong critical thinking skills. Using ANOVA, BSN students had significantly higher total scores in both tests than ADN and RN-to-BSN students (CCTDI: F 4.159, $p < 0.05$; CCTST: F 24.21, $p < 0.05$). The means for the BSN students, however, were still below the established means. Even though Cronbach's alpha coefficient was 0.70, the authors did not discuss the applicability for use in Korean culture. As with the previously mentioned study, the results were attributed to the differences in Korean educational and health care culture as compared to Western settings.

Zhang and Lambert (2008) found similar results in their assessment of the correlation of Learning Styles to critical thinking disposition of BSN students enrolled in two nursing programs in China. The authors identified that while there were a number of studies linking Western student learning styles to critical thinking, little research had evaluated this association in non-western settings. Using convenience sampling, the Chinese versions of the CCTDI and the Felder and Solomon *Index of Learning Styles* (ILS) were administered to 100 students evenly distributed over four years of school from two universities. The ILS measures students' preference for learning along four axes: sensing-intuitive, visual-verbal, active-reflective, and sequential-global. The Cronbach's alpha for the Korean version of the CCTDI was 0.71, similar to that reported in the Shin, Jung, Shin and Kim study.

In relation to critical thinking, and consistent with the other studies reviewed, students demonstrated significant weakness in their overall disposition toward critical thinking, with mean total scores of 272 (range 206 - 331), lower than the 280 score

established by Facione and Facione (1997). Interesting and unexpected, Zhang and Lambert found age ($r = -0.262$, $p < 0.01$) and academic year ($r = -.0317$, $p, 0.01$) were negatively correlated with total CCTDI scores. One would expect that as students progress academically and clinically, critical thinking scores would improve. The researchers attempted no rationale for these puzzling results. The study was limited by the convenience sample of students from two universities in one city in China.

Ip, Lee, Lee, Chau, Wootton and Chang (2000) found similar decreases in critical thinking disposition scores as students progressed academically in a nursing program. Exploring whether undergraduate nursing students at one university in Hong Kong displayed critical thinking dispositions, Ip et al. administered the CCTDI to 122 students spread over the first three years of nursing school. Only 4% of the students surveyed had attended upper level classes in which critical thinking was part of the pedagogy. Mean total scores were 269 for first year students, 270 for second year students, and 243 for third year students. ANOVA with post-hoc Tukey analysis showed no significant differences in scores between years of college except with third year students ($F 12.7$, $p < 0.01$). As with previous studies, Ip et al. conjectured that the model of education and cultural values in Hong Kong were reflective of CCTDI scores below the threshold of 280, which indicates weak critical thinking disposition. They did identify that the comparable scores from other studies were those of Western students, and are used as a baseline, may not be appropriate because the majority of Western baseline studies did not include nursing majors.

One final study of Asian nursing students was found. Tiwari, Avery and Lai (2003) compared the critical thinking dispositions of Hong Kong Chinese nursing students to Australian nursing students, each in their native country. The CCTDI Chinese version was given to a convenience sample of 360 Hong Kong nursing students and the CCTDI English version was given to a convenience sample of 330 Australian nursing students, from one university in each country. Student academic year was relatively evenly distributed over four years of college. For Hong Kong students, the total CCTDI mean score was 268.36; there was no positive disposition towards critical thinking. This compared to a total mean CCTDI score of 287.73 for Australian students. One-way ANOVA was completed both on the total scores as well as subscale scores. The authors found significant differences between Hong Kong and Australian students ($F(1, 382) = 52.13, p < 0.001$). Conjecturing that cultural practices may have an influence on critical thinking skills and dispositions, the authors called for qualitative research that provides a deeper understanding of what critical thinking entails in different cultures.

Two studies were identified during the literature search related to nursing students from other than Asian countries and critical thinking. One study examined nursing students in Puerto Rico while another examined nursing students in Saudi Arabia. While the CCTDI was used in only one of these studies, both studies found similar results to those discussed above in relation to Asian nursing students.

Ayala (1999) described the critical thinking skills of nursing students in six BSN programs in Puerto Rico. Utilizing the Watson-Glaser Critical Thinking Appraisal (WGCTA) Spanish version, a non-random convenience sample of 557 students from six

BSN programs were surveyed. The WGCTA is an 80 item multiple choice test with five subscales related to critical thinking skills: inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments. Ayala found that students from schools in Puerto Rico had significantly lower sub-scale scores than students from similar studies in the U.S. in which the WGCTA was used. Puerto Rican students had a mean score of 42.8 (range of 39.5 to 45) for the sample as compared to scores of 51 and 56 in two studies of U.S. nursing students ($p < 0.001$). While not statistically significant, Ayala also found that students in Puerto Rico who had higher levels of English knowledge scored higher than students with lower levels of English knowledge. This was an interesting finding given that the test was administered in Spanish. In contrast to studies discussed earlier, Ayala found that students in their third and fourth years of nursing school scored significantly higher in each of the five subscales than students in their second year of nursing school.

Suliman (2006) explored the critical thinking dispositions and learning styles of nursing students in Saudi Arabia comparing traditional BSN students with second-degree students in an accelerated program. Using the CCTDI, Suliman evaluated 130 students, 80 from a traditional BSN program and 50 from the accelerated program. Overall sample mean CCTDI scores for all students was 276.24, which was marginally lower than the standard of 280 set by Facione and Facione (1997). Accelerated students had an overall higher mean score ($\mu = 281.90$) than traditional students ($\mu = 272.85$) based on MANOVA ($F = 4.099$, $p = .0000$). Suliman identified that while the tests were administered in English rather than the students' native Arabic language, Cronbach's

alpha coefficient for this group was 0.85 as compared to 0.90 for the CCTDI in other studies. The author believed that language differences may have impacted student performance in regard to comprehension and interpretation.

Considering the research as described above in relation to non-Western students in their native country regardless of their academic major, three observations can be made. First, the vast majority of studies relate to Asian students. Second, when using quantitative critical thinking instruments, non-Western students scored lower than Western students in all cases. Third, researchers have concluded that instruments for measuring critical thinking developed with cultural sensitivity are lacking. All of the quantitative studies utilized instruments developed by Western scholars, often translated into other languages, but not necessarily reflecting non-Western cultural values. This may reflect Vandermensbrughe's (2004) assertion that critical thinking is a Western construct that reflects Western social values rather than teachable behaviors.

In the next section, research related to non-Western students studying in Western universities will be reviewed. In all cases, both nursing and non-nursing studies, qualitative rather than quantitative methods are used. Thus, some of the concerns raised by the previously studies research will be addressed.

Critical Thinking of Non-nursing International Students in Western Countries

A number of researchers have examined critical thinking of non-nursing students in Western universities. In this section these studies will be discussed. As mentioned previously, the vast majority of these studies are qualitative. While several researchers explored the ability to learn critical thinking, others measured critical thinking skills and

dispositions, while still others attempted to identify the characteristics of critical thinking used by international students.

Chiodo and Tsai (1995) attempted to ascertain the extent to which critical thinking was taught to Taiwanese students in their secondary educational programs before coming to the U.S. for a university education. Using convenience sampling, Chiodo and Tsai performed a single structured interview of 26 Taiwanese undergraduate and graduate students enrolled at several universities in Oklahoma. All students attended at least 12 years of schooling in Taiwan prior to coming to the U.S. Interviews were conducted in Chinese to eliminate problems related to English speaking skills. At the beginning of the interview, students were presented with a broad definition of critical thinking to make sure all students fully understood the topic. Responses were analyzed; however, no specific methodology for analysis was reported. Chiodo and Tsai found that 69% reported never having been taught critical thinking in their secondary education. The majority of those reporting this lack of education were undergraduate students. Given the date of this study, these results may not be useful at this time as during the 1990s, critical thinking was only reaching prominence as an important outcome in education in the U.S.

Pawloski and Danielson (1998) analyzed the level of critical thinking proficiency of first year students enrolled in a freshman level communication course at Creighton University in Nebraska. They administered the WGCTA tool to 220 students at the beginning and the end of the semester. Of the students who voluntarily participated in the study, approximately 50% of the students were freshman and 10% of the students were

international students. The forty items on the WGCTA were divided into two 20-question tests, with one test administered at the beginning of the semester and the other at the end of the semester. The authors did not report the method for deciding which questions were assigned to which test and whether content validity remained for the divided tests. At the beginning of the semester, Pawloski and Danielson found that national origin was significant related to critical thinking scores ($F(1,222) = 6.68, p = 0.01$) in that domestic students scored significantly higher ($\mu = 12.50$) than international students ($\mu = 10.73$) on the WGCTA. No results were reported related to scores at the end of the semester. In addition, the authors did not report the breakdown of countries of origin for the international students. This study is limited in its lack of reporting end of semester data, the possibility that the difference in scores might be related to the limited number of participants, the wide range of academic levels taking the test, and the lack of psychometric data of the split WGCTA test.

Jones (2005) explored the ways in which graduate level Chinese international students in an introductory macroeconomics course at a university in Australia adapted to a Western learning environment based on their ability to understand a critical thinking assignment. Barnett's (1997) multidimensional model of critical thinking was used as a basis for the design of the study. While the author did not report how long the Chinese students had been in school in Australia, four Chinese students and four Australian students participated in the study. Participants wrote a short essay based on a real world macroeconomics issue, and then viewed and critiqued another student's response. Using a semi-structured technique, following the peer critique Jones interviewed each student

regarding the purpose of the task, their thought processes in writing their own work, and how they understood their role in critiquing other student responses. In addition, the interview also explored the students' understanding of the meaning of critical thinking.

Using line coding, reading and rereading of the transcripts, Jones found little variation between the Chinese and Australian students in their perception of critical thinking, despite the Chinese students' lack of prior experience with critically analyzing others writing. Both Chinese and Australian students described critical thinking in terms of Barnett's first level of critical thinking, a set of skills and dispositions. This understanding of critical thinking had been taught in this particular course. Thus, Jones concluded that student understanding of the concept of critical thinking was limited by how the task was framed and introduced by faculty. In addition, Jones believed that Chinese students demonstrated positive adaptation to the Australian higher education system based on a similar perception of critical thinking. The Chinese students were found to have a stronger concern for maintaining balance and respect for relationships in their critiques. But Jones' conclusions do not preclude the existence of critical thinking, rather she identifies the students' priorities. The study was limited by the number of students as well as the use of exclusively Economics majors. In addition, the author did not identify how long the participants had been in Australia. The study is helpful in the author's utilization of the Barnett model as well as the utilization of interview questions related to student understanding of critical thinking and their thought processes.

Melles (2009) attempted to evaluate the impact of a sustained focus on critical thinking, language, and writing instruction on international students enrolled in a

graduate level engineering course at a university in Australia. The course was a discipline-specific course designed for students in which English was their second language. During the semester, there was a sustained critical thinking focus across five course assignments: three written assignments that included critical appraisal of literature related to a particular issue in engineering, one more extensive literature review, and an oral presentation of the literature review. Participants in the study, one hundred international students enrolled during four different semesters, were Masters level engineering students with English as their second language. The majority of the participants were from Asian countries, but several students came from Latin America and the Middle East. A five question survey was administered at the end of the semester that asked students to reflect on their writing, language, and ability to use critical thinking in their written assignments.

Several themes emerged from the analysis of the written assignments: 1) students were able to link critical thinking and writing as integrated processes; 2) students confirmed the relevance of critical thinking to engineering and saw critical thinking as a process for analyzing data and literature; and 3) students experienced difficulty with synthesizing and evaluating multiple sources, summarizing and paraphrasing, and applying theory to practice. Many students commented that their prior educational background and native cultural norms interfered with their ability to utilize critical thinking skills fully in their assignments.

Durkin (2008a & 2008b) explored the process by which Asian international students adopt or not adopt Western critical thinking methodologies. Three research questions framed her study:

- 1) What are the key differences in academic expectations between U.K. and East Asian cultures with specific reference to critical thinking?
- 2) What cultural influences facilitate or hinder the understanding of Western-style critical thinking?
- 3) How can the learning experience of East Asian students be described in terms of an adaptation process? (2008b, p. 39)

Using a grounded theory approach, Durkin interviewed students at two universities in the U.K. at which there were large numbers of Asian students as well as students at a university in China. Students were chosen who were in their fourth year of undergraduate education who planned to enroll in a master's program, and who had courses with a high focus on critical thinking and evaluative writing. A nonprobability sample of 42 East Asian students in the U.K. and 18 Chinese students at the university in China were utilized. Triangulation of perspective was attained by interviewing 16 professors and six native British students at the U.K. universities. All Asian students had to have sufficient competency in the English language in order to express their thoughts clearly in English during the interview.

Using three stages of analytical coding as defined by Glaser and Strauss, Durkin was able to develop a grounded theory which describes the adaptation journey of East Asian students (2008a), as well as developing a theory which describes the critical

thinking processes used by East Asian students (2008b). Durkin concluded that “the majority of Asian students interviewed reject full academic acculturation into Western norms of critical thinking” (2008b, p. 42). Using the understanding of critical thinking as described by Paul, Durkin characterized Western critical thinking as polarizing, linear, and argumentative.

Rather than adopting this method of critical thinking, Durkin theorized that the majority of East Asian students reject a full acculturation of Western critical thinking, but adopt what she termed a “Middle Way” that “synergizes those elements of Western academic norms that are perceived to be culturally acceptable with the traditional cultural academic values held by many East Asian students” (2008b, p. 42). The *Middle Way* model combines two different approaches to critical thinking including what Durkin termed “conciliatory dialogue and wrestling debate” (p. 47). The *Middle Way* method of critical thinking can be described as utilizing constructive criticism, dialogue, empathetic seeking of truth, indirect but sincere challenge, conciliatory reasoning and logic, and a focus on teamwork for problem solving (2008a, p. 20). The top priority for international students when involved with critical thinking is the maintenance of relationships and preserving the dignity of all participants.

Subsequent to the development of this theory, Durkin (2008a) also investigated the processes which East Asian students take in the adoption of this *Middle Way* while they are students in a Western setting. She developed a five step model from her interviews for this process that she labeled as “learning the ropes”, “battling the elements”, “becoming competent but not adventurous”, “developing expertise”, and “full

acculturation” (p. 19). She determined that students enter and exit the process at various points, however, none of the Asian students progressed to full acculturation, “not because they were unable to, but because they chose not to” (p. 23). All students who attained the third and fourth stages of her acculturation process model opted for the *Middle Way*. Students indicated that they chose the Middle Way, either because of the transient nature of their time in the U.K., their planning to return to Asia after completing education, or the belief there was no long term benefit to adopting a Western critical thinking style.

While this particular study did not focus on the acculturation process, Durkin’s grounded theory may be of assistance in a number of ways. Durkin’s assumptions about the difference between Western and non-Western critical thinking as well as her de-emphasis of Western methods as exclusively normative can be valuable as students are approached in this current study. In addition, her *Middle Way* model could be tested for transferability to international students other than Asian, as well as a basis for some interview questions.

Two studies were identified in which critical thinking of international students was not the central focus, however, analysis of data verified critical thinking issues as being important for international students. In both studies, data collection involved both international students and faculty of international students.

Lee and Carrasquillo (2006) attempted to identify and compare the perceptions of professors teaching Korean students with the perceptions of Korean students in regard to the cultural, educational, and language issues that contribute to academic difficulty for Korean students who attend a liberal arts college in the U.S. A 27 item Likert survey

created by the authors was distributed to faculty and Korean students, with 25 faculty and 21 students completing the survey voluntarily. Faculty participants were full-time, received their education in the U.S., and were teaching at least three Korean students at the time of the study. Korean student participants had been in the U.S. for less than three years, spoke Korean as their first language, and were born in Korea. In addition to the survey, follow-up interviews were held with each of the participants using a structured open-ended questionnaire to gather further information about student problem-solving skills, class participation, language preferences, and learning style preferences.

While the study did not exclusively measure critical thinking, based on the follow-up interviews, Lee and Carrasquillo found that 91% of the faculty and 64% of the students identified Korean students as not using critical reasoning methods in their problem-solving. The students indicated that they were more interested in learning facts and did not feel comfortable asking questions about information presented in class. Statistical analysis or descriptive statistics of the survey data were not presented, nor did the authors explicate how the survey questions related to the interview questions.

Robertson, Line, Jones, and Thomas (2000) assessed the culture of a university in Australia from the perception of international students as well as from the perception of faculty teaching international students. With three iterations using the Delphi technique, the researchers initially utilized 38 international students and 31 faculty. The number of participants dropped to 20 students and 26 faculty by the third iteration. The first iteration involved a mailed five question survey about the difficulties experienced by international students; the second iteration involved distilling the initial responses; and the third

iteration involved rating of the reasons for the difficulties. They authors did not identify the countries from which the students originated.

As with the study reported above, critical thinking was not the central focus, but emerged as an important result, at least from the faculty perspective. While students did not identify critical thinking as an important issue, they did report difficulty attempting to implement learning strategies other than memorization as one of their top ten issues. Other socio-cultural, economic, and emotional issues were rated by the students as more problematic than expanding students' repertoire of learning strategies. In contrast, faculty rated poor critical thinking and analysis as the second most important issue for international students. Related to critical thinking, faculty perceived that characteristics of international students included a reluctance to give personal opinions, acceptance of text or faculty lecture content as strict truth, and an inability to formulate an argument appropriately. In addition, faculty reported that female international students were often reluctant to question older persons, especially if the older persons were in a position of authority such as faculty members. The difference in perceptions between faculty and students regarding critical thinking is quite interesting. While both students and faculty identified language related issues with equal importance, students did not report learning and critical thinking issues with the same priority as that of faculty. Robertson, Line, Jones, and Thomas (2000) believed that faculty need to be aware of this disconnect as they interact with the students.

Critical Thinking and International Nursing Students in Western Countries

When exploring the literature for research specific to critical thinking skills of international nursing students in a foreign country, very little was found. A number of researchers explored a range of issues and problems related to international nursing students' adjustment, including acculturation, social differences, financial problems, language, and stress. Several studies focused on African nursing students. No studies were found that focused exclusively on critical thinking issues of international nursing students. Within these studies, however, differences in learning styles, educational expectations and methodologies, and critical thinking difficulty were common themes in the implications. In all cases, these studies were qualitative, possibly due to the small number of potential participants or the lack of valid and reliable instruments for use in international students.

Wang, Singh, Bird, and Ives (2008) examined the learning experience of 21 Taiwanese Nursing students enrolled in either a BSN or MSN program somewhere in Australia. Snowball sampling was utilized to obtain a broad range of student experiences. The majority of students had been in Australia for more than one year, and half of the participants were graduate students. The researchers focused on a broad range of issues because of the paucity of knowledge related to Taiwanese nursing students. Utilizing an exploratory survey design many of the results related to critical thinking issues. Questions centered on educational differences between Taiwan and Australia, learning difficulties in Australia, preparation for coming to Australia, and adaptation issues. The interviews were conducted in Chinese, transcribed in Chinese and then translated into

English for analysis. Only one translator was used for the interviews to attempt at assuring consistency of information transfer. Transcripts were verified for accuracy through review by an independent scholar who was fluent in both Chinese and English. In addition, a number of transcripts were returned to participants for review.

Four themes emerged related to issues important to the students including: 1) obstacles; 2) differences in learning experiences as compared to their home country; 3) coping difficulties; and 4) a desire for more academic assistance. Participants voiced a number of concerns related to critical thinking abilities. The students were more familiar with teacher-dominated environments where they were not encouraged to speak out, question or challenge the teacher, or develop their own ideas. As a result, students had little experience with building a reasoned argument and forming their own opinions and judgments. This is very similar to the results obtained in non-nursing studies. In addition, students believed that language issues created difficulty in developing critical thinking skills, because the language barrier prevented them from articulating their thoughts in both written and verbal assignments. The researchers believed that this demonstrated the difficulty Taiwanese students experience with critical thinking in international settings. While no philosophy of qualitative research approach or analysis was identified, this study can be helpful in the present study in the focus and types of questions asked.

These results compared to those obtained by Gardner (2005) in a study of racial and ethnic minority students in predominantly Caucasian nursing programs in California. Using a phenomenological approach to ascertain the underlying meaning or essence of the students' experience, Gardner interviewed 15 students enrolled at three different BSN

programs, who had been in the U.S. for more than four years. Cultural backgrounds of the participants included east and central Asia, Indian, Hispanic, Hmong, African-American, Nigerian, and Filipino. Eight themes emerged that reflected student difficulties in succeeding: 1) loneliness and isolation; 2) feeling different from other students; 3) absence of acknowledgement of student individuality by teachers; 4) lack of understanding and knowledge of cultural differences; 5) desire for support from teachers; 6) coping with insensitivity and discrimination from peers; 7) harboring a strong determination to succeed; and 8) energy invested in overcoming obstacles. Deeper analysis of the transcripts revealed educational practices and past experiences influenced the student's critical thinking abilities. As identified in previous studies, students found much difficulty in taking multiple choice tests. The participants consistently reported that western students were more assertive in their discussions, raising questions and building arguments in class activities.

Two studies were identified that focused exclusively on international nursing students who came from Africa which have implications for critical thinking. Sanner, Wilson, and Samson (2002) explored the perceptions and experiences of eight Nigerian nursing students after their junior year of study in a BSN program at a university in Georgia. Using a guided, open-ended interview technique, the researchers focused on social interactions and experiences of the students in the nursing program. The students were all from Nigeria, however, their length of time in the U.S. ranged widely from five to twenty years. Participants were able to review their transcripts and were encouraged to clarify statements and make revisions as they felt necessary. This study is helpful given

its focus exclusively on the African nursing student, its focus on one nationality, and its reference to several critical thinking issues.

None of the themes that emerged related specifically to critical thinking. These themes included issues of social isolation, resolving the attitudes of American students, and persistence despite many obstacles. The researchers, however, stated that the students made comments about differences in learning and thinking resulting from their previous educational experiences in Africa. Students mentioned that their approach to learning involved memorization rather than critically analyzing and applying concepts. More of the students' energy during their nursing education thus, was placed on reading and memorizing content rather than problem solving and applying knowledge. When faculty made the effort to interpret the material from a cultural perspective, students were able to incorporate critical thinking and application. Unfortunately, the authors did not provide details of these particular experiences or explore more fully the issue of critical thinking. The authors did call for further research specific to the African student, with the goal of ascertaining similar issues from different nationalities in Africa.

Sanner and Wilson (2008) were able to move closer to the issue of critical thinking as they examined the experience of international nursing students, most of the participants from Africa, and the students' understanding of the reasons for nursing course failures. A purposeful sample of six international nursing students enrolled in the same nursing program as the previous study, and who had failed one nursing course in their first year of school, were interviewed three times over a six month period. The Seidman model of multiple interview events was used as a model allowing for three

different foci: 1) focus on life history; 2) reconstruction of their experience in the nursing program; 3) reflection on the meaning of their experience and how those experiences influenced where they are in their present situation.

Miles and Huberman's inductive approach to data analysis was used, allowing for tentative interpretations influencing appropriate refinement of questions with subsequent participants. Data analysis occurred throughout the interview process, identifying the emergence of three themes: 1) walking the straight and narrow related to their previous life experiences; 2) feeling of an outsider looking in; and 3) doing whatever it takes to succeed. Within the description of the first theme – walking the straight and narrow, Sanner and Wilson (2008) focused more on previous learning styles but alluded to the connection of learning styles and critical thinking abilities. Characteristics of the educational environment experienced by students included highly structured and teacher directed class environments, reluctance of students to engage in dialogue with teachers, use of lecture by teachers as the primary method of instruction, an emphasis on rote memorization, and a lack of textbooks. The authors concluded that this concrete educational environment was incompatible with the methods of application and critical thinking used in the nursing program, thus hindering international student success. The focus primarily on the African student and the verification of similar experiences of Asian students in non-nursing and nursing studies provides further support for this current study proposed.

Conclusions

As a result of this literature review, several important concepts stand out. Zhang and Sternberg (2001) found no scientific evidence for the suggestion that forms of thinking are genetically based. It is more likely that individuals are influenced by cultural values and practices. Prior cultural practices and learning experiences significantly influence the methods of learning and thinking used by international students, as they interpret meaning and understanding from these prior experiences (Wang, Martin, & Martin, 2002). A number of researchers, limited by the fact that their studies were based on Western critical thinking methodologies, concluded that international students do not utilize similar critical thinking methods as Western students. It is clear from the literature, however, that critical thinking can be taught to international students. There is virtually no research that explores or describes the African student population in the area of critical thinking and methods, especially of nursing students. Rather, most of the research related to critical thinking and international students examines Asian students traveling to countries such as the U.K or Australia. Therefore, this study examined critical thinking from the African nursing student perspective.

Summary of Chapter 2

There are three focal areas in this chapter: an overview of phenomenology including the theories and methods as discussed by van Manen; the evolutionary development and characterization of critical thinking in the fields of general education as well as nursing education; and research related to nursing and non-nursing international

students and critical thinking. Van Manen built on the descriptive phenomenology of Husserl, with the emphasis on understanding the meaning of an experience according to Heidegger, into his philosophy of hermeneutical interpretation. Van Manen believed both were important in describing an experience as well as for understanding the context of the experience.

Critical thinking has been discussed in the Western literature from the time of Socrates up through the 21st century with common themes of questioning, analysis, interpretation, reflection and problem-solving (Paul, Elder & Bartell, 1997) as well as of deciding what to believe or do (Ennis, 1987). Descriptions of critical thinking theory have steadily evolved during the 20th century from Dewey's (1910) *reflective thoughts* conceptualization in the early 1900s to a complex array of critical thinking skills and dispositions as educational objectives in the 1990s. By the 1990s a number of American education and philosophy scholars developed the APA consensus statement which detailed these skills and dispositions (Facione, 1990).

Meanwhile, in England, Barnett (1997) developed his theory of *criticality* which characterized critical thinking as a multidimensional phenomenon that goes beyond the domain of systematic individual critical thinking for problem solving to include the domains of the internal world of self-reflection and the external world of critical action in the world. Each of Barnett's three domains incorporate four levels of criticality that include skills, self-reflection, refashioning accepted theories, and transformative critique. The application of critical thinking for nursing education has more recently followed a similar evolution, which resulted in 2000 with a consensus statement developed through

the Delphi technique led by Scheffer and Rubenfeld (2000); this panel characterized critical thinking as a combination of skills and habits of the mind. This statement was heavily influenced by the 1990 APA statement.

This review of the literature has demonstrated that little research has focused on the experience of African nursing students in Western cultures in relation to critical thinking. A significant body of research has focused on critical thinking in nursing students in non-Western countries, including on Asian students in nursing and other majors in Australia and the U.K. Integrating Barnett's theory and the 2000 nursing consensus statement, this study utilized van Manen's approach to phenomenology both to describe the critical thinking methods used by African nursing students in the United States, and explore the meaning of these experiences in relation to past educational experiences and future goals.

Chapter 3 – Methodology

In this chapter the purpose and methodology of the study will be described. The research questions, research design, population and sample, instruments, data collection procedures, data analysis methods, ethical considerations, and limitations of the design will be explained.

Purpose and Research Questions

The purpose of this study was to describe the lived experiences of African nursing students in U.S. BSN programs as they make critical patient care decisions in the academic and clinical settings. This included developing an understanding of the characteristics of critical thinking described by African nursing students. Finally, the relationship between critical thinking, demographics, past educational experiences, and academic successes were explored. The research questions include:

1. What are African students' experiences of learning and utilizing Western critical thinking methods in the academic and clinical settings?
2. How do cultural and past educational factors influence the understanding and utilization of Western style critical thinking?

Research Design

It is important to understand the nursing student's perception of barriers to and facilitators of critical thinking. While researchers have described these relationships for American students and students from other countries and cultures, little is known about these interrelationships for students from African cultures. Field and Morse (1985) stated that qualitative research should be used when there is little known about a particular domain. Thus, a phenomenological method of qualitative research design was used for this study. Using interpretive hermeneutics, as described by van Manen (1990), as a basis for this study, semi-structured interviews with African nursing students served as a resource for developing a richer understanding of the students' experiences using critical thinking skills in their academic journey towards becoming a nurse. An interpretive hermeneutical approach was selected to explore how students perceive and experience their developing Western critical thinking skills through the narratives. Interpretive hermeneutics allows the researcher to focus on meaning, context, and understanding for participants experiencing a phenomenon (Benner, 1994; Maxwell, 2005; van Manen, 1990). Finally, the qualitative approach was chosen due to the lack of extant knowledge about this population.

Population and Sample

The target population was African college students enrolled in Bachelor of Science degree (BSN) nursing programs in the United States (U.S.). Two non-probability sampling strategies – purposeful and network/snowball sampling were used to

enroll study informants. A purposeful sample of African students enrolled in nursing programs at several colleges and universities with varying sizes of student enrollments, located in the eastern portions of the U.S. was obtained. Students were identified by contacting undergraduate nursing faculty leaders at several public and private universities in Virginia, as well as several private BSN programs outside of Virginia with which this researcher has contacts.

Purposeful sampling has been described as necessary based on the participant's "first-hand experience with the culture [...] or phenomenon of interest" (Streubert-Speziale, & Carpenter, 2007, p.29). Utilizing a variety of universities provided heterogeneity of the sample, one of the goals of purposive sampling (Maxwell, 2005, p. 89). In addition, a snowball sampling method was also used to obtain additional participants. After the interview was completed, or if a student chose not to participate, the researcher asked the African nursing students to identify and refer other potential African nursing students. The snowballing method allows for the identification of additional participants who may otherwise be difficult to locate (Streubert-Speziale & Carpenter, 2007). Although snowball and purposeful sampling methods are limited in their ability to generate a representative sample of African nursing students in the U.S., they are suitable for such a qualitative research design.

African students enrolled in nursing programs in states close to Virginia, and with specific inclusion characteristics were approached to participate. Inclusion criteria included students who are: (a) native African; (b) who are first generation university students in the U.S.; (c) currently enrolled in a BSN program and were in at least their

second semester of clinical experiences; (d) had been in the U.S. less than ten years; (e) attended elementary and middle school in Africa; (f) over the age of 18; and (g) are able to speak, understand and write in English. In the midst of the study, several potential participants emerged who had been in the U.S. for more than ten years. These students were ultimately included as it was determined they had rich experiences similar to those students who had been in the U.S. for shorter periods of time.

In phenomenological research, the goal is to collect data until no new themes emerge. Data collection continued until saturation had been achieved, evidenced by the lack of new themes emerging and the repetition of responses. (Streubert-Speziale & Carpenter, 2007) While some authors have warned about the validity of saturation, Streubert-Speziale and Carpenter wrote that saturation needs to be understood in the best interest of the qualitative researcher to “[...] saturate the specific culture or phenomenon at a particular time” (p. 31).

Data Collection

A qualitative methodology was selected for this study in part because it is difficult to hypothesize the results and because the goal was to unearth data rich in detail and embedded in the students’ context. Data collection included semi-structured face to face interviews, demographic data, and field notes related to observations made during the interview. Over the course of nine months, twelve African students were interviewed for this study.

Selection of Students

Following approval for this study by the George Mason University Human Subjects Review Board, undergraduate nursing faculty administrators at a variety of nursing programs within the state of Virginia were contacted first via telephone followed by an email to identify potential participants (See Appendix 1). Administrators were asked whether any specific permission was necessary from their Institutional Review Board for my research. These administrators were then asked to identify candidates who met the inclusion criteria, and to forward the introductory email to these students. For students who responded to the introductory email, additional information was provided regarding informed consent and the nature of the interview, and a final invitation to participate in the study via email or telephone conversation was made (See Appendix 2).

Once Institutional Review Board approval was obtained for utilization of students from the respective universities, students were then approached to ascertain if they met the inclusion criteria. For those students who responded to my email but declined participation or did not meet the inclusion criteria, no further contact was made. If the student met the criteria and agreed to participate, a mutually agreed time and place for the completion of the critical thinking instrument and interview was established.

At the beginning of the interview, the study was again explained to the student. A written informed consent form was given to the student once it was determined that the student met the inclusion criteria. The interview began after answering clarification questions and signing of the consent. Colleges and universities in Virginia and other close

proximity parts of the eastern United States were chosen for convenience of obtaining participants without significant travel costs for the researcher.

Student Interviews

Once informed consent had been obtained, a semi-structured interview was conducted. Each interview lasted between one and one and a half hours. The interview process was chosen because many international students “feel awkward about providing written responses to questions that canvas sensitive issues” (Wang, Singh, Bird, & Ives, 2008). In addition, semi-structured interviews are more likely to result in more thorough responses, allow for clarification, and allow participants to not be limited in their response options (Streubert Speziale & Carpenter, 2007).

The interview began with several demographic questions. This served to establish a cooperative relationship between the participant and the interviewer. Maxwell (2005) stated that the relationship between participant and researcher is an important component to the qualitative process. Such a relationship can become the mechanism by which the deeper meaning of the phenomenon may emerge (van Manen, 1990). The interview continued with a number of guided questions. All interviews were audio taped and transcribed verbatim for validation and analysis. Any potential identifying information was omitted from the transcripts. See Appendix 3 for the interview questions.

Prior to the initiation of the interviewing process, the questions used were reviewed by two qualitative research scholars, as well as three international nursing students from the university where this researcher is a member of the nursing faculty, for content validity and ease of understanding. Students who reviewed drafts of the

questionnaire were ineligible for participation in the actual study due to their enrollment in courses taught by this investigator. Because qualitative research is interactive rather than linear, several questions were altered in later interviews to reflect learnings from previous interviews (Maxwell, 2005). Maxwell emphasized that the design should be an ongoing and dynamic process, able to change in response to the circumstances of the study.

Field Notes

Field notes made by the interviewer were kept and became part of the subsequent data analysis. Such notes included participant reactions to the critical thinking instrument or to the interview questions, non-verbal communication of the participant during the interview, ideas generated by the interviewer regarding modifications in the interview questions, the setting of the interview, and assumptions about what was being heard or observed. These notes served as validation for important points made by the participants during the data analysis process.

Data Analysis

Data analysis began immediately after the first interview had been completed and transcribed (Maxwell, 2005) and was ongoing as the transcripts became available. The purpose of the analysis was to “grasp the meaning of the phenomenon” (van Manen, 1990, p. 77) of critical thinking for African nursing students.

The first step in the analysis of the interviews was to read the transcripts and listen to the audiotapes as soon as the transcripts became available. The transcripts were compared to the field notes. The product of this phase was a written narrative summary of

the content of the transcript encompassing both what the participant said, as well as initial ideas regarding categories and relationships of themes. In essence, this process allows the researcher to “capture the whole” of the interview (Maxwell, 2005, p. 93).

Next, the transcripts and narrative summaries were then sent to the participants via email for their review and feedback. Van Manen (1990) stated that allowing the participant to review the transcript creates an ongoing hermeneutic interview for the purpose of further accuracy, validation of inflections, and deeper reflection of the meaning of the experience. Participants can also identify areas for clarification and correction. Additional information provided by the participants was then added as an addendum to their transcript and became part of the data analysis.

The third phase was an intense line by line review of the transcripts for the identification of codes and essential themes. With the first reading of the transcripts in this phase, categorizing strategies were employed that essentially “fractures” the data and rearranges the data into categories (Maxwell, 2005, p. 98). During this process, segments of the transcripts were arranged into themes/nodes using Nvivo 9® qualitative research software.

With subsequent readings of the transcripts, connecting strategies were employed in such a way that allowed the researcher to understand the data in the context of the participant. Maxwell (2005) described this as the opposite of fracturing, as one looks for relationships rather than similarities to understand the “coherent whole” (p. 99). During this phase, matrices of the content were constructed to identify patterns, trends, and contradictions between participants. Such matrices were organized based on student

academic success, their past educational experiences in Africa, and the challenges faced in U.S. nursing programs in regard to critical thinking and interaction with faculty.

Matrices were also constructed to better understand the students' understanding of critical thinking in comparison to the models of critical thinking used as a basis for the study.

The matrices assisted in staying sensitive to the context experienced by the participant, an essential component of hermeneutics.

Validity Threats and Limitations

A number of validity threats that potentially limited the richness of the data obtained in this study were identified prior to the initiation of the interviews. These included the relationship of the researcher with the participants during the interview, the reactivity of the participant, the use of a purposeful sample, the researcher bias that a difference exists in critical thinking strategies between African and Western students, the potential that the critical thinking instrument will not be sensitive to African cultural values, and the short time frame for interaction with the participants. Each of these will be examined with descriptions of how to minimize these threats.

First, I will examine the relationship of the researcher to the participants. Denzin and Lincoln (2005) stated that the researcher becomes part of the investigated world while performing qualitative research. Maxwell (2005) indicated that eyes and ears of the researcher become research tools. Several issues arise in this study. If students become aware of my status as a nursing professor, would a hierarchical structure evolve that might get in the way of the participant freely telling their story? Might the participant have felt vulnerable and excluded valuable stories that hindered a rich understanding of

the student experience? During introductions and interviews, while I did share that I was a nursing instructor, I also emphasized myself as a researcher interested in their stories and experiences. In addition, I attempted to demonstrate interest in what was being described without showing approval or disapproval.

A second validity threat is the reactivity of student. There was the potential that the students would tell me what they thought I wanted to hear. This may be difficult to avoid, however. Thus I asked the participants to describe stories of past educational experiences, as well as asked them to describe feelings and emotions during those experiences. Such responses provided for deeper and more meaningful information. Omotosho (1998) emphasized that during his interviewing process, students were asked to reflect on their own experiences rather than attempting to provide causal relationships, generalizations, or abstract interpretations. This was done to decrease the likelihood of reactivity among the participants. As a learner and researcher during the process, the keeping of field notes and writing narrative summaries after each interview assisted in maintaining sensitivity, and helped me to improve with each subsequent interview. Additionally, having the participants' reflect on their narrative summaries provided an opportunity to lessen the possibility of reactivity.

Maxwell (1995) stated that sample size and sampling in qualitative research are often inadequate to identify and characterize the actual diversity that exists in a particular setting or a population studied. The size and purposeful nature of the sample population could also create a validity threat, as it potentially neglects the complexity and limits the diversity of a larger population. With purposeful sampling of a limited number of

participants in a narrow geographic range, there could be a bias towards uniformity both methodological and theoretical. This threat was addressed by utilizing students from several sizes and types of colleges and universities. This was based on the assumption that different types of students enroll in different types of schools. Thus, participants from both public and private universities with varying sizes were sought after.

A fourth threat involves researcher bias that there actually is a difference in the critical thinking skills and dispositions between African and Western students and that such difference are problematic. It is also possible that all African students have similar critical thinking qualities. The development of matrices after data collection provided a mechanism to avoid generalizations regarding African students as a unified whole. Seeking the participants' understanding and utilization of critical thinking through qualitative interviews and the provided instrument allowed for the development of a richer understanding of whether a difference actually exists. In addition, framing the interview questions based on "what is" rather than "what should be" prevented the establishment of a problem mentality. Finally, limiting the participant sample by their being in the U.S. less than ten years was intended to lessen the adaptation towards uniquely Western critical thinking methods as well.

The short time frame for interaction with the participant had the potential for creating a final validity threat. Deeper and richer sharing of experiences happen with longer term interactions. Displaying genuine interest in the individual through both verbal and written communication during the process was important in establishing rapport. Having the participant review their transcripts provided a second episode of interaction.

Ethical Issues

Several procedures were followed to avoid ethical issues through this study. First, approval from the George Mason University Human Subjects Review Board was obtained prior to initiation of the interviews. All participants signed an informed consent document prior to initiation of the interview. This informed consent outlined the procedures, risks and benefits, mechanisms of maintaining confidentiality, and nature of participation in the study. Participants received the original copy of the informed consent, while another copy was maintained in a locked and secure location in the researcher's office. Finally, participants were permitted to withdraw from the study at any time without penalty. All students interviewed were included in the final data analysis of the study.

Confidentiality was maintained at all times during the study. Interview transcripts and narrative summaries were coded with pseudonyms. There was no financial remuneration for participation, however, participants were permitted to keep a copy of the interview transcript, the narrative summary, as well as will receive a summary of the final research project. Interviews were performed in a convenient, private location selected by the participants on the campus of the participant's university and outside of class time.

Summary of Chapter 3

Using an interpretive hermeneutic approach as described by van Manen (1990), a semi-structured interview was performed with a purposive sample of twelve African students studying nursing at BSN programs in the U.S. The purpose of this study was to

understand both the characteristics of critical thinking utilized by African students, as well as the meaning of their experiences with critical thinking. Through a multistep approach of data analysis involving categorizing and connecting strategies, review of the transcripts and narrative summaries by the participants, and returning to the transcripts for multiple readings, it was hoped that themes would emerge that described the African students' experiences. Strategies were employed to reduce validity threats and avoid any ethical concerns.

Chapter 4 – Findings

In this chapter, the findings of the participant interviews are presented. Demographic information are examined, followed by a thematic analysis of the participant interviews having utilized van Manen's (1990) approach to qualitative research to uncover the essential meaning of the student experience. This chapter closes with an examination of results based on a comparative analysis of information regarding these students.

The purpose of this study was to describe the lived experiences of African nursing students in U.S. BSN programs as they made critical patient care decisions in the academic and clinical settings. This included an attempt to develop an understanding of the characteristics of critical thinking described by African nursing students. In addition, the relationship between critical thinking, demographics, past educational experiences, and academic successes were explored. As stated earlier, understanding the characteristics of critical thinking utilized by African students and the challenges utilizing critical thinking by such students may be beneficial to both the students as well as the profession of nursing.

Demographic Information

Demographic information regarding each of the participants was analyzed using descriptive, narrative, and numerical data (See Tables 3 and 4). Each participant was given an alias name to maintain anonymity:

Table 3
Demographic Data of Participants

Participant	Age	Country of Origin	Length of Time in U.S. (years)
Angela	28	Ethiopia	8
Barbara	27	Ethiopia	9
Carol	28	Ethiopia	10
David	25	Kenya	5
Edward	41	Ghana	15
Faith	27	Kenya	6
Gail	24	Kenya	5
Hosea	23	Nigeria	4
Inez	24	Cameroon	10
Judy	22	Ethiopia	10
Katie	35	Nigeria	7
Linda	21	Nigeria	9
Mean	27.08		8.13
(SD)	(.57)		(.57)

Nine of the participants were female, with three participants being male (David, Edward, and Hosea). The age of the participants at the time of the interview ranged from 21 to 41 with a mean of 27.08. Five countries were represented by the participants including four from Ethiopia, three from Kenya and Nigeria, and one each from

Cameroon and Ghana. Participants had been in the United States from four to fifteen years with a mean of 8.13 years.

In Table 4 the educational experiences of the participants are delineated. Four of the twelve students attended private secondary schools in Africa. Interestingly, each of the students who attended a private secondary school in Africa had, at the time of the interview, successfully completed all nursing major courses to date. Gail, who attended a private school in Africa, did fail her Psychology prerequisite course in the U.S., however, this failure occurred in her first semester in the U.S., immediately upon arrival in the U.S. Gail mentioned that her course failure was the result of having arrived in the U.S. two weeks into the semester, thus missing several weeks of course content. Apparently the instructor did not allow accommodation for her missing the time. Gail successfully repeated the Psychology course the following semester and did not fail any other courses since that time. All students who experienced course failures within the Nursing major attended public secondary schools in Africa. As noted in Chapter 3, two students attended secondary school in the U.S. but were included in the data analysis.

Five students attended college in Africa, three of whom majored in Accounting, one majored in Computer Science, and one majored in Biology. Those students who majored in Accounting and Computer Science reported having received a degree equivalent to an Associate Degree in the U.S. Katie obtained a bachelor's degree in Biology in Africa. Six students enrolled in courses in colleges in the U.S. prior to enrolling in prerequisite Nursing courses. Majors included Applied Sciences, Business,

Fine Arts, and Psychology. These four students did not complete requirements for graduation in these majors but rather changed to Nursing as a major. Two students, Faith and Katie, completed other degrees in the U.S. before enrolling in a nursing program.

Table 4
Participant Educational Experience

Participant	Type of Secondary School Attended in Africa	Attended College in Africa & Major	Attended College in U.S. other than Nursing & Major	Course Failures in Nursing Major
Angela	Public	Yes Computer Science	Yes Applied Science	Yes – Med/Surg
Barbara	Public	Yes Accounting	Yes Psychology	Yes – Med/Surg
Carol	Public	No	No	Yes – Med/Surg
David	Private	No	No	No
Edward	Public	Yes Accounting	Yes Business	Yes – Med/Surg
Faith	Private	No	Yes Biology	No
Gail	Private	Yes Accounting	No	Yes – Psychology prerequisite
Hosea	Public	No	No	Yes – Med/Surg
Inez	Private	No	Yes Fine Arts	No
Judy	Public ¹	No	No	Yes – Med/Surg
Katie	Public	Yes Biology	Yes Zoology (MS)	No
Linda	Public ¹	No	No	Yes – specialty not specified

¹ = These students attended secondary school both in the U.S. and in Africa.

Faith obtained a bachelor's degree in Biology, then enrolled in another university as a nursing major. Katie obtained a master's degree in Zoology, and then several years later enrolled in a nursing program in another university.

Critical Thinking

During the semi-structured interviews, each participant described his or her definition of critical thinking, as well as an example of how they used critical thinking in either the academic or clinical setting. Each participant's definition and application of critical thinking was then reviewed for illustrations of the Scheffer and Rubenfeld's critical thinking skills and habits of the mind (2000), as well as illustrations of Barnett's levels of criticality (1997). As mentioned in Chapter 1 and further described in Chapter 2, these two models served as part of the conceptual framework of this study. The definitions and exemplars were then entered into a matrix (see Tables 5 for those students who passed all of their courses and Table 6 for those students who failed any nursing courses). Maxwell (2005) indicated that such comparisons serve to identify patterns by attempting to understand the "coherent whole" (p. 99) rather than fracturing the data as happens in thematic analysis.

Based on reading and rereading the participants' definitions of critical thinking, Scheffer and Rubenfeld's skills and habits of the mind (2000) were matched with each of the students' definitions (See Tables 5 and 6). Then, each of the students' definitions of

Table 5
Critical Thinking Definitions and Theoretical Illustrations
Participants Who Passed All Nursing Courses

Participant	Definition of Critical Thinking	Scheffer & Rubenfeld Skills & Habits of Mind	Barnett's Levels of Criticality
David	Critical thinking is the thinking that helps to anticipate. Mistakes happen. Like you think through things before you do them. And you basically applying the knowledge that you have to what you are doing. You're thinking it through.... If you're thinking critically, any step you take, you're critical thinking, if there is anything that might go wrong, you will already know that. That instinct will lead to this or that and then it shall be solved if this is to happen...requires self discipline.	Applying standards Discriminating Predicting Logical reasoning Reflection Perseverance Confidence Open minded	CT3 – Critical Action Level 2 – Reflective practice
Faith	I think it's being able to process information, like, you know. And relating it to the rest of the world ...relating what I would probably hear in class to what I see happening in the world. Or relating one subject matter to another. That's, you know, that's sort of how I would define it...behaving as a global citizen...using coordination between knowledge and practice.	Analyzing Discriminating Applying standards Open minded Reflection Contextual Inquisitive	CT3 – Critical action Level 3 – Mutual understanding & development of traditions
Gail	Is applying what I've learned in class to the life now, like to the real life.	Applying standards Discriminating Flexibility Contextual	CT3 - Critical action Level 1 – Problem solving
Inez	How to process information and act on it. It helps the nurse to tie things together. And prepares the nurse to care for the patient.	Analyzing Info seeking Logical reasoning Reflection Contextual	CT 3 – Critical action Level 1 – Problem solving
Katie	A situational sort of thing that involves thinking more about one's knowledge and then trying to apply it to a specific scenario. It involves thinking about and processing a situation to come up with the correct answer or solve the problem.	Analyzing Applying standards Info seeking Flexibility Open minded Contextual Confidence	CT3 – Critical action Level 2 – Reflective practice

Table 6
Critical Thinking Definitions and Theoretical Illustrations
Participants Who Failed A Nursing Course

Participant	Definition of Critical Thinking	Scheffer & Rubenfeld Skills & Habits of Mind	Barnett's Levels of Criticality
Angela	Just seeing things from different directions, not only one way. Critical thinking is a skill learned how to successfully do one thing by having a strong knowledge background, practical skills, and also using your own imagination and experiences.	Analysis Info seeking Flexibility Creativity Open minded	CT3 – Critical action Level 1 – Problem Solving
Barbara	Integrating different information's to come up with a wise decision... so that we can become familiar when we go to a patient situation so that we can integrate different things to come up with a better idea.	Applying standards Discriminating Info seeking Flexibility Creativity Confidence	CT3- Critical action Level 2 – Reflective practice
Carol	Critical thinking just like when you have a question you just don't look one thing, you have to see the whole. Think outside the box... You need to see the whole thing before you decided to do whatever, the whole picture to understand and sometimes you going to start small before going to the big picture. It's not only from big to small, small to big.	Analyzing Logical reasoning Contextual perspective Open minded Intellectual integrity	CT3 – Critical action Level 3 – Mutual understanding & development of traditions
Edward	Like me as a health worker, as a nurse, being able to recognize the probable causes of some symptoms and coming out with appropriate measures to help the patient.	Analyzing Discriminating Info seeking Predicting Contextual perspective Confidence	CT3 – Critical action Level 2 – Reflective practice
Hosea	What would you do if you were faced with an obstacle?...[it] involves discerning how information and knowledge is applied to clinical situations to provide what is best for the patient...discerns what information is needed and how to handle that information by evaluating the pros and cons.	Analyzing Info seeking Discriminating Predicting Open minded Inquisitive	CT3 – Critical action Level 1 – Problem solving
Judy	Putting things into where they should be...putting things together to identify what is wrong...what is going on under the surface.	Info seeking Logical reasoning Inquisitiveness	CT3 – Critical action Level 1 – Problem solving

Table 6
Critical Thinking Definitions and Theoretical Illustrations
Participants Who Failed A Nursing Course

Participant	Definition of Critical Thinking	Scheffer & Rubenfeld Skills & Habits of Mind	Barnett's Levels of Criticality
Linda	The ability to just see something and not just take it at face value, you know. Be able to look deeper into it and feel. What is really telling you? What could this mean, you know? That's look at all the presentations, so which one will I do first for this patient even though I will do all this which one is the priority I guess.	Discriminating Info seeking Inquisitiveness Perseverance Open minded	CT 3 – Critical action Level 2 – Reflective Practice

critical thinking were compared to Barnett's model of criticality (see page 56) – most notably their domain (knowledge, self, and world) of critical thinking as well as the level of criticality (critical skills, reflexivity, refashioning, and transformative critique). Since each student described his/her use of critical thinking within terms of a clinical experience, the definitions were categorized within the domain of the *world* also identified as CT-3 (Barnett, 1997, p. 65). The domain of the world, also called critical action by Barnett, involves critical thinking that is demonstrated in the external world. Critical action involves the making of informed decisions via critical thinking processes with the intent to take action and bring about change in some aspect of one's context (pp. 82-83). The assumption used by this researcher during the assignment of levels of criticality believed that the implementation of critical decision making in the clinical setting represented a form of Barnett's critical action.

After identifying both the critical thinking skills and levels of criticality described by each participant, a matrix was created listing each participant, based on the skills,

Table 7

Critical Thinking Skills and Levels of Criticality by Academic Success

Skills	Students Who Passed All Courses	Students Who Failed A Course in the Nursing Major
<i>Analyzing</i>	Faith, Inez, Katie	Carol, Edward, Hosea, Linda
<i>Applying Standards</i>	David, Faith, Gail, Katie	Barbara, Edward
<i>Discriminating</i>	David, Faith, Gail, Katie	Angela, Barbara, Edward, Hosea, Linda
<i>Information Seeking</i>	Inez, Katie	Angela, Barbara, Edward, Hosea, Judy, Linda
<i>Logical Reasoning</i>	David, Faith, Inez, Katie	Judy
<i>Predicting</i>	David	Edward, Hosea
<i>Transforming Knowledge</i>		Angela
Habits of the Mind		
<i>Confidence</i>	David, Katie	Angela, Barbara, Edward
<i>Contextual perspective</i>	Faith, Gail	Carol, Edward
<i>Creativity</i>		Angela, Barbara
<i>Flexibility</i>	Gail, Katie	Angela, Barbara
<i>Inquisitiveness</i>	David, Faith, Gail	Angela, Hosea, Judy, Linda
<i>Intellectual integrity</i>		
<i>Intuition</i>		
<i>Open-mindedness</i>	David, Faith, Katie	Angela, Barbara, Carol, Edward, Hosea, Linda
<i>Perseverance</i>	David	Hosea, Linda
<i>Reflection</i>	David, Faith	Angela
Level of Criticality Within “World Domain”		
<i>Level 1 – critical skills: Problem solving</i>	Gail	Angela, Hosea, Judy
<i>Level 2 – reflexivity in practice</i>	David, Inez, Katie,	Barbara, Edward, Linda
<i>Level 3 Refashioning of traditions – mutual understanding and development of traditions</i>	Faith	Carol

habit of the mind, and level of criticality illustrated. Each participant was also identified based on whether they passed or failed any courses (see Table 7). The critical thinking skills and level of criticality were arranged in Table 7 in this manner because it was observed that the challenges using critical thinking that were identified by the respondents seemed to be influenced by whether or not they had passed all of their nursing courses. For example, students who passed all of their nursing courses identified the challenges of a faster paced academic environment, the fear of asking questions due to being perceived as unintelligent, and the need to move from memorization to application. Students who had failed courses spoke of such challenges as test anxiety, fear of approaching teachers, and language issues.

Three observations regarding Tables 5, 6, and 7 were made. First, there are four skills that were demonstrated by all of the participants regardless of their academic success: analyzing, applying standards, discriminating, and information seeking. Second, the identification of skills based on an analysis of their critical thinking definitions and clinical illustrations were independent of whether or not participants had passed all of their nursing courses. Third, one skill, logical reasoning, is described by five students – four of whom passed all of their nursing courses.

Based on the student responses as outlined in Table 7, four of the five participants (David, Inez, Katie, and Faith) who passed all of their course work as of the interview reflected either Criticality level 2 (reflexive practice) or Level 3 (mutual understanding and development of traditions) within the critical thinking domain of “the world”. David provided an example of critical thinking as reflexive practice:

I was working on the oncology unit with cancer patients...and being there listening to them and their stories and knowing first about their background and what religion they are. So there was a person who was Muslim, and you don't say to them "put your Christianity there."...For this patient I went there and listened to what they were saying and tried to encourage them...with critical thinking I first of all listened to them and learned about their type of religion before I start taking care of them.

Faith provided an example of criticality level 3 (mutual understanding and development of traditions) as she discussed how she used critical thinking while caring for a complex patient struggling with congestive heart failure:

Like you have to coordinate what you learn in class with what you learned in previous semesters and what do I know from a nursing class, but maybe also from a psychology class or another science class. It all relates to taking care of this patient. He had so many health problems going on...so I had to put these small pieces together to take care of the person as a whole instead of just concentrating on the heart failure...So to make this patient well and leave the hospital better than they came, or helping them learn something that they didn't know before about their health.

The fifth student (Gail) who had passed all courses illustrated critical thinking in the clinical setting at the lowest criticality level – problem-solving. Three of the students (Angela, Hosea, and Judy) who had failed a nursing course were also categorized at this first level of criticality. Judy provided an example of criticality level 1 – problem-solving in her story of caring for a patient just before their discharge from the hospital:

She had been out of surgery for several days but was still NPO and she was supposed to go home. But she had not eaten anything. The patient asked me if she could get something to eat and I looked into the computer, it said NPO, but I didn't see any other reason why she should not eat since she had no other problems. So I asked the nurse and I was able to get the order changed, and the patient was happy.

Three other students (Barbara, Edward, and Linda) described examples of level 2 of criticality – reflexive practice, while one student who had failed a nursing course, Carol, illustrated criticality level 3 – mutual understanding and development of traditions.

Thematic Analysis

Following listening to the audiotapes, creating narrative summaries from the transcribed interviews, and thematic analysis of the transcripts seven themes emerged related to the students' experiences with critical thinking and enrollment in a nursing program in the United States. These themes include: *learning experiences in Africa, using new learning tools to adapt to critical thinking, fear, desire for faculty interaction, cultural factors impeding critical thinking, evolving self-awareness, and the voice of those afraid to speak*. Several of these themes also have subthemes that will be explained in each section (See Table 8).

Learning Experiences in Africa

All of the participants reported a very different educational process in elementary and secondary school in Africa as compared to their experience in college in the U.S. These differences were evident whether they attended private or public schools in Africa, or whether they completed secondary school in Africa or the U.S. Five subthemes emerged that describe various characteristics of the learning experiences in Africa. These subthemes include: (a) a more formal relationship with teachers; (b) the common use of corporal punishment by teachers; (c) the use of memorization and lecture as the predominant learning and teaching styles; (d) the lack of resources in the classroom; and (e) the lack of an emphasis on critical thinking as an outcome.

Table 8
Themes and Subthemes

Differences in learning experiences in Africa	Using new learning tools to adapt to critical thinking	Fear	Desire for deeper interaction with nursing faculty
<ul style="list-style-type: none"> • More formal relation with teachers • Common use of corporal punishment • Use of lecture and memorization • Lack of classroom resources • Lack of emphasis on critical thinking as an educational goal 	<ul style="list-style-type: none"> • Use of study groups • Use of internet and other mass media • Change in study habits • Adaptation to study habits • Participation in class discussion • Participation in critical thinking course 	<ul style="list-style-type: none"> • Of punishment by teachers in Africa • Of asking questions in class in US • Of academic failure • Of discrimination and stereotyping • Of test taking in the U.S. 	<ul style="list-style-type: none"> • Seeking closer relationships with faculty • Faculty hesitancy to relate to students • Negative experiences with faculty
Cultural factors impeding use of critical thinking	Evolving self-awareness	• Developing a voice that is afraid to speak	
<ul style="list-style-type: none"> • Respect of elders • Not challenging authority • Community • Valuing of quietness • Relaxed concept of time • Traditional African role of women in society 	<ul style="list-style-type: none"> • Being quiet • Visual learners • Strong motivation to succeed in nursing • Sacrifices to leave Africa • Desire for support groups • Not wanting to be seen differently • Taking ownership for actions 	<ul style="list-style-type: none"> • Lived space: Africa and U.S. nursing world • Lived body: skin color • Lived time: fast paced nursing education • Lived other: faculty to walk alongside 	

A more formal relationship with teachers. Participants in this study consistently reported a strong level of respect demanded by teachers in school in Africa. This respect was illustrated by such things as students standing when the teacher entered

the room, the belief that a student could not challenge or question a teacher about an issue, and the lack of conversational interaction with the teacher. Examples of this environment were reflected by Angela, who stated:

When the teacher walks in the classroom, everybody has to stand up. Thus when he said “Be seated”, we have to sit. It’s those kinds of things.

Carol further illustrates this relationship:

They just come and explain the chapter, for example they say, Chapter 5, they going to come in an explain and they may give you homework. Sometimes they come and check whether you do work. Just to look at it but they don’t see what we did or not...you could ask a question but if you ask deep they don’t like because you are taking their time. So they are not going to appreciate you to ask in front of the students. There would be a lot of students in class, like 120 students in one class. The teacher they don’t even know us. They just say things. They don’t know whether we understand it or not. To my thinking they don’t even care.

The common use of corporal punishment by teachers. A number of participants shared stories about the use of corporal punishment by teachers as a method of discipline. Edward illustrated:

When I was in elementary school there was, I mean if you got something wrong there was harsh punishment from the teachers...So when you are called on he would say, “Oh, 5 times 8, what is the answer?” And if I would answer incorrectly, you got a few lashes.

Angela also illustrated this:

Everyone was afraid of the teacher. Another thing is punishment. They are allowed to use actual sticks and stuff to kick you when you misbehave or something.

Those participants who attended private boarding schools related a less punitive environment and a more collaborative relationship with faculty. For example, Gail stated:

I went to a public school in high school and then I changed to a private school which was much better. You understand more better. The teachers care, you

know, they care about you on a personal level. In public school they are really like, don't really care so much. I mean they do, but they it's like, they don't. They don't come to you and be like, "Are you really okay?"

The use of memorization and lecture as the predominant learning and teaching styles. All participants described the predominant learning and teaching method in Africa as lecture and memorization. Several students called this style of learning *theoretical*, while juxtaposing it with what they termed *practical* in nursing school. Faith stated:

It was mostly lecture. Like the teacher would come in and lecture and give you notes on the blackboard, and that's pretty much it. In science classes we had laboratory lessons and that's the only time we actually had like hands on experience. But other than that it was all lecture...and the only thing we learned was what I memorized.

Teachers would predominantly lecture and use the blackboard in lieu of textbooks.

Students would then copy everything on the blackboard into notebooks.

Many of the participants reflected that the purpose of testing was to measure the memorization of facts, rather than the application of knowledge. Furthermore, most testing was based solely on what the teacher said in class. The style of tests was reported to be more short answer, matching, and true/false type questions with no use of multiple choice style of questions.

The lack of resources in the classroom. Participants consistently reported a lack of supplies and books in the classrooms in Africa. Students were frequently required to share textbooks with other students, had no textbooks at all, or had outdated books. Libraries, especially in public schools were sparsely stocked, or had older books. In addition, classes usually had large numbers of students – several students reported more

than 50 students per classroom, with a number of students sharing a single desk. Katie stated:

I mean like back home you could go to the library but you don't have up to date books. The books were kind of very old, and you know, here you have access to the internet, you have access you know, some students can even bring their computers to school. We didn't have that back home. And, you know, it was tough to get materials.

One other aspect of the lack of resources was the teachers themselves. Several students mentioned that the motivation for teaching seemed to be related to obtaining a salary more than a concern for student outcomes. At times there were significant interruptions in the school year due to teacher strikes. David mentioned this:

For me, I was on and off in school. So due to financial things, I went to a school that had a bad reputation because of the teachers. Teachers were sometimes not there, come one day and not another day.

Teacher absences were sometimes protracted which significantly interrupted the educational process. Katie tells of long periods of time without faculty:

Because of strikes, schools were shut down for six months or more, and you'd be sent home. And so you, I mean sometimes you forget what you learned eight months ago...

The lack of an emphasis on critical thinking as an educational goal. The final subtheme within the theme of Learning Experiences in Africa relates specifically to critical thinking. All of the participants stated that critical thinking was lacking as a component of education in Africa. Several participants relayed stories from elementary and secondary school in which students were discouraged from asking questions or admitting to not understanding class material. When students would get an answer to a question asked in class wrong, they were required to stand up. Dave gave this example:

The teacher would review what they taught today. Sometimes if you're in the class and don't understand they make you stand up, and so if you don't answer you don't sit down. You keep standing until a question comes that you could be right. They make you really attentive so that if you missed and the time is up then you have like to do a punishment because you didn't listen.

Gail also described situations in which students were afraid to ask questions:

I would be so terrified. They have this figure of an instructor, they are like high, they are above you and you can't throw any stupid questions because they'll throw things and make you feel dumb or stupid.

Faith, as well stated:

There was not much like asking questions and interrupting the teacher and challenging all that kind of stuff. There was no critical thinking in my classes in Africa.

Using New Learning Tools to Adapt to Critical Thinking

Participants spoke in detail about learning new methods to adapt to the emphasis on critical thinking while in nursing programs in the U.S. Participants identified seven broad categories, including the use of study groups, the use of the internet and other mass media, the change in personal study habits, adaptations to test taking, participation in class discussion, participation in a critical thinking course, and the use of English in the learning process.

Use of study groups. A majority of the participants indicated that they participated in some type of study group as a way to master the nursing content. Some utilized study groups that included American students, while other students preferred studying with other African students. Students who preferred studying with American students indicated that the American students gave them the opportunity to learn and think critically. They found that American students utilized more application-oriented

methods, including the formation of possible test questions or questions based on clinical situations experienced. When these same African students studied with African students, however, they found the questions asked of each other were more memorization in nature. Angela, who preferred to study with American students, described such interactions:

What helps a lot is to be mingle with other American students. You should make friends with American student. I have some [country] friends which they only prefer hanging out with other [country] bodies to be friends. That doesn't help you learn more. Think, you have to be diverse with other, and study learn about how they study, how they do things, and learn about the way of life around here; the culture and system and language makes a difference too.

In contrast, several students indicated that they favored studying with other African students because they understood each other more fully. In fact, some courses required the use of integrated study groups that were not helpful to some participants. Participants who preferred studying with other Africans described the culture of the study group as reflecting the cultural values with which they were familiar in Africa; most notably the concern for an individual's success over the mastering of the material. Judy described the difference when discussing the difference between studying with African versus American students:

I guess one difference between the African study group and my American friends is with the African we just, our head was everywhere where we could actually talk about it and it would take us hours to come together and make sure the person that didn't understand understands. Where I go into the American group it was just kind of like one way and everybody was like on point.

Besides the use of study groups, several students identified other methods of interaction that assisted in the development of American methods of thinking; these other

interaction venues included participation in sports, college clubs, student government, and host family relationships. Faith provided examples of other social and academic interactions that assisted with learning critical thinking:

Well, the other thing that I could say helped me myself was participating in school activities a lot. Like a lot of, well I didn't do any sports, but almost all the clubs in school like science club you get to meet different people like the speaker that I invited to talk, and you go to a different conferences and just listening to people talking about different things that helps you too, to broaden my mind. I was like at [another college] I was involved in student government club; I was involved in the premedical national club. So participated in a lot of conferences through that and that also helps to not only develop critical thinking but also some kind of leadership skills. So I think, yea, like having an opportunity to participate in some many extracurricular activities was definitely a help. And then I had host families that also helped me.

Changes in study habits. African students who participated in this study reported that they needed to find new study habits in order to master the nursing curricular content. New habits included practices not uncommon to American students, such as recording class lectures for later review and reading textbooks thoroughly. The participants indicated that the lecture and memorization teaching styles in Africa often emphasized the teacher as the primary source of information. Upon entrance into the nursing program, however, the students realized that more depth of knowledge and understanding were necessary to be successful. In addition, they recognized the need to learn how to take notes in class to augment information found in faculty distributed handouts. A number of students stated that they utilized review books with practice questions developed by either nursing license examination review publishers or standardized testing companies. Such practice questions allowed the students to learn

critical thinking methods through familiarization with critical thinking formatted questions.

The majority of participants believed that they needed to spend twice as much time studying as they perceived that American students required. Several reasons for this included language issues as well as the lack of familiarity with reading textbooks. One student commented on the need for new study habits because of the perceived speed of the academic process. Katie, a student with significant post-secondary education in Africa commented:

First it was, I think, in the US in the education system here, first I think, is fast. I would say fast relatively because back home we had, I mean, they would teach you but there you have to go study on your own and everything. But here it was more like you were seeing everything so you could go faster.

Another student, Edward, alluded to the American academic process as a race saying:

So I always had to kind of run ahead because I knew there are certain things I don't have...and for me to successfully go through this, I have to, like I said, I had to kind of double up my steps... Like run faster than those guys who grew up in this culture. Because most of the things they were not known to me.

Adaptation to test taking. African students also described the need to learn to take new types of tests in the U.S. The majority of the students reported they were not familiar with multiple choice tests that focused on critical thinking rather than memorization of facts. Thus, they found the need to focus more thoroughly on the purpose of the question by reading the question at least two times and considering the possible answer before reviewing the choices. Judy commented about taking multiple choice tests:

Med/surg, it's all critical thinking...It's never, a patient has this and this and what is this disease. It's never that. It's always a long sentence, a lot of questions...it's something you can memorize and study but when we go to the test it's different. It's critical thinking, your patient come out with this and this what do they have or what's the reason. It's a different concept. Definitely critical thinking for the exams. I do think it's my understanding the question fully and understanding which answer is different because it's so close to A & B would be so similar except one thing different. And noticing that different...and also I think Americans, because I do have a lot of American friends, and they do have it easy as far as understanding things faster.

At the end of the comment from Judy, another concern becomes evident. Several students reiterated a belief that American students were able to complete tests in half of the time of African students. Katie, a student who had passed all of her tests in the nursing program, and was preparing to graduate soon after the interview, reflected on the time needed to take a test:

You feel that that way too, cause, I mean, most of my friends, we laugh and say when we're taking tests here we find it funny how most American students like if it's a 50 question test and I may be on number 10 and the American students are done. And I'm thinking, did you, did you read the question? I'm still trying to read through the questions, you know. We find that very interesting, I don't know if it's the fact that they read faster or they think faster. I don't know what it is, but at the end of the day we also say it's not like they always make better grades than we do. So maybe they just, they just used to doing things quicker, and you know, we kind of take our time. You know, you read and we read the question and read the answers and go back and read the question. Maybe it's an African thing or if it's, I don't know.

Several students described their adaptation to critical thinking questions as not just unique to an African versus American difference, but also a difference between nursing and non-nursing courses. Katie had completed other degrees before entering nursing, compared nursing tests to other majors by stating:

Yes, even in [other major]. For the most part, not for all of the questions, but for the most part, I could easily regurgitate and bring that [information] back on the test card. That has been a challenge for nursing because mostly it's more critical thinking. It's more situational. You have this patient that shows this symptom so you really have to be able to think about, process the question and be able to come up with the correct answer.

One final concept related to test taking. At least half of the students indicated that they utilized extra testing time for examinations during the first two semesters of their nursing major courses. One student mentioned accommodation due to a medical condition, however, the remainder of the students used accommodation for the purpose of having more time to take tests. In all instances, the accommodation was no longer available to them in their senior year. Students obtained the accommodation through the testing center programs available at their universities; and often times the accommodations were initiated by faculty who suggested the accommodation to the students. Carol shared her story of using accommodation as a result of a fellow student and a faculty advocating for her:

The first time I did really bad on my test. I have an American friend. I studied with her always when she asked me something I could answer for her. She knows I know the material. But when it comes to testing I told you I have anxiety plus the time. One of my tests were 35 questions they took my test I got 68. She went in and told the teacher "I studied with her. She know the material. Just because the language and the time this lady is going to fail." That teacher told me I should go and get the accommodation letter so she can give me the time. Then the next day I got 87 just because I got the extra hour.

Participation in class discussion. A number of African student participants described the difficulty in asking questions and challenging teacher statements in nursing classes. Participants indicated that the difficulty arose from experiences in Africa related to fear of making mistakes, the sense of respect for the faculty, as well as concern about

their accent potentially causing misunderstanding. Students often times waited to ask their questions until after class when they felt more comfortable approaching the faculty.

This was true for Inez:

I'm a little timid at times, so I'm not comfortable asking questions in class, except in small class. A small class I don't really care. But huge class, sometimes I'm just reluctant you know. Maybe I don't want to hold back the class so. Sometimes I feel like maybe everyone else thinking stupid me I don't want to hold back the class. I just prefer to wait and ask it later.

Because participation was a graded component of some nursing classes, students had to learn to participate more freely. This required becoming comfortable with asking questions. Gail illustrated this concern with asking questions in class:

Something I've been battling with here is asking questions. Because I'm so terrified. They have this figure of instructor or teachers like, you know, they are like high, they are above you and you can't just throw any stupid questions... So it was more, I still struggle with it up to now. Because I had to transition and be like, okay, it's okay to ask the dumb questions, they're not really stupid. Just ask whatever. But at times it just played like the old way. No, don't ask any stupid questions that you know you can find in the textbook, you know.

Some students mentioned that forced interaction in class through participation grades was actually beneficial because it required them to actually say something meaningful in class. For others, the requirement to participate did not help them feel more comfortable.

Faith's comments illustrated how forced interaction was beneficial:

Like, just place me with a group of other students and give us something to do. It's like it mandates me to interact with the students... Like in my sociology class and most of my other biology classes, the thing that helped me the most was class participation was graded, so I pretty much had to participate cause if I don't participate then the grade be affected. So either, like I had to make a presentation in a group or I am a group leader. I, you know, I'm made a group leader in some group that I have, I just had to do it.

Participation in critical thinking course. Six of the students who participated in this study reported having enrolled in a critical thinking course as part of the mandatory nursing courses for all nursing students. The courses discussed were one semester in length, focusing on learning critical thinking methods within the context of the nursing process. Of the six students who reported taking such a course, two of the students had passed all of their courses as of the interview. There is no way to ascertain the impact of those courses on student success, but one can only conjecture how successful the students might have been without the course. Inez commented on the critical thinking course she took:

[...] which basically throws light on how we should react in certain situations and writing papers. I think the course was helpful because, you know, I mean that you become comfortable if you're faced with a real life situation on how to act.

Linda commented further on the course which she took and its impact on her thinking:

You have to be open-minded [caring for patients and taking tests in nursing] and they taught us to be open minded you know reading the questions. And they give us key points about being able to eliminate the correct answers to come up with the best one.

Use of the internet and mass media. Another method of adaptation that the participants discussed frequently was the need to learn how to use the internet. Several students described a lack of familiarity with computers, online learning management systems, and formatting papers for proper citation. In fact, several students stated that they were not familiar with typing, which added time to their completion of assignments. A number of students stated that they came to realize they were visual learners and had found ways to use the internet to their benefit. They used a variety of internet tools such

as YouTube as a way to reinforce concepts that had been discussed in class and about which they had read in their textbooks.

Numerous participants also mentioned the role of television in understanding culture and critical thinking. They believed that the American students, as a result of television, had a different concept of hospitals and cultural ways of problem solving which put the African students at a disadvantage because of their lack of exposure.

Fear

A third theme that emerged from many of the interviews involved the concept of fear having an impact on the ability to utilize critical thinking. While this was not mentioned by all participants, the theme emerged in a majority of interviews, though at a variety of points in the interview process. The theme of fear was categorized around five subthemes, based on the reasons for the fear. These included: (a) fear of punishment by teachers in Africa; (b) fear of asking questions in class in the U.S.; (c) fear of academic failure; (d) fear of discrimination or stereotyping in the U.S.; and (e) fear of test taking in college in the U.S.

Fear of punishment by teachers in Africa. As stated earlier, a number of students described the use of corporal punishment in the classroom in Africa. As a result, students developed a fear of teachers in Africa which then carried over to a fear of teachers in the U.S. Angela expressed how fear, mixed with respect for the faculty, inhibited her ability to approach nursing faculty, despite realizing that punishment was not a practice in the U.S.

Back there, it's very respectful to their teacher. Some of this is out of fear. So that kind of psychological plays a big factor as to how to behave and to do your things appropriately on time...I think when I came here I still have that same psychology, and I was afraid of my teacher. I'm cautious even though I know it's really not that way.

Oftentimes the sense of fear related to receiving punishment in Africa for not having learned the material taught. Thus, when the prospect of making a mistake in nursing classes or clinical experiences arose, the sense of fear returned, as Edward described while discussing the difference in relationship between teachers in Africa and the U.S.:

It's not like here, where you can, you know, it's not like that. It's more about, should I say fear, as opposed to cooperation...There's always something that you as a student are going to miss. Depending upon the instructor, how you are feeling is going to be coming out. So that is the most what word, the most hesitant that you can go through. So I always have that at the back of my mind. Okay, this procedure that I'm going to do, there's a chance that I'm going to miss a step or something, and how is the instructor going to react. Some of them react nicely and some of them not so nice. So that has been my fear. That's the most challenging part of it...One thing that they need to know is, like I told you, this kind of teacher fear, that relationship with our teachers back home, you know that has shaped the way we relate to our instructors. Some of us might deny it, but it is still there.

Fear of asking questions in class in the U.S. The sense of fear included difficulties asking questions for clarification or understanding in nursing classes. Students reported that they were afraid to ask questions, because they might say the wrong thing, their accent might impede understanding, or other students would think they were less intelligent. Carol described this by stating:

I would say they might judge me, but if I say something, if I don't say it the right way, they going to judge me so I rather not say something even though I want to ask some question I would say the teacher might not understand will she think I'm stupid. So I rather not to ask her so I'll find out somewhere else.

The fear of asking questions because of misinterpretation based on one's accent

generated much frustration in the participants as described by Gail:

Yea, there was the fear of asking questions, and it's the fear of you telling them, because you're scared people won't understand you. I was so tired, everybody's like oh you got an accent, you got an accent. That's so annoying. You get so tired of it.

Fear of academic failure. All of the students expressed a fear of academic failure because they were an international student. The overriding possibility of failure led to much discouragement and loss of self esteem among several of the students, especially in those who actually failed a nursing course. The fear of failure arose partly from their reflection on the amount of time, money, and energy invested in coming to the U.S.; failure meant a loss of dreams and aspirations. As Barbara stated, "I came this far, I don't want to fail out just because of one course... I left all of my life just to be educated here." Course failures led to self-reflection by some students, who then made adaptations in their personal life or in their study habits to succeed. Consistently, this led to succeeding a course in the second attempt, as described by Hosea:

Well, I did, I not sure I did anything much different because then the material was the same, it was like a review again. You know. I really did so much. Because, like I said, it was studying with American students the first time that really sucked. Especially, and all of them all did good. You know I felt the students I studied with they all did good. I was like, why was I not the one that did, why didn't I do good as well? So the second time I had to study with fellow African students who just came in who were in the program. And who also didn't put in, who failed the class the first time too. So I studied with the African students.

Several students commented that part of the fear of failure arose from the lack of support from faculty early in courses, making the assumption the student would fail a course even after failing early in the semester. Hosea continued:

I felt they were just encouraging us to drop the class... You know, like the first time they would actually say, um, was we have like 4 tests and they average it out. And whatever, it at least has to be a 77% or above regardless of your quizzes and stuff. So I felt after even the first test that you failed they were already like, oh, drop this course, drop this course, you know, you have to take it again, drop this course. There wasn't that encouragement from them at all.

Fear of discrimination or stereotyping in the U.S. A number of students expressed the experience of discrimination for the first time when attending college in the U.S. The sense of discrimination arose partly from their skin color, as expressed by Barbara:

I mean, I hate to say this, but when I came to this country this is the first time I ever understand that your skin color makes a difference in your life... But I didn't really know the experience that would also make a difference of your success, your education, and how people perceive you, who you are and take you for who you are. In the classroom, there are some when I tried to be friendly they were not too friendly just because of who I am. I never thought that just because I look difference doesn't mean I have different thinking. I'm just the same.

Discrimination was felt by several students simply because they were international students. Participants expressed the belief that international students were scrutinized more rigorously than American students, and that faculty assumed they would fail based simply on the premise that they were international students. Several participants mentioned that teachers often expressed surprise when the students did well on tests or answered questions appropriately. Many students believed that the teacher simply did not know the students well enough to understand the issues faced by international students. Linda challenged faculty to avoid stereotyping by developing a relationship with the student:

So I guess teachers kind of, I feel like Americans in general just view international students as like they have to baby us and that could be really

annoying you know. When your teacher you know is like, I can't remember any phrase right now particular but when they, I feel like not look down on you but treat you like you're incompetent because you're international or they have to slow down because you're international...So in approaching an international student, if the professor, what you're saying I think, is get to know them rather than stereotyping that you're automatically going to have trouble. Get to know them, because you're an international student, get to know them and find out what, what their gifts are and where are their weaknesses.

Fear of testing taking in the U.S. A final subtheme related to fear involves the difficulty taking tests in the U.S. and the possibility of failure. Many of the participants indicated that multiple choice tests that emphasized critical thinking were very foreign for them, thus creating high levels of anxiety. Actually, a number of students stated they had sought out assistance for test anxiety, including medications as well as testing accommodation, for at least their junior year of college within the nursing major. Judy was one student who struggled with test anxiety:

I was scared, and me getting like I told you, I have an anxiety problem. Me failing one test is enough for the whole semester like that would mess me up. And they even had a meeting about me like telling me you need to stop being scared, it's just a, it's a passing or failing and you need to put it in the passing. And I definitely put failing in my head and it was almost existed before I even failed the class...and to really go through it on my own. So I think, I put it on myself like to have a confidence and know the reason I'm here. I'm in nursing school and I'm in America. And to take that fully to my advantage and just go for it and really use every moment to my advantage.

Taking multiple choice tests was a new phenomenon for most of the students which resulted in lower grades than they had experienced previously. Katie, who had another college degree responded to the fear of taking multiple choice tests:

But I kind of, you know, I got a wind of it after a few tests. I realize what I was up against, and then, you know, I had to settle down and try to understand what I was studying. I didn't always have to understand it before. I could just read it and I've read it and then if I test I know I'm going to make an A. Cause in my

[other major] I got a 3.9 GPA. Out of 4. So I, I was a master of regurgitation. I can get it and I will you know get it back. But my first few tests in nursing school told me I couldn't do that. So I had to settle down, understand what I was reading, and be able to answer the questions.

Thus, it can be seen that fear was an important aspect of the African student's experience in nursing which impacted all aspects of both their academic career as well as their personal lives.

Desire for Interaction With Faculty

A fourth theme that emerged from the interview of African nursing students was the desire to develop closer relationships with nursing faculty, despite a common background of negative relationships with teachers in Africa. Several students commented that it took time to realize that it was appropriate to ask teachers questions or to speak with the teacher about non-academic issues. As Angela commented:

Here I think the teacher are close to their student... It's more you can make them your friends to work with, and back there it's not like that with everyone afraid of their teachers. I think, when I came here I still have that same psychology and I was afraid of my teacher. I'm cautious even though I know it's really not that way.

Participant responses related to developing closer relationships with faculty focused on four subthemes: seeking closer relationships, desire for conversation with faculty outside of the class time rather than in public, faculty hesitancy to relate with students, and negative experiences with faculty.

Seeking closer relationships with faculty. All participants voiced the desire to develop closer relationships with faculty as a means to become successful academically. Such a relationship also fostered student improvement in critical thinking skills. Faith,

who passed all of her courses at the time of the interview stated: “I feel more free to talk to my professors... and can ask questions, challenge them or give an opinion in class which did not happen in [country].” A number of participants indicated difficulty approaching the faculty themselves. Rather, they believed faculty should purposefully initiate time for student and faculty interaction, as Gail illustrated:

I feel like they should, if possible, take their time out and try to learn the students and know their fears and because we all from different countries. People from my country may experience what I experienced depending on what kind of schools they went to. If they went to a public school it's probably more worse as opposed to a private. And I feel like if they understand the student they will be able to help them from a personal level to achieve their goals.

While many students discussed interactions with faculty related to reviewing tests and clinical assignments, many also reflected as Gail mentions above, the desire to know faculty on a personal level beyond academic performance. Barbara, who struggled to approach faculty stated:

I would say, to have good relationship with that student. They should ask you like American people they are different culture, different language, different background so they should get close to us and ask us if we need extra help, how we study, what we should do to improve our grade if you have low grade...they should understand where I came from. How I'm struggling to get to here. So if they are a nursing teacher, they should be caring.

Desire for conversation with faculty outside of the class time. Many of the participants indicated that they did not feel comfortable asking questions in class. This was related to such factors as accent, being unsure of the proper words to use, concern that the students were wasting faculty and student time asking questions in class, as well as reacting to past experiences in elementary and secondary school in which questions were discouraged. Rather, the students found that asking questions after class was more

comfortable, once they became more familiar with the instructor. Hosea expressed this fear of asking questions in class:

But myself I would feel like because of the fear of just getting it wrong, you know I mean, it just, I basically don't want to ask no questions in class or anything like that. If I wasn't sure about something like I said I would go to the professor after class.

Several students, however, stated that they found it helpful when faculty encouraged African students to talk in class. Faith stated:

Like in classroom you don't feel comfortable talking because you're told you have an accent. Someone cannot understand you because you have an accent. So you prefer not talking just writing out your ideas and what you want to say because that will not come out as an accent. It will just come out as a well written paper. So if professors could or even, yea, professors mostly could understand that and just encourage us to talk that would probably help a lot.

Faculty hesitancy to relate to students. Participants also indicated that they sense faculty hesitancy to ask questions of international students in class out of a desire not to embarrass the students. Faith, who desired to be encouraged to speak in class stated:

You know like they don't want to ask you a question because they think they will make you uncomfortable or they will embarrass in school or in class in front of your peers. But to a [country] student that's probably what I'm looking for. Someone that will encourage me to talk or someone that would do what they think here is embarrassing me.

Negative experiences with faculty. While participants expressed a desire to build closer relationships with faculty in order to succeed academically, several participants shared negative experiences that hindered the student's ability to do well in nursing school. The most common negative experience involved faculty stereotyping of international students. This stereotyping included the lack of validity in student education

in Africa, that all people from Africa are poor, or that African students are most likely to fail their course work. Several students mentioned the sense that faculty believed the students lacked an appropriate education in Africa, and were thus only semi-literate. Hosea reflected the experience of feeling as if faculty did not perceive he had a valid secondary education:

We're not like, we're not just learning right now. This is not the first step of our learning curve. We went through high schools too... We have very similar educational systems in a way. So acknowledging that fact, you know, would sort of be very helpful... The reason I say that is because, if they cannot acknowledge that, then we're pretty much looked at as a, one of a semi-literate or semi-educated student.

Inez described how faculty stereotypes are discouraging to African students, because they envision the students as all being poor, which has the perceived connotation that they will not do well:

And sometimes the examples they make in class...but there's more to Africa than that. I remember when we had our ribbon ceremony, they were welcoming us into nursing program, they had this mission trip, one of the nursing faculty she had this mission trip...She usually takes a couple of students every year to some part in Africa for a mission trip. So we had this, I think she took them to Congo. And they came back and they had all those pictures about a ribbon one ceremony. I, it was, just, I just think stereotyping....there are poor places, too, in the U.S. I just think stereotyping sometimes gets in the way.

One final example of the stereotyping by faculty that created tension for the African students was described by Linda, who was concerned that nursing faculty automatically believe that a student will not do well if one is an international student:

I feel like Americans in general just view international students as like they have to baby us, and that could be really annoying you know. When your teacher, you know, is like, I can't remember any phrase right now particular but when they, I feel like, not look down on you, but treat you like you're incompetent because you're international or they have to slow down because you're international... it

could be they are struggling because you're international, but if you have an international student and you approach that international student as, I know you're having trouble because you're international, that is just, that is not a good way to bond, that is not creative bond, that just creates distance.

Cultural Factors Impeding the Use of Critical Thinking

A fifth theme that emerged from the review of participant interview transcripts involves cultural factors that potentially can impede the use of critical thinking. This theme emerged partially as a result of a specific question during the semi-structured interview, by which the students were asked about cultural factors that might influence their ability to utilize critical thinking. This question was included in the interview because of the emphasis of *Ubuntu* as a pillar in the conceptual framework of this study. As a refresher, Ubuntu is the African philosophy that permeates much of western and sub-Saharan Africa when, translated Ubuntu means, "A person is a person through persons" (Haegert, 2000, p. 496). Six cultural factors were identified by the students during their interviews: the respect of elders, not challenging authority, importance of community, the valuing of quietness, a relaxed concept of time, the role of women in traditional African society. Several of the dimensions of Ubuntu were evident in the cultural factors identified by the participants.

Respect of elders. Every participant mentioned respect of elders as a cultural value that affects their abilities to utilize critical thinking, at least in the presence of a faculty member. As Judy stated, "Respect is number one!" Respect of elders naturally emerges from the Ubuntu worldview that emphasizes all persons are to be treated with respect and dignity. Students mentioned that respect of teachers is a natural outgrowth of

respect for elders, for while teachers may not be considered elders in age, their role as teachers elevates them to that of an elder in the eyes of an African. Because teachers are seen as elders, students found it difficult to approach teachers with questions of clarification or with questions regarding a different perspective to a problem. Several students reacted to the way some American students interacted with faculty. They saw American students being more informal, and sometimes acting rudely or without respect of faculty. Such treatment felt foreign and unusual for the African students. Gail represented the consensus of the participants when discussing the respect of teachers:

I mean it's not, like we respect them the same way, but we don't relate them like friends no, no, no. You're teacher is somebody, they're respected you just going go to them like that. Um, sometimes we really want to approach our teachers, but we just don't know how. It's not as easy as just walking into your office and telling you this and that. It seems easy to the Americans because here you get to say anything. You get to say whatever you feel like. If you don't like that teacher you'd be like oh I'm sorry I just don't like you. You can't tell a teacher like that back home. No way.

Another aspect of respect for elders involved how this perspective influenced patient care. And while not directly related to critical thinking, this perspective influenced some of the priorities carried out with patients in the clinical setting. Several students mentioned that such respect of elderly patients had kept them from implementing certain nursing actions due to the fear of causing pain or wanting to provide quality personal care at the expense of other priorities. Carol described an incident experienced by another African student in the clinical setting in which respect of elderly patients may have been perceived negatively by faculty or impeded patient care:

The other day [other student] was telling me there was one old lady, elderly, and then she was trying to check her respirations. Then she failed to ask the person to

bend down to check her back posterior. I ask her we were talking, why, and she said she's [the patient] too old. In our country just when you see old people you care a lot. But she's not thinking to check her [the patient] back it's going to help her more to check if she has pneumonia or other diseases. Just because we grew up there, she was thinking if she ask her to bend she's going to feel bad. So it's going to change your thinking... If she [the patient] bend, the outcome is going to be better. In my country just to ask somebody to bend down, the teacher would be looking at her like, why did she do that.

Not challenging authority. Another cultural value expressed by many of the students that emerged from the emphasis on respect for elders is the common practice in Africa of not challenging authority. Thus, even if students had a different perspective from the faculty they would not question the faculty. As a result, African students were more hesitant to ask questions, either in class or other settings. This also applies to the clinical setting, where students found it difficult to ask questions of physicians and experienced nursing staff. Other students related stories of having difficulty writing papers that required giving one's opinion. Hosea discussed:

One of the examples would probably be the fact that, one would come out like in the Bible classes for instance, you know, we're expected to give our own opinions on what we think. If you remember vividly, I told you that we're not allowed to give our opinions and stuff. That was one of the biggest challenges I faced, you know, it was like especially in like my worldview classes here at [college]. We have what you call the general ed and the Bible classes. We were expected to give our own opinions in class like, basically okay, what we do think. Writing the papers on our own opinions and I'm like wow. What am I supposed to put in that? One, I don't want to infuriate anybody by putting down something you know. I'm always used to doing exactly what the professor says. We don't ask, like basically whatever the textbook says, we don't ask the questions. But here, this was really rational. Even if the textbook doesn't exactly mention it, but this is exactly what you're supposed to do. Which is what I had a problem with when I got here.

Importance of community. A third subtheme related to cultural factors impeding critical thinking involved the emphasis on helping others, thus fostering community,

rather than focusing on one's own needs. A communal perspective and emphasis sits at the core of Ubuntu. Participants stated that the importance of community in relation to critical thinking arose especially when studying with other African students, as well as in the way one communicates with another individual. Students did not hesitate to help others who were struggling with studying, even if it were at their own expense. Judy illustrated this concept when comparing the study habits of American and African students:

I guess one difference between the African study group and my American's friend is with the African we just, our head was everywhere where we could actually talk about it and it would take us hours to come together and make sure the person that didn't understand understands. Where I study with the Americans it was just kind of like one way and everybody was like on point.

Valuing of quietness. A number of students commented that quietness was a virtue valued in African culture and that quietness influenced their ability to think critically. Similarly, these same students characterized themselves as having a quiet personality. Participants commented that people in the U.S. seem to be more talkative, because of their perception that American culture emphasizes communication and conversation. They observed that African people do not jump into group conversations as easily as American people, and being quiet keeps them from being assertive. This lack of assertiveness may influence their hesitancy to voice opinions or ask clarification questions in the academic setting. Barbara exemplified this quality as she described her experience with being quiet:

Yes, so I guess back home, I don't know, a person with few words especially in nursing things like that, they feel like they know better, and shyness it's not too bad. They don't say anything. But here, like they prefer better if someone

communicates, I mean I understand that. For example, I'm naturally like, unless someone is next to me on one to one conversation, I'm fine, you might not notice it. But if it's a group thing, unless I know that group, unless I know those people, I don't easily open up. It's not because I don't want to it's a challenge for me. I've been here a lot, but I guess still that's how I am.

While this characteristic was not described by all participants, quietness was mentioned by a number of participants as a struggle for them as they adapt to American culture.

Relaxed concept of time. While not directly influencing their ability to utilize critical thinking, participants did consistently comment on the differences in the understanding of time between their African culture and U.S. culture. Those who did comment on time stated that the pace of life and activities are much faster in the U.S. than what they experienced in Africa. This is borne out in the speed that people talk, the emphasis on timely arrival for class and clinical, and the need to honor deadlines for paperwork. While also representing the emphasis on respect for elders, the different concept of time may also influence clinical experiences. Hosea described:

But I learned sometimes that, at least because of time, time is of essence here. Time is of huge essence here, you know, you can't, I used to be so behind also in my clinicals a lot, because I would go into patient's room I would want to make sure I get the patient's water, if the patient is not like maybe the patient is upset about something or the patient is not comfortable in position, I have to keep doing and doing and doing everything possible. And my professors really tell me what if you had five patients, what are you going to do in a situation like that? You know so, I used to get so caught up in the patient's room because I, it all boils from the fact that my values that you know this is your patient, care for him.

Role of women in traditional African society. While only mentioned by several of the female participants, the role of women in traditional African society was identified as another cultural value that may affect a student's ability to utilize critical thinking. Those who did mention this concept stated that women traditionally remain in the home

rather than further their education. Also, their role may limit what a woman can say or do in certain settings. Students who grew up in areas in which this role of women was emphasized thus may have more difficulty voicing opinions or critiquing the ideas of men. Faith commented on this issue:

I would say mostly like gender roles. I don't know how to describe that. Like we probably have a lot, you know, much more different gender roles in my culture than they have here. So I'm probably limited to doing such and such because I am a woman or because I'm a man, and I just can't do that which is, it's not how I was taught to do it, it's not how we do it in my culture. And for me this was not a problem at all.

While the students who commented on the role of women emphasized they did not perceive the gender differences as an issue for themselves, they conjectured that it could be a problem for some students.

Evolving Self-Awareness

As described in Chapter 2, Barnett (1997) included *Self-Reflection* as the second of three domains that comprise critical thinking. He stated that the goal of self-reflection is the desire to “go beneath the surface to arrive at a deeper understanding” (p. 94) and was highly valued in higher education of the 1990s. As a result of thinking as self-reflection, new ideas, thoughts, and actions emerge. All but one of the participants in this study voiced self-reflection regarding their experiences with nursing education in the U.S. This self-reflection provided a rich insight into the meaning of their experiences. In Table 9 the comments of each participant in regard to their reflection on themselves is delineated. Several common themes run through these quotations: a realization about their own personalities, commonly as either being quiet persons or being visual learners;

an understanding of the determination and motivation for succeeding in nursing; or the need beyond themselves for other people or groups that serve as support systems to help the students cope with nursing school. Accepting Barnett's insistence that an element of the critical person is self-reflection, these comments demonstrated a level of critical thinking that might also be compared to some of the Habits of the Mind described by Scheffer and Rubenfeld (2000). Such habits of critical thinking would include confidence, flexibility, inquisitiveness, and perseverance.

The Voice of Those Afraid to Speak

Van Manen (1990) stated that using the interpretive hermeneutical approach involves seeking meaning in an experience. Finding such meaning arises from a desire to discover and reflectively understand the person in the lived experience (pp. 87-89). One way to make that discovery is through a "wholistic reading approach" (p. 93) that examines the text as a whole and then has the researcher develop a sentence or phrase that captures the main significance of the whole text. Further, van Manen identified what he called "lifeworld existentials" (p. 1010) to provide guidance for the reflection of the research process: lived space, lived body, lived time, and lived other.

After reading and rereading the participant interview transcripts, describing the concept of critical thinking as understood by each participant, and illustrating and analyzing the themes that emerged from the interviews, this researcher attempted to discern the deepest meanings of African students' experiences using critical thinking in American nursing programs. The deepest meanings that were discovered by

Table 9
Student Comments of Self-Reflection

Student	Textual Comments	Author Interpretation
Angela	...I learned more about myself and what kind of person I want to be as a nurse...places that are less intense...I like interacting with my patients...what helps a lot is to mingle and interact more...but I am very quiet and reserved.	Angela realized she needed a support system; in describing a painful clinical failure, she also realized the need to take ownership for her actions and the type of nursing most comfortable to her personality.
Barbara	...while I have been here 9 years, I felt like a new international student when I started nursing...I don't easily open up. It's not because I don't want to but it's a challenge for me	Barbara's realization of her quietness has helped her utilize study groups with American students to help her improve.
Carol	So I decided, whatever it takes I'm going to succeed, I'm determined to work this out. I have a passion to help in [country], for the kids and the mothers. I want to educate the people there...I left my life there to be educated here and if I don't make it just feel more bad about myself.	Carol expressed a strong self-determination to succeed, based on her vision of her role improving the health of persons in her native country.
David	...nursing and being an athlete, that's something that requires discipline...thus, I have learned to discipline myself and putting myself accountable, so next time I aim for something different...I push myself to get 100 instead of a 90.	David's involvement in athletics provided lessons in discipline and striving for higher goals to improve as a nurse and student.
Edward	...my brother promised me that he was going to send me to be a doctor...but when he passed [died], I knew I would not have enough money to do that...but when I came to the U.S. I saw that I could become a nurse.	Edward realized that his mission was to fulfill his brother's dream for him, which motivated him to succeed.
Faith	...I didn't feel like I could ask in class...I had something to say to contribute but I couldn't talk...I'm looking for someone who will encourage me to talk, that has helped me a lot...I helped myself by participating in school activities.	Faith had identified her uncomfortable-ness in speaking up in public settings. Realizing she needed support systems, she initiated participation in other school activities to overcome that barrier.
Gail		Gail never revealed much about herself except for her fear of asking questions in class thinking people would see her as stupid. She indicated she would rather have someone else explain a topic

Table 9
Student Comments of Self-Reflection

Student	Textual Comments	Author Interpretation
		to her rather than her asking questions to a professor.
Hosea	...I don't feel comfortable expressing my ideas cause I don't feel I will say it right. If you ask a question it makes you feel like you are not intelligent...we're not going to be looked at in the same category as an American student...they watch you, that is what I was telling you about the scrutiny. They scrutinize things a little bit more..they believe I am more of a danger to a patient than an American student	As with Gail, Hosea expressed a strong discomfort with speaking up in class. As he mentioned he felt as if African students were scrutinized more closely than American students. These two issues may connect to each other, however, Hosea never expressed other areas of self-reflection.
Inez	...I'm timid at times, and am not comfortable asking questions in class, except in small classes...I dropped out of a class, but the next time I felt like "I can do this"...	Inez had identified her timidity and stated that being forced to talk in class was helpful to her. Also, she noted a strong determination to succeed in nursing school despite a course failure.
Judy	...90% of us our goal is to have a better life than we did back home...I was scared after I didn't pass a test, it's so important, like I can't fail anymore, I had to get failing out of my head...I put it on myself to have confidence and know the reason I am here in nursing school in America. And I want to take full advantage and really use every moment to my advantage.	Reflecting on her past life experiences and the sacrifices made by her parents for her to attend college, Judy communicated a strong motivation to succeed.
Katie	It was tough. I have made it through because I said to myself "okay, this is what I have to do". So I had to kind of buckle up...it was sacrificial for my family...but I'm going to be done soon...so that kind of helped us get through	Katie, being interviewed on her last day of clinical as a student, described her strong determination to succeed and realized the sacrifices made by her family, though temporary, helped her succeed.
Linda	...I guess Africans see America as the land of opportunity, so my parents brought me to America to get a better education...my mom calls me and she says, "are you studying?" She's like, "study"...and she's just, "okay let's pray," you know...like okay, "Yes, I can do this mom."	Linda was highly motivated by her parents expectations that she do well and finds reassurance in the support and encouragement of her mother. She attributes this support to being in her last week as a nursing student before graduation.

this researcher, based on reflecting on the process as a whole, will be placed in paragraphs rather than sentences, as van Manen suggested and organized based on van Manen's four existentials. All of the participants voiced willingness to tell their stories and many stated that no one had asked about their stories. Thus, in a very real sense, these are the meanings – which seem to reveal a final theme - which African students may be afraid to articulate in the most vocal ways in their nursing educational experience.

Lived space. Van Manen (1990) stated that the lived space “refers to the world or landscape in which human beings move and find themselves at home” (p. 102). While in college, African nursing students find their home in two places – one in the nursing education world, while also remembering their home in Africa.

Participants unanimously talked about critical thinking as core to nursing. They described critical thinking in twelve unique ways, with common elements of analyzing, critiquing, reasoning, and predicting for the purpose of answering test questions or making decisions about patient care. Many also stated, however, that after having spent time taking prerequisite courses or having enrolled in other majors or occupations, beginning actual nursing courses led to feeling as if they were a new international student. That is, in a sense having felt like they had adapted to life again in the U.S., suddenly they felt foreign once again. At the same time they reflected about the extreme differences between being in school in the U.S. and being in school in Africa. As Gail stated: “...you can't tell a teacher [something] like that back home.” Further, the African students described their lived space in Africa as a place of quiet, respect, and sense of community.

Lived body. Van Manen postulated that, “In our physical or bodily presence we both reveal something about ourselves and we always conceal something at the same time [...]” (p. 103). For a number of participants, their very bodies were stereotyped, discriminated, and scrutinized in ways they did not believe American students experienced. While they all recognized their difference from American students, many asked not to be treated as different. They asked that faculty not assume they cannot think critically or succeed in the academic process. At the same time, others recognized their differences from American students and asked for additional opportunities to learn the critical thinking process. Many saw their differences used against them, while others felt acceptance. In a sense the African students were saying as mentioned by Linda: “We are different...we are not different, so don’t treat us like we are incompetent or generalize about us just because we are international.”

Lived time. According to van Manen, lived time is “subjective time” or “temporal time” that constitutes in broad ways past, present, and future (p. 104). African students understand their past and the circumstances from which they came, described their experiences in the present as a nursing student, and expressed their desires to succeed as a nurse in the future. But time takes on a new meaning for Africans studying in a Western culture. Several expressed how the educational process, the clinical process, the thinking process seemed to go faster in the U.S. In addition, there was the real sense that African students needed to work harder and study longer to understand the critical thinking process. As David stated, “we need to run faster than those from the US.”

Lived other. The lived other is the “relations we maintain with others in the

interpersonal space we share with them” (van Manen, 1990, p. 104). The African students seemed to indicate a strong desire for experiencing relationship with faculty as they asked for planned time for discussion, for faculty to “walk alongside us” (Judy), as a means for faculty to understand the nature of the students’ thinking better, and the fears and hopes that they held. In addition, the lived other is also reflected in the predominant cultural values identified by the students: respect, avoiding the challenge to authority, and fostering community. Understanding the African student perspective of the lived other sheds light on their experiences with critical thinking. Valuing respect and community as primary to relationships may, in a real sense, limit the ability to question, judge, or search for further evidence in critical thinking.

Comparative Analysis

As mentioned earlier in this chapter, Maxwell (2005) advocated for the use of matrices to identify patterns in qualitative data by attempting to understand the “coherent whole” (p. 99), rather than fracturing the data as happens in thematic analysis. After an extensive reading of each participant’s interview transcript, two conceptually clustered matrices were developed that organized the researcher’s interpretation of student comments to the questions asked during the interview. In the first matrix, the educational experiences of participants, based on the type of school they attended in Africa, (public versus a private secondary school) is examined. This matrix described the participants’ school experiences in Africa, along with the types of interactions experienced with faculty in the U.S. (See Table 10) In the second matrix, the participants’ experiences with

Table 10
Educational Experiences Based on Type of Education in Africa

Students Who Attended Private Secondary School in Africa		
Participant	School Experience in Africa	Interactions with Faculty in U.S.
David	<ul style="list-style-type: none"> Teachers often did not show up for class. Belief that teachers more interested in pay than student outcomes; Corporal punishment common in school- often if student answered question incorrectly; Class & test questions asked by teachers mostly recall of facts 	<ul style="list-style-type: none"> Not hesitant to contact faculty outside of class when having academic difficulty; Finds teachers very responsive to international student (IS) issues: “they will walk alongside of you”; Faculty assistance marked by flexibility and taking time outside of class and clinical times;
Faith	<ul style="list-style-type: none"> Attended private boarding school, had remedial studies before class time each morning and every evening; Little opportunity to ask questions or interrupt teachers; Students believed teachers knew everything, thus take teachers at their word; Learning focused on memorization – content was theoretical rather than practical; Students not permitted to provide opinions about content studied; 	<ul style="list-style-type: none"> Feels free to talk to professors by asking questions, challenging content, and giving opinion; Professors do not want to make IS uncomfortable or embarrass them by asking IS questions in class; Student expressed desire to be encouraged to talk in class to help develop critical thinking
Gail	<ul style="list-style-type: none"> School was not lacking for resources; Teachers took genuine interest in students; Asking questions in class was encouraged by teachers; Testing was primarily subjective focusing on recall of facts; 	<ul style="list-style-type: none"> Teachers in nursing program found to be welcoming and receptive; Teachers encouraged meeting with students when struggling with course content; Found one on one meeting with faculty helpful;

Table 10
Educational Experiences Based on Type of Education in Africa

Students Who Attended Private Secondary School in Africa		
Participant	School Experience in Africa	Interactions with Faculty in U.S.
Hosea	<ul style="list-style-type: none"> Teachers were very involved with student learning – encouraged students to do their best; Teacher/student relationship was professional in nature; Discipline involved pulling student aside and discussing issues and what student needed to change; Computers and other resources in adequate supply Content more theoretical than practical but there was much interaction with faculty; 	<ul style="list-style-type: none"> Able to speak with professor without difficulty since he was comfortable doing that in Africa; Does not feel comfortable asking questions/speaking in class; Had to learn it was appropriate to provide opinions to others ideas in papers; Feels teachers scrutinize IS more than American students
Inez	<ul style="list-style-type: none"> Teachers did not rely on textbooks even if available; Testing was essay and memorization focused; Interactions and discussions with faculty were frequent in classroom Teachers often lived at boarding school thus creating social interaction outside of class; Part of evening time spent with teachers in “study preps”; 	<ul style="list-style-type: none"> Teachers readily available to answer questions; Does not feel comfortable asking questions in class, is comfortable approaching teacher outside of class time for questions.

Table 10 (*continued*)
Educational Experiences Based on Type of Education in Africa

Students Who Attended Public Secondary School in Africa		
Participant	School Experience in Africa	Interactions with Faculty in U.S.
Angela	<ul style="list-style-type: none"> Everyone was afraid of teacher Physical punishment often used for discipline; Few resources and crowded classrooms; 	<ul style="list-style-type: none"> Was afraid of teachers when first arrived in U.S., still cautious even though realizes teachers are approachable; Several instances when she approached faculty but faculty less than cordial to provide help; Believes some faculty think her accent indicates she does not know material;

Table 10 (*continued*)
Educational Experiences Based on Type of Education in Africa

Students Who Attended Public Secondary School in Africa		
Participant	School Experience in Africa	Interactions with Faculty in U.S.
Barbara	<ul style="list-style-type: none"> Teacher lectured, put notes on blackboard for students to copy; Parents emphasized importance of respecting teachers; Resources very limited, rather used textbooks or had homework; 	<ul style="list-style-type: none"> Has little hesitancy speaking with faculty about test performance; Feels more comfortable approaching teacher after class – not comfortable formulating ideas in front of large number of students in class;
Carol	<ul style="list-style-type: none"> No personal relationship with teachers, no encouragement to ask questions in class; Whatever teacher said was right; Classroom marked by fear and judgment – favoritism given to smarter students; 	<ul style="list-style-type: none"> Feels discrimination from faculty after poor performance in first semester of nursing; Afraid to ask for advice for fear her comments will be misinterpreted; Afraid to ask questions in class – believes students and teachers will think she is stupid; Concern that her accent might be primary reason for misinterpretation of her comments;
Edward	<ul style="list-style-type: none"> If students got questions wrong, there was harsh punishment – parents would support teacher punishment of student; Early morning “mentals” held to review previous day material; Student-teacher relationship dominated by fear 	<ul style="list-style-type: none"> Finds cooperation and patient relationship between students and faculty in U.S.; Will not approach a faculty about a question until after significant searching for answer – “I do not want to waste their time”; Described particular incident when approached by faculty – he felt motivation for being approached out of desire of faculty to help student. But he needed to “shake off the burdens of memory of teachers in Africa”;
Judy	<ul style="list-style-type: none"> Little interaction with teachers; Teachers lectured and put notes on blackboard for students to copy into notebooks. Notebooks reviewed for accuracy; 	<ul style="list-style-type: none"> Hesitant to approach faculty at first when failing a course. She believed faculty had given her everything in class needed to pass the test – did not want to waste faculty time;

Table 10 (*continued*)
Educational Experiences Based on Type of Education in Africa

Students Who Attended Public Secondary School in Africa		
Participant	School Experience in Africa	Interactions with Faculty in U.S.
		<ul style="list-style-type: none"> • Afraid faculty would believe student was lazy • Found that faculty who intentionally approached students were beneficial and helped to boost student confidence;
Katie	<ul style="list-style-type: none"> • Significant shortage of learning resources; • Teacher and other political strikes interrupted educational experience; • Very little interaction between students and teachers • Believed teachers only doing their job for the sake of a job, not interested in student improvement 	<ul style="list-style-type: none"> • Finds that teachers want to motivate students to learn and are very accessible; • Does not feel comfortable speaking up in class due to language and lack of confidence being able to use critical thinking;
Linda	<ul style="list-style-type: none"> • Teachers would often not show for class due to strike or other reasons; • Acceptable for teachers to beat their students which created animosity between teachers and students; • She often skipped class to avoid punishment • Came to the US during secondary school and had better relationship with teachers and felt comfortable approaching teachers about questions; 	<ul style="list-style-type: none"> • Has developed close relationship with several faculty of African heritage; • Found some faculty emphasize or assume IS African heritage as the cause for challenges and failures – believes stereotyping of IS frequent; • Believed faculty thought she was stupid and was the cause of her not doing well in courses.

critical thinking based on whether or not they failed any nursing courses within the major is examined. In this matrix, the challenges related to critical thinking experienced by the student, methods which they adopted for learning critical thinking, and any African cultural values related to critical thinking identified during the interview are identified. (See Table 11)

Educational Experiences Based on Type of Education in Africa

In Table 10 the matrix allows comparison of differences in educational experiences between students who attended public secondary school in Africa and students who attended private secondary school in Africa. Several observations can be made from a review of this matrix. Four common concepts were identified among students who attended public school in Africa. First, the school atmosphere in public schools was characterized as using corporal punishment which instilled an atmosphere of fear in the classroom. Second, students in public schools tended to express a lack of relationship between teachers and students. Third, when comparing information outlined in Table 4 related to who failed nursing courses, it can be noted that six of the seven students who attended public secondary schools in Africa failed nursing courses in the U.S. Finally, all but one of these students discussed experiencing hesitance to approaching nursing faculty when they were struggling academically. While they were hesitant to approach faculty, however, they all expressed the desire to want to interact with faculty about academic difficulties.

In regard to those students who attended private schools, three observations can be made from a review of 10. First, the students experienced more interaction with teachers in secondary school in Africa as compared with those students who attended public school. Second, four of the five students who attended private school passed all nursing courses at the time of the interview. Third, these students expressed greater comfort approaching teachers in the U.S. than the public school students. Similar to the public students, however, the private school students also wished to approach faculty

about questions outside of class rather than during class times.

Challenges Faced By Critical Thinking

In Table 11, the matrix compares the challenges faced, the methods of adopting critical thinking, and the cultural values influencing the use of critical thinking of African students as they experience a nursing education in the U.S. This matrix is structured based on whether or not the students passed or failed any Nursing courses.

Several observations can be made about students who failed nursing courses. First, the challenges they identified emphasized test anxiety, contextual understanding of test questions, language and accent issues, and an inherent fear of asking questions of faculty. Second, three of the seven students studied with U.S. students while four preferred to study with African students. Finally, these students identified respect, community, time management, and fostering a quiet nature as cultural values that influenced their abilities to utilize critical thinking in nursing school.

In reviewing Table 11 in relation to students who passed all of their nursing courses, the following can be observed. First, common challenges included the faster pace of the U.S. educational system, the fear of having questions judged as stupid, and the learning of the concepts of critique and analysis. As with students who failed nursing courses, several students in the passed category identified the move from memorization to practical application as a challenge. Second, in relation to methods for adopting critical thinking, all of the students who passed their nursing courses emphasized that they preferred to study with American students. They also mentioned the benefit of involvement in non-academic activities with non-African students, such as sports,

campus groups, and earning other degrees before nursing in learning the methods of critical thinking. Last, students who passed all of their nursing courses expressed similar cultural values that influenced the use of critical thinking, most significantly respect of elders, time management, and sense of community. When compared with those who had failed a nursing course, however, this group did not mention having a quiet nature as an important cultural value.

Summary

In this chapter, the conversation with twelve African nursing students studying in the U.S., have been described through the lens of seven themes. These themes were discovered by the researcher as a result of reading, rereading, analyzing, and reflecting in an attempt to understand better the experience and meaning of learning critical thinking in both academic and clinical settings. It needs to be understood that the themes that emerged were uncovered, as the researcher is part of the research process. So they are identified and described through the lens of one not African, but acutely concerned about the African student experience.

In Chapter Five, the themes and meanings discussed in Chapter Four will be further analyzed to reveal appropriate implications and recommendations for nursing education and research.

Table 11
Challenges and Experiences with Critical Thinking

Students Who Failed Courses in Nursing School			
Participant	Challenges Faced	Methods for Adapting to Critical Thinking	Cultural Values Related to Critical Thinking
Angela	<ul style="list-style-type: none"> Felt discriminated against, thus not able to form support groups with other students; Takes twice as much time for reading and studying for tests; Afraid to speak up in class due to accent, and what she believed to be the conclusions faculty make about one's knowledge level because of their accent – the teacher thinking one does not understand the material just because someone has an accent; Fear and anxiety interferes with thinking and applying things 	<ul style="list-style-type: none"> Utilized YouTube & other educational videos because found to be a visual learner – also draw diagrams and create tables to relate concepts; Completed additional reading; also found writing assisted with developing CT skills; Studied with American students to ascertain different ways of thinking – even social interactions; Received testing accommodation due to test anxiety; NCLEX practice questions used for 50% of time studying for tests 	<ul style="list-style-type: none"> De-emphasis on talking in social circles about personal situations. This also then was reflected in academic situations, and less of a tendency to speak up in academic and clinical situations.
Barbara	<ul style="list-style-type: none"> Had to learn new style of questions – application oriented rather than memorization; Language barrier that worsened between college attended for pre-reqs and nursing school. She felt like a new international student in nursing school; Difficulty grasping the contextual understanding of clinical or test questions; Test taking was a particular challenge in applying the knowledge 	<ul style="list-style-type: none"> Reviews tests with faculty to better understand the process of choosing correct answer; She has someone review her written papers; “If it is a serious assignment I make sure I give it to someone else to sure it makes sense.” Use of online NCLEX questions in preparation for tests 	<ul style="list-style-type: none"> Respect of elders is an important emphasis in African culture – thus teachers are always respected; America values open communication and interaction – more of an emphasis on being quiet in Africa. When quiet in class, it might be interpreted that one is not sociable or willing to interact in class. Impacts the asking of questions. Interacting more seems to improve performance

Table 11
Challenges and Experiences with Critical Thinking

Students Who Failed Courses in Nursing School			
Participant	Challenges Faced	Methods for Adapting to Critical Thinking	Cultural Values Related to Critical Thinking
Carol	<ul style="list-style-type: none"> • Finds the textbooks to be “very deep”, and takes much longer to read; • Contextual issues when taking tests, would often place self in Africa when trying to answer a question; • Language has an impact on answering questions – “When I read sometimes I do not understand what they are asking, makes it hard to think critically.”; • Fear of saying the wrong thing or misinterpretation due to accent keeps student from asking faculty questions – “the teacher might think I am stupid”; • Experiences test anxiety which is being treated professionally and receives accommodation; • Minimal writing experience in Africa 	<ul style="list-style-type: none"> • Utilizes NCLEX practice questions to study for tests and learn how to understand questions by focusing on the question rationales; • When taking tests tries to consider the whole question and the purpose of the question • Utilized testing accommodation by extended time to take tests; • Studied with an American student mentor/tutor who is a nursing student further in the program; • Talking through content while studying for test 	<ul style="list-style-type: none"> • “If somebody fail in my country, you just grab that person to help them, you do not consider you’re going to be sued. You just do it without thinking. In this country I see different and see what happened to the person, think what should I do before I jump in and help.” • Respect for elderly - related a story about assessing a patient, and avoiding certain aspects of the assessment for fear of causing pain or discomfort – that consideration is more highly valued than the assessment – “So now my thinking is different I would think even though its going to hurt, in the long run it will help”;
Edward	<ul style="list-style-type: none"> • Initially in nursing school nothing made sense, • Certain level of distrust of the professors based on experiences in Africa; • In clinical always felt the fear that a mistake would be made or forget a particular step – made him hesitant in performing procedures; 	<ul style="list-style-type: none"> • Rather than asking questions in class, student researched the concepts on the internet; • Relied heavily on the internet – especially YouTube - for filling in gaps of knowledge related to study materials or proper performance of a procedure; • Used study CDs from standardized testing company 	<ul style="list-style-type: none"> • Fear of teachers in Africa shaped the way he relates to instructors in the US, “some of us might deny it, but it is still there” • In [country] being quiet is a virtue. “Our people admire those that are quiet, keep family stuff to themselves”; • Because of the lack of resources, did not know how to type, thus it took longer to complete paperwork

Table 11
Challenges and Experiences with Critical Thinking

Students Who Failed Courses in Nursing School			
Participant	Challenges Faced	Methods for Adapting to Critical Thinking	Cultural Values Related to Critical Thinking
Hosea	<ul style="list-style-type: none"> Emphasis in Africa was on memorization, not allowed to give opinions then began taking courses in the US in which students expected to give their opinion; Assumption was that if IS asked questions they were not intelligent; Studying for tests, would use memorization rather than apply my reasoning to it; Because of the focus on memorization, did not do as much reading beyond what heard in class or read the details between classes 	<ul style="list-style-type: none"> Studied with other African students, as he could relate to them more in terms of the techniques of studying. Studied first in private, then come together to discuss the topics; whereas the American students would compare notes and then ask how they would apply it; Perceived that he spent twice as much time studying; 	<ul style="list-style-type: none"> Concept of time and priority with the patient seems different. American priorities/values “time is of the essence” and what other patient’s do you need to care for. While in the patient room asking, “What else do I need to do for the patient to make them comfortable, my values say I need to care for this patient in the same way I want to be cared for.”
Judy	<ul style="list-style-type: none"> Found that need to study for much longer period of time to get beyond the memorization part and how to discern the difference in answers on a multiple choice test; Feels that language and the context of the use of medical terms is challenging because of the lack of exposure to American society; Experiences test anxiety and feels like she lacks self-confidence 	<ul style="list-style-type: none"> Spending more time reading text and studying with American class-mates. “I have a certain way of thinking through the questions where another student can have another way and you can see where they got that answer.” Met with faculty to review material as well as use nursing tutors...”I realized that going to my professors definitely helped and took that for my advantage to pass instead of trying to like in my way protect my professor’s time.” 	<ul style="list-style-type: none"> Respect – how one approaches a professor. Concern that approaching faculty perceived as being lazy or wasting faculty time. Sense of community – while studying, if with other African students they would work at a question until everyone understood; with American students studying was much faster, there is one way to the answer, and then they moved on. East African people are more shy, thus they do not make eye contact or are less expressive until they feel comfortable in their surroundings;

Table 11
Challenges and Experiences with Critical Thinking

Students Who Failed Courses in Nursing School			
Participant	Challenges Faced	Methods for Adapting to Critical Thinking	Cultural Values Related to Critical Thinking
Linda	<ul style="list-style-type: none"> At times would rush through test questions, not read all of the answers, and not necessarily choose the correct answer; Does not believe the challenges with critical thinking are culturally based – American students had challenges too; In her observation of other IS, she noted that those with ESL had the most difficulty; Accent gets in the way of her communicating her thoughts becomes nervous and makes mistakes; Afraid to raise questions in class for fear of saying the wrong thing (memories of Africa and corporal punishment) 	<ul style="list-style-type: none"> Studies primarily with peer African students – feels more comfortable studying with somebody that understands her accent; Did utilize testing center for testing accommodation first year of nursing; 	<ul style="list-style-type: none"> Respect is highly emphasized, and thus affects the way teachers are approached...but feel that approaching teachers in the US is overused. Surprised when some American students say disparaging comments to faculty.

Table 11
Challenges and Experiences with Critical Thinking

Students Who Did Not Fail Courses in Nursing School			
Student	Challenges Faced	Methods for Adapting to Critical Thinking	Cultural Values Related to Critical Thinking
David	<ul style="list-style-type: none"> Did not experience the concept of CT until entered nursing school, even in other courses taken in the US; Fast pace of academic experience 	<ul style="list-style-type: none"> Able to use the lessons of self-discipline learned participating in sports to work at changing study habits in nursing; 	<ul style="list-style-type: none"> Could not identify any culturally related values

Table 11
Challenges and Experiences with Critical Thinking

Students Who Did Not Fail Courses in Nursing School			
Student	Challenges Faced	Methods for Adapting to Critical Thinking	Cultural Values Related to Critical Thinking
	<p>made it difficult when taking more time for studying;</p> <ul style="list-style-type: none"> Adapting to CT oriented questions instead of memorization oriented; 	<ul style="list-style-type: none"> Studied with American students who he believed knew the material well – and analyzed their thinking processes – watching them get better and better; Reviewed tests and analyzed the tests to determine the reason for choosing the incorrect answers. If that did not help, would then make an appointment with faculty; Did more reading to help process information Found that his most effective learning style was visual in nature; Also found quizzes helpful – help one to understand how to pick things out like what a word means or what are the key words, or what the questions are asking 	
Faith	<ul style="list-style-type: none"> Received BS in other major at different college, courses in US asked for student critique, opinion, and finding hidden messages in assigned readings and movies. States she felt like a child because she did not know how to go about critiquing the materials; Found that language affects how IS think, perform, and relate with other students...partly related to the accent and pronunciation of words. 	<ul style="list-style-type: none"> Found that gaining the self-confidence to speak up in class helped the most with developing her critical thinking; Studied in groups which mandated her to interact with other students (not IS); Class participation grade forced her to speak out in class and ask questions; Participation in school clubs and other school activities increased the interaction with non-IS helped to develop critical thinking; Also having a host family improved 	<ul style="list-style-type: none"> Gender roles limit what one can say, thus limits the questioning or critiquing of someone else.

Table 11
Challenges and Experiences with Critical Thinking

Students Who Did Not Fail Courses in Nursing School			
Student	Challenges Faced	Methods for Adapting to Critical Thinking	Cultural Values Related to Critical Thinking
Gail	<ul style="list-style-type: none"> One of the challenges educationally was the reliance on learning management systems like Blackboard(not necessarily CT related); Fear of asking questions because people may not understand you due to the accent. Tires of hearing about accent; In US explanations tend to be short and to the point, in Africa they are more narrative and descriptive with more explanation; People in US tend to jump into others' conversations; 	how to use the language	<ul style="list-style-type: none"> Not related to CT, but struggled with time management, late for class, turning in assignment etc – at least the first year of nursing, but it improved after that.; Respect for teachers is a strong value;
		<ul style="list-style-type: none"> Took a CNA course that was taught by same instructor as in fundamentals. So repetition helped; Purposefully met with faculty to review questions and learned how to help her make the connections; Reviewing case scenarios helped with CT, did one on one's with professors to do case scenarios, also found use of computer-based learning modules supplied by textbook company are assistive in learning CT; Studied with non-IS students 	
Inez	<ul style="list-style-type: none"> Did not identify much challenge in the use of critical thinking; Had not fostered a practice in previous educational settings of thoroughly reading textbooks, realized the need to focus more attention on the text. Tended to be timid, thus uncomfortable asking questions in class 	<ul style="list-style-type: none"> Stated that additional studying, and use of practice questions from standardized testing vendor was helpful in processing questions; 	<ul style="list-style-type: none"> Time perspective is the biggest cultural difference but did not relate any connection to critical thinking
Katie	<ul style="list-style-type: none"> Found the transition from memorization -based learning to CT intimidating at first; Her GPA dropped between previous college education in US and nursing 	<ul style="list-style-type: none"> While studying would develop potential questions and situations that reflected more CT application rather than just memorization; Study time was twice that reported by 	<ul style="list-style-type: none"> Approaching people slower - rather than jumping to the task at hand, talking to people about how they are doing etc. Takes long to do an assessment;

Table 11
Challenges and Experiences with Critical Thinking

Students Who Did Not Fail Courses in Nursing School			
Student	Challenges Faced	Methods for Adapting to Critical Thinking	Cultural Values Related to Critical Thinking
.	<p>program causing a decrease in self-confidence;</p> <ul style="list-style-type: none"> • Felt herself to be a quiet individual who is not willing to ask questions in public; • Speed of the educational process is very fast, which makes it hard to develop critical thinking skills; 	<p>non-IS peers;</p> <ul style="list-style-type: none"> • Studying in groups of non-IS; • Reviewed standardized testing books helped in the studying process; 	<ul style="list-style-type: none"> • Respect especially with older persons and faculty;

Chapter 5 – Discussion, Implications, and Conclusions

In this final chapter the essential themes uncovered during the analysis of the interview transcripts are discussed in light of related previous research and conceptual theories of critical thinking as described in Chapter 2. Additionally, implications for education, as well as implications for further research are discussed as they relate to universities improving the teaching and learning experience for African nursing students. These implications are put forth based on the themes that emerged from the transcripts. Keeping with van Manen's (1990) interpretive hermeneutical approach to research, this chapter serves to create a "reflective cognitive stance [...] which serves to make some aspect of our lived world, of our lived experience, reflectively understandable and intelligible" (p. 125). Such is the goal of this chapter in discussing the essence of the African nursing student experience to using critical thinking.

Reflecting on the experience of interviewing twelve students who traveled from Africa to the United States to pursue the goal of becoming a professional nurse, a number of questions must be considered. What is it like to be asked one's opinion when you have been taught all of your life to respect what other people say? When is it appropriate to question what a teacher says – either for clarification or establish correctness – when one has experienced physical punishment after asking questions in secondary school? What is it like to feel voiceless, afraid to ask questions because of the fear of being misunderstood

due to one's accent? What does it feel like to be immersed in a foreign education setting after twelve years of secondary school in Africa? How does it feel to be discriminated due to the color of one's skin, an unusual accent, or the stigma of being an international student? What does one do when, having invested so much by leaving home in a distant land to become a nurse to help others, failure looms or the challenges seem insurmountable? What is it like to become discouraged in a strange land with few friends available? Returning to the study's assumptions and research questions, in light of what the student participants expressed, answers to some of these questions have emerged.

Return to Study Assumptions and Research Questions

When discussing the implications of the seven themes identified in this study, including the understanding of critical thinking articulated by the African nursing students who participated, it is helpful to return to the assumptions and biases described in Chapter One. Analyzing the latest research related to cross-cultural influences of critical thinking within international students from Asian countries, Davies (2006) argued that critical thinking is culturally contextual, thus has significant implications for education. This was further supported by Vandermensbrugghe (2004), who wrote that critical thinking is culturally constructed, and that most of the published literature reflects a Western critical thinking perspective. Based on this assumption, research was undertaken not so much to evaluate and measure the critical thinking practices of the African students, but rather to describe their experiences learning a different type of critical thinking revealed through the themes emerging from the participant interviews.

A second assumption discussed in Chapter 1 relates to what Marshall and Barritt

(1990) discussed in their evaluation of the American educational system. In their meta-analysis they concluded that educational research literature tended to be written from a “problem-to-be-solved perspective” (p. 599) that categorized people, thus limiting the ability of researchers to truly understand research participants’ experience with a phenomenon. Further, Gutierrez and Rogoff (2003) identified the need to abandon what they termed “deficit-model thinking” (p. 19) that created hierarchies of educational practices placing the dominant cultural over other cultural practices. This current study attempted to keep these two concerns in mind, attempting not to evaluate the adequacy of the African educational system and student ability to think critically as inferior to the Western models; but rather, to listen and value the student’s past educational experiences and better understand their backgrounds as a way to mediate between the African students’ and the American nursing educational system. Thus, it is not that African students cannot and do not think critically, rather that their methods of critical thinking are different than the methods used in the context of Western health care cultures. As a result, the need is not to minimize the student’s prior educational experience as reflected by one of the participants, Hosea, who stated, “We went through high school too... if they [Western educators] cannot acknowledge that, we’re pretty much looked at as semi-literate or a semi-educated student.”

Finally, Tervalon and Murray-Garcia (1998) coined the term *cultural humility* to replace *cultural competence* as an outcome for multicultural education. Cultural humility encourages individuals to identify their own biases and assumptions when working with people from diverse cultural backgrounds, recognizing that it is impossible to become

adequately knowledgeable about cultures other than one's own. Throughout this study, the mindset of cultural humility has been at the forefront guiding the design, methods, interviews, and thematic analysis, attempting to understand a small part of the African student's experience and recognizing so much more to be learned from the African student. Additionally, cultural humility emphasizes the development of partnerships between care providers and clients; in this study the goal during interviews and analysis was to foster such partnerships between the participants and the researcher.

In this study, seven themes with numerous subthemes emerged from interviewing twelve African nursing students enrolled in a variety of nursing programs in the U.S. (See Table 8). These themes included:

- Differences in learning experiences in Africa;
- Learning new tools for adapting to Western critical thinking;
- Fear in a number of settings;
- Desire for deeper interaction with nursing faculty in the U.S.;
- Cultural factors impeding the use of critical thinking;
- Evolving self-awareness; and
- Developing a voice that is afraid to speak.

The themes suggest that the majority of students interviewed experienced significant differences in educational styles and environments between Africa and the United States; and that these differences, in concert with their own cultural assumptions, created challenges for adapting to a Western critical thinking way of thinking. While faced with these challenges, the students strongly desired to become academically

successful and to utilize a variety of adaptive tools for learning critical thinking from a western perspective.

In further analyzing these findings, the next section explores the implications of the themes and interviews from the context of the original two research questions. Given, as mentioned in Chapter 1, the paucity of research related to African students and critical thinking, the purpose of this study was to uncover the critical thinking paradigms used by African students. Responding to Tiwari, Avery, and Lai's (2003) call for qualitative research that provides a deeper understanding of what critical thinking entails in different cultures, this study was based on two research questions:

1. What are African students' experiences of learning and utilizing Western critical thinking methods in the academic and clinical settings?
2. What cultural and past educational factors influence the understanding and utilization of Western style critical thinking?

Research Question 1: African Student Experiences Using Critical Thinking in Academic and Clinical Settings

African students interviewed for this study focused on four aspects of their experiences with critical thinking in the Western academic setting. These aspects included their understanding and application of critical thinking, the tools used to learn and adapt to an educational process focused on critical thinking, a desire to interact more fully with nursing faculty, and negative experiences in the American educational setting.

Understanding of Critical Thinking

All of the participants emphasized the challenge of learning the skills of critical

thinking, partly based on their lack of exposure to critical thinking in African education. While several students, Faith, Hosea, and Katie described small degrees of exposure in sports, debate clubs, and post-secondary education in Africa, this was the exception, rather than the rule. The distribution of Scheffer's and Rubenfeld's (2000) critical thinking skills and habits (as noted in Tables 5, 6, and 7), indicated that the students were utilizing at least rudimentary critical thinking skills throughout their nursing education. For several of these students, this has been directly through a critical thinking course embedded into their nursing program. For others, the development of critical thinking skills and habits has been more of an integrated process throughout their nursing courses.

All students expressed some difficulty with learning and adapting to critical thinking skills. This is consistent with earlier research regarding critical thinking of international nursing students (Ayala, 1999; Gardner, 2005; Sparks, 2009; Wang, Singh, Bird, & Ives, 2008) and non-nursing international students (Davidson & Dunham, 1996; Durkin, 2008a & 2008b; Lee & Carrasquillo, 2006; Melles, 2009). Participants in this study, however, were exclusively African. As mentioned in the literature review, no studies were found focusing on critical thinking and African students studying nursing in the United States. It has become clear that African students struggle with critical thinking, comparable to students from Asia, Central America, and the Middle East.

While the intent of this study was not to compare African students to American students, it became clear that African students perceived their challenges as distinct from those of American students. In fact, based on observations of American students in class and clinical, while testing, and while participating in study groups, several of the

participants perceived that American students had a better grasp of critical thinking, experienced fewer challenges related to critical thinking, and had fewer challenges overall.

While the participants expressed challenges learning critical thinking, however, this does not mean they do not think critically. Considering participants' responses in light of the critical thinking skills and habits developed by nursing experts in the U.S. (Scheffer & Rubenfeld, 2000), all of the students were able to articulate several of those skills and habits. There was no emergence of a pattern of skills and habits of critical thinking in the participants' responses.

When those definitions and illustrations of critical thinking in the clinical setting were analyzed according to Barnett's model of critical thinking (1990), however, some potential patterns emerged. Students who passed all of their course work at the time of the interview were more likely to have attended private secondary schools in Africa. These participants more closely illustrated Barnett's Level 2 and Level 3 criticality. In contrast, most of the students who failed at least one nursing course had attended public secondary schools in Africa. These students were found to illustrate Barnett's Level 1 and Level 2 criticality. Given the small sample size coupled with the lack of quantitative data, no generalizable conclusions can be drawn. It seems, however, that the differences in educational experiences and cultural values in Africa might influence the student's experience with critical thinking in nursing school.

Adapting to a Critical Thinking Educational Environment

Students identified a number of learning tools that they used to adapt to the use of

critical thinking in their nursing education. These included the use of study groups, learning how to use the internet, changes to their own personal study habits, and strategies for test taking. These tools support the findings of Omotosho (1998), who found that African students needed to transition their test taking strategies from describing and explaining information to analyzing and evaluating options in solving a problem (p. 168). This research further supports the grounded theory of Durkin (2008a & 2008b) related to the adaptation of international students to using critical thinking. The initial stage of Durkin's model is labeled "learning the ropes" (2008a, p. 21); in this stage, students attempt to learn the various skills necessary to master critical thinking methods. The learning of tools identified by the African students in this study illustrates this initial stage of Durkin's model.

One of the interesting learning methods discussed by the participants involves the use of study groups. As described in Chapter 4, some students preferred studying with other African students, and some preferred studying with American students. In the comparative analysis of challenges faced and adaptation methods used, all of the students who had passed their nursing courses at the time of the interviews studied more consistently with American nursing students, while those students who had failed a nursing course utilized both American and African students for their study groups. There is very little in the literature investigating the effectiveness of a variety of models of study groups as it relates to international student development of critical thinking. Similar strategies were described by Robertson, Line, Jones, and Thomas (2000) in their investigation of learning environments conducive to international student success. They

found that Asian students identified the need for interaction with native Australian students both to improve language acquisition and become less isolated. Melles (2009) developed an engineering course that included a significant integration of critical thinking content with engineering content. Upon evaluation of the course over several years, he found that critical thinking improved among the international students as a result of the students' interchange with native students and faculty. Wang, Singh, Bird, and Ives (2008) found that Taiwanese nursing students in Australia had mixed results studying with native students. While some students found that the interactions helped them develop critical thinking, other students felt isolated when forced to participate in mixed study groups.

Grosser and Lombard (2008) found that African education students tended to use avoidance as a means of conflict management, causing the students to limit their participation in rhetorical discussions with native students. These African students focused more on relationships and "experience-based knowledge rather than abstract logic and reasoning" (p. 1369).

Several students in the current study mentioned the difference in discussion, problem solving, and study methods between groups comprised only of African students and those that were predominantly comprised of American students. While the groups that were all African focused on knowledge acquisition and the importance of assuring all in the group understood the material, the American study groups were faster paced, utilized application of scenarios, and focused on solving the problem as an end point. As mentioned above, however, among those students who had not failed any courses, the use

of mixed study groups was uniform. While it is difficult to conjecture about the importance of this finding, successful students in this current study used mixed study groups as an adaptation tool to develop their critical thinking skills.

Students in this study expressed the desire to interact more closely with nursing faculty than they had with faculty in Africa. Most of the participants expressed the preference to interact with the faculty outside of the classroom rather than during class. Comparing students who attended public secondary school in Africa and those who attended private secondary schools, it was noted that students who attended public school more frequently expressed hesitancy about approaching nursing faculty even in settings outside of the classroom.

This desire, coupled with hesitancy to interact with faculty, is consistent with other studies of international students. In an ethnographic study of 35 university students in South Africa, van Heerdan (1995) found that African students experienced apprehension and hesitation about meeting with faculty. Lee and Carrasquillo (2006), as well as Omotosho (1998), discussed the hesitancy of international students to ask questions in the classroom setting, preferring to approach the faculty either immediately after class or in private in the faculty offices. Similarly, this was the preference of the twelve participants in this current study. Such hesitancy in the classroom was attributed in past studies in part to what Omotosho called the “lost voice”, the perceived need to be silent due to concern about their accent, fear of wasting someone’s time, or concern about being discriminated against. Numerous participants in this current study expressed concerns about their accent and the perception that other students would deem them

unintelligent because of their accent, as well as quietness as a cultural characteristic. In a study of students in China, Chiu (2009) demonstrated that developing intentional, affective relationships between students and faculty provided opportunities to develop critical thinking skills while respecting the cultural values of social harmony and respect for teachers. Likewise, in this current study, African students expressed the importance of community and respect for elders as important aspects of their African culture, while also expressing the desire for nursing faculty to assist them with developing critical thinking skills. Such a desire for interacting with faculty by the African students was reflective of similar findings by Wang, Singh, Bird, and Ives (2008).

While not directly linked to critical thinking, another theme that emerged in relation to the educational experiences of African students in the U.S. involves the concerns of stereotyping and discrimination. Students described situations in which they perceived that they were stereotyped, either because of skin color or because of the label of being an international student. For some students, this created an environment in which they felt a lack of support from American students or a sense of intense scrutiny by nursing faculty. As mentioned in Chapter 4, the African students interviewed did not observe or perceive such discrimination and scrutiny to occur to American students.

While the students expressing these concerns recognized how they are different, at the same time they wished to not be considered different than American students. Similar results were found by Omotosho (1998), who interviewed a number of African nursing students in the U.S. who felt prejudice based on their accent and skin color. While not mentioning stereotyping and prejudice directly, Sanner, Wilson, and Samson

(2002) studied eight Nigerian nursing students in the U.S. They found that students experienced what they termed “antagonistic attitudes” (p. 210) by American peers. Similarly, in assessing the barriers experienced by 15 racial and ethnic minority nursing students, Gardner (2005) reported numerous stories of isolation, discrimination, and stereotyping by both student peers and faculty. Several of the students in this current study acknowledged that these experiences fostered a learning environment that diminished their self-esteem, and limited their ability to think clearly, feel accepted, and focus on what was necessary to succeed a rigorous academic program.

Research Question 2: Cultural and Past Educational Factors Influencing Critical Thinking

Having better understood the essence of the student experiences in the United States, the second research question that framed this study involved the student’s experience in Africa. Sparks (2009) studied the perceived difficulties of international nursing students in Texas and discovered that the perception of academic difficulty was based not so much on language difficulties, but rather on the educational and socio-cultural backgrounds in their native countries. While the current study did not attempt to compare critical thinking experiences with language, Spark’s conclusions are validated in this current study, as will be discussed further.

Past Educational Experiences

Student participants in this study discussed a number of cultural factors and past educational experiences that influenced their abilities to utilize critical thinking in nursing programs in the United States. The struggles and challenges described by these African

participants are consistent with the meta-analysis of critical thinking of Asian students studying in western cultures by Davies (2006). Davies identified five characteristics of Asian students and the educational process in their native country including: (1) rote learning and memorization styles; (2) passive learning and non-participation in class; (3) lack of willingness to mix with local students; (4) lack of skills for analysis and critical thinking; and (5) the inability to adjust their learning styles to that of the western context (p. 19). Researchers came to similar conclusions in other studies of Asian students (Brown, 2008; Chiodi & Tsai, 1995; Davidson & Dunham, 1996; Wang, Singh, Bird, & Ives, 2008; Zhang & Sternberg, 2001). Studying Taiwanese nursing students in Australia, Wang, Singh, Bird, and Ives concluded that the teacher dominated environment of Taiwan, characterized by restricting students from speaking out, or challenging teachers hindered Taiwanese students from developing critical thinking skills needed in Australian educational systems.

Similar themes related to past educational experiences were described by the African students who participated in this study. African participants described the emphasis on memorization, passive learning, and lack of critical thinking instruction when reporting on their educational experiences in Africa. As well, these past educational experiences, paired with students consistently expressing difficulty with critical thinking while enrolled as nursing students, is consistent with the results of previous studies. These characterizations were also consistent with studies of African students, including the work of Grosser and Lambert (2008), Sanner, Wilson, and Sampson (2002) as well as that of Omotosho (1998).

The participants' characterization of fear as a predominant dimension of their educational milieu, especially expressed by students who attended public schools, had not been described in prior research of international students. This finding of fear should be addressed in future research.

Cultural Influences to Critical Thinking

As mentioned previously, one of the underlying assumptions of this study was that one's cultural environment contributes to the development of critical thinking. Vygotsky theorized that cultural development may actually be the principal driving force in the development of higher level cognitive functions (as cited by Grosser & Lombard, 2008). One of the interview questions in this study explored the identification of cultural values that students believed influenced their ability to develop their critical thinking skills. Four major cultural values were identified by the vast majority of the participants; these included respect for elders, not challenging authority, the importance of community, and the emphasis on quietness.

The values identified by the participants are consistent with those found in other research of international students both from Africa and from Asia: most notably respect for elders and a communal rather than individualistic perspective. Jones (2006) identified Chinese students' desires to respect faculty as elders. Zhang and Sternberg (2001) described Asian students' difficulties challenging norms. Durkin (2008a & 2008b), in her grounded theory with Asian students' adaptation to Western critical thinking practices, found that students refused to totally adapt based on their strong value of dignity as well as the maintenance of relationships. These values in Asian students may be similar to the

values of respect and community expressed by the African students.

Ubuntu, the belief that “a person is a person through other persons” (Haegert, 2000, p. 496), serves as one of the three conceptual frameworks legs in this study. Emphasizing respect of elders and a communal perspective of personhood, Ubuntu has been compared to East Asian ways of thinking. As mentioned in Chapter 1, a number of researchers demonstrated that Ubuntu influences one’s thinking processes (Green, Dilamini, D’Errico, Ruark, & Duby, 2009; Muwanga-Zake, 2009; Nama & Swartz, 2002). Scholtz, Braund, Hodges, Koopman, and Lubben (2008) investigated the critical thinking skills of debate and argumentation in South African teachers enrolled in higher education. They characterized Western critical thinking as individualistic, focusing on binary logical reasoning (yes/no solutions), and confronting and refuting viewpoints. Such characterizations are similar to those identified by Durkin (2008a, 2008b) as well as by Tweed and Lehman (2002) in their comparisons of Western critical thinking and Asian modes of thought. Scholtz and colleagues concluded that critical thinking may be incompatible with the concept of Ubuntu. If Scholtz’s assertion is true, that South Africans emphasize inclusion and community while avoiding conflict, then Western critical thinking models would need to be adapted for Africans. Similarly, participants in this current study identified how the values central to Ubuntu of respect, challenging authority, and community influenced the learning of critical thinking. Students perceived these cultural values to impact their success in nursing school. Further research with similar African nursing students could explore more closely whether Scholtz’s assertion is valid.

Quietness as a personal characteristic and cultural value was expressed by several African students interviewed. Several of them conjectured their quiet nature contributed to their difficulty with critical thinking. While no earlier research or descriptive literature could be found associating quietness with Ubuntu, it is clear from the participants, that being quiet may include not speaking in class, not asking teachers for clarity or help in understanding content, and not critiquing other writers. Quietness may be more of a personality trait, or possibly the result of the teacher-dominated educational process in Africa. The only researcher who alluded to this issue is Durkin (2008a), who identified guardedness, self-criticism, and a focus on listening as reflective of Asian cultures.

Implications for Education

As mentioned in Chapter 1, the ANA, AONE, and AACN have been calling for nursing programs to increase their cultural diversity at a time when both the number of international students and the number of ethnic groups in the patient population is increasing (AACN, 2001; NAFSA, 2007; Sullivan Commission, 2004). Therefore, three implications for education emerged from the experiences of the twelve participants that would help improve the learning experience of African students. These include the development of a critical thinking course specific for international students, the intentional use of mixed student study groups, and the establishment of mentoring assistance from faculty for international students. These reflect Vendermensbrugghe's (2004) conclusion that while most Western students intuitively adapt to the critical thinking requirements emphasized in college, the challenges faced by international students to adapt is significant. Thus, Australian [Western] universities need both to

“develop a better understanding of international students as learners” (p. 421), as well as to develop programs that assist international students to learn critical thinking within the context of the student past experiences.

Critical Thinking Course

The first recommendation is the implementation of a critical thinking course for international students. Several of the participants in this study mentioned participation in, and benefitting from, a critical thinking course as part of their nursing curriculum. According to these students, this was a requirement for all nursing students, not specifically targeted to international students. A critical thinking course developed specifically for international students might, however, allow the integration of cultural values, and could also integrate individual considerations based on the variety of educational experiences of the students. Such a course is supported by the meta-analysis of Davies (2006), who concluded that if universities seek to encourage the enrollment of international students, universities should develop academic courses and programs that assist international students in the development of western critical thinking skills. Based on the transcripts of students in the current study, however, such courses need to be designed with a consideration of factors such as the prior educational experiences with memorization rather than problem solving, past educational environment characterized by fear, and other aspects of teacher relationships, as well as the cultural values of respecting elders, avoiding the challenge to authority, and fostering community outcomes.

Content to help students develop critical thinking skills might be devoted specifically to critical thinking, or critical thinking could be integrated into other courses.

It is not clear from this study if there is a benefit to a stand-alone critical thinking course versus an integrated course. One participant identified a weakness of his stand-alone course as being out of context with other nursing didactic learning. Researchers have recommended the integration with intentional critical thinking content. Jones (2005) incorporated critical thinking instruction into a macroeconomics course in Australia, with both native students and Chinese students. She found that this approach had a positive influence on Chinese students' developing critical thinking skills. Similarly, Melles (2009) incorporated intentional semester-long critical thinking content into an engineering course that had a high percentage of international students. Melles concluded that international students successfully gained understanding of, and the ability to apply critical thinking through a "sustained and practice-oriented approach" (p. 168). Davidson and Dunham (1996) found that Japanese students who were enrolled in a course with emphases on both critical thinking and English language instruction scored better on the Ennis-Weir critical thinking test than students enrolled in a content only English instruction course.

Pre-emptive Mentoring Assistance from Faculty

Students interviewed for this study consistently indicated a desire for closer working relationships with faculty, while simultaneously expressing hesitancy to initiate that relationship. Thus, this current study proposes that educational programs create intentional mentoring programs between the international student and faculty. The agenda for such relationships would be to extend mutual understandings between African students and faculty based on providing assistance to the student in the development of

culturally sensitive critical thinking skills and habits, but also providing assistance to the teacher in better understanding the challenges, needs, and cultural values of the student. Sanner, Wilson, and Samson (2002) indicated that such a program would assist international students with both the social and academic transitions to a western model of education. A mentoring program, however, would also need to include education of faculty in cultural humility as well as the cultural values of Ubuntu (Gardner, 2005) . The program could also facilitate the identification of educators' "hidden personal biases" (Sanner, Wilson, & Samson, 2002, p. 212) towards the international student population. Chiu (2009) reported that a faculty mentoring program, built on a teacher and student relationship described by a "shepherd metaphor" (p. 42), within a course devoted to enhancing international students' critical thinking abilities, "enabled [international] students to cross the affective/cultural boundaries from the 'harmony and silence' zone to critical participation" (p. 53). Such a course emphasized critical thinking development, personal relationship building, and understanding the international students' cultural and historical perspectives.

Intentional Mixed Student Study Groups

The students in this current study described a number of tools for developing critical thinking strategies in order to be overcome the challenges they experienced in their nursing academic pursuits. Many of the students spoke about the use of peer study groups as one such tool. Several described peer groups comprised exclusively of international students, while other students described groups comprised of both international and American students. As mentioned earlier, while those students who had

failed a nursing course differed on the type of study groups used, students who had passed all nursing courses to date utilized study groups that included American students. Those students who preferred studying with other African students spoke about how the different approaches to studying - including pace, goals, and methods of studying when studying with American students - created internal conflict. Students who studied with American students, however, described learning critical thinking methods of priority setting, formulating potential test questions, and creating clinical application scenarios from the American students.

Therefore, this study advocates for the formation of intentional study groups comprised of African, (or other international) students, and American students. Such study groups could be variable in size, due to the potential time demands and commitment required of the American students.

Omotosho (1998) called for the creation of peer-mentoring programs that involved pairing an African nursing student with a senior American student as a means of helping African students make the adjustment to the American educational system. Education of the senior nursing student-mentor in cultural value and diversity concepts might lessen the initial discomfort experienced by the international student. A peer nursing student mentor might meet regularly with the African student, assist in university orientation, provide content-specific tutorial assistance, and help in other ways for the African student to adapt to Western critical thinking skills as well as adapt to life as a nursing major.

Implications for Further Research

Better understanding of both African nursing students' experiences with critical thinking as well as their thinking processes has been the underlying goals of this study. As noted earlier, while there is extensive research related to a variety of challenges faced by international students in general, as well as much research focusing on Asian students attending college in Western countries, there is little research specific to African students in western countries. While Asian and Middle Eastern students comprise the largest percentage of the international student population (IIE, 2009a), there is much to learn about international students from Africa. While several researchers have focused on African students' general challenges in nursing education, none could be found specifically investigating critical thinking. Thus, this study was a first attempt to understand the unique challenges faced by African nursing students in relation to western critical thinking. Based on the findings as articulated in the seven themes, additional research might take several directions.

This beginning knowledge of some of the challenges of African students came from a small group of participants; there would be a benefit to performing research with a much larger sample of African nursing students. Utilizing a mixed methods approach with a larger sample might include both the use of a critical thinking instrument to quantify participants' critical thinking skills and habits, coupled with qualitative interviews to explore reactions to the instrument results, as well as to investigate some of the same questions used in this study. The use of a critical thinking instrument would provide quantitative data that assesses their current level of critical thinking. As

mentioned in Chapters One and Two, however, such instruments may not be sensitive to measuring student critical thinking abilities that are influenced by student cultural perspectives. As Durkin (2008a & 2008b) theorized, international students adapt western critical thinking to the values held most important in their culture.

Other research approaches to elicit the African student's critical thinking methods might include the comparison between student perceptions of critical thinking and faculty perceptions of critical thinking, similar to that undertaken with Asian students by Lee and Carrasquillo (2006), as well as by Durkin (2008b). The use of *Think Alouds* (Charters, 2003; Young, 2005) as a qualitative research tool might provide important information about the type of critical thinking utilized by African students. Finally, utilizing multiple interview sessions rather than a single interview has the potential for eliciting deeper responses from participants as the participant and researcher develop a closer relationship from repeated conversations.

This leads to another suggestion for research. More research is needed related to the African influence of Ubuntu on thinking processes. A grounded theory approach, similar to Durkin's work with Asian students, could be completed to discover and articulate an African adaptation to western critical thinking. Further, it would be of interest to investigate the differences and similarities between Ubuntu and Confucian approaches to thinking (Tweed & Lehman, 2002). Such research might assist in improved understanding of the African student and their thinking processes. Once a better understanding of African methods of critical thinking emerges, critical thinking instruments might be developed that reflect the unique contributions and values of

Ubuntu rather than western values.

This study involved twelve students in a variety of educational institutions in the eastern United States. Further, there was a variety of African countries of origins, as well as a variety of past educational experiences among the study participants. The results of this study could be validated and compared with a larger sample of African students in other institutions to understand more clearly the influence of types of African educational systems as well as the educational environment between teacher and student, different African countries, as well as other background on student abilities to adapt to western critical thinking in the United States. Pilot programs based on the implications for education as described above including critical thinking courses, faculty mentoring, and peer study groups could be implemented and studied for effectiveness.

Finally, as mentioned earlier, this study discovered the issue of fear, partly related to approaching faculty based on their experiences in Africa. Students were explicit in mentioning this as a characteristic of their school environment. No other research could be found discussing this sense by African or other international students. Thus, fear might be investigated further to better understand its influence on the African student ability to both learn critical thinking and be academically successful in Western universities.

Limitations of Study

Several limitations have been identified in this study. The methodology necessitated a small sample size; this also means that the findings cannot be generalized. Thus, this study cannot be taken as representative of a complete African perspective, considering the vast expanse of the African continent, the lack of response from

participants to the narrative summaries, and the biases inherent in the researcher. Further, besides the size of the group, convenience-type purposeful sampling was utilized. The students were chosen for this study based on their geographical location in relation to ease of being interviewed, their willingness to be interviewed, and the time frame for interviewing. Miles and Huberman (1994) identified 16 strategies for purposeful sampling, convenience sampling being seen as the least desirable of the sixteen (Maxwell, 2005, p. 88). Convenience sampling limits both the utility of the data as well as limits generalizeability. Maxwell stated that such external generalizeability is not the purpose of qualitative research, but however can provide “face generalizeability” (pp. 115-116) based on the comments and assessments of the participants regarding the plausibility of generalizeability. While not generalizeable, the interpretation of the transcripts attempted to capture the essence and meaning of the experience of critical thinking among the twelve students who participated.

A second limitation involves the inability to represent the whole of Africa and the vast diversity among both students and countries in Africa. Africa is a large continent with many and wide ranging histories and cultures. It is clear from the interview transcripts that differences existed in student educational experiences, family structures, and experiences in the United States even among the twelve participants.

As part of the data analysis, narrative summaries were written to capture both a summary of each interview, as well as the essence of the individual student’s experiences with critical thinking. These summaries were then emailed back to the students via the email address identified by the participants where they would most easily be reached in

the future. Of the twelve students, however, only three students responded with either affirmation or suggestions for revisions. Only one student suggested a minor change in the summary, while no suggestions were made for substantive changes. All three respondents affirmed the narrative summary as accurate. Had additional participants responded, it is possible that different themes might have emerged.

Another limitation involves the methodology of only one interview session with the participants. In several cases participants described personal and emotionally charged situations that were visibly painful to the participant. One participant alluded to a difficult situation, however, changed the subject quickly. The researcher chose not to explore this situation further based on the desire to be sensitive to the participant's emotions. During several other interviews there were either expressions of anger or the formation of tears while discussing experiences in the U.S. Multiple interviews could have provided the opportunity for building deeper rapport between the researcher and participants, with the hope of gaining further understanding of the students' experience.

The final limitation of this study involves the role of the researcher in the qualitative research process, both in performing the interview process as well as interpreting the transcripts through the identification of themes and comparative analysis. The role of the researcher, becoming part of the research has been widely discussed, most notably by Heidegger (Lopez & Willis, 2004; Streubert Speziale & Carpenter, 2007). While performing the interviews, reading and rereading the transcripts, writing narrative summaries, analyzing and categorizing elements of the transcripts into themes, and interpreting the themes for the significant essence of the African student's experience,

this researcher became a substantial part of both the research instrument and the results.

Throughout the process this researcher attempted to approach both the interviews, as well as the data analysis with an attitude of cultural humility, and at the same time acknowledge the honor bestowed by the participants willing to share some of their joys, vulnerabilities, and struggles as an African student. This study has been an attempt to provide the African students a voice as they reflected how, at times, they felt voiceless. Providing a voice has also partly come through the researcher's eyes as one with a western background with very different experiences. While prior to the start of the interview process, the written and unwritten emphases of the study questions focused on the critical thinking process of the African students, even as the first interview started, the researcher found himself shifting emotionally between focusing on the psychological impact of the student experience with critical thinking and focusing on the critical thinking process itself. The sense that students were highly interested in participating and sharing their experience provided validation of the researcher's focus on both the personal and the academic experience of the participants – thus providing them a voice. This researcher, however, also found himself being transformed by the richness of the student stories and the student willingness to share those stories; becoming less of a researcher and more of a listener in the research process.

Part of the researcher becoming part of the research emerged near the final stages of the analysis and writing process. As interview transcripts were read multiple times, new stories were found in the transcripts that did not stand out in the earlier thematic analysis process. Van Manen (1990) wrote that “phenomenological projects and their

methods often have a transformative effect on the researcher himself or herself” (p. 163). Could it be that the researcher was transformed and the transcripts were being seen through a new set of eyes late in the research journey as the final chapters were being written? The transcripts are rich in the sharing of stories, still some untold that may not be reflected in the seven themes identified, but may be used in future analysis.

Summary

This research journey began in the hope of discovering a magic formula for helping African nursing students in the U.S. to become academically and personally successful in relation to critical thinking. This researcher started the journey wanting to listen and hear their stories, and discern from the students how best to help them with the critical thinking challenges of a western nursing school. Through an interpretive hermeneutical approach the journey attempted to uncover the students’ lived experience of learning and using a western critical thinking approach. The goal was to understand the students’ experiences better, as well as ascertain the influence of the students’ past academic experiences in Africa coupled with African cultural values. What emerged from interviewing twelve African students were seven themes that provide insight to their experience. These themes offer ideas for how faculty might walk alongside and mediate the students’ experience, while also stimulating further research specific to the African student population and culture. What also emerged was a deep respect for the resilience, sacrifice, and determination of those who choose to leave their homeland for a foreign place and new hopes. This study offered an opportunity for the participants to discuss their personal experiences and challenges related to critical thinking, and provided a

voice within the body of literature related to cultural understanding of the African student. The real hope is that this is the beginning of a journey for improving the outcome for those African students who choose to study nursing in the U.S.

Appendices

Appendix 1

Invitation Letter Sent via Email to School of Nursing Contacts

Dear Nursing Dean,

As introduced in our earlier communication, I am a doctoral candidate in the PhD Nursing program at George Mason University. I am soliciting your assistance in finding students who might be willing to participate in my study regarding the experience of African nursing students enrolled in BSN programs in the United States as it relates to their use of critical thinking. The literature regarding international students, both nursing and non-nursing, indicates students' difficulty in utilizing western concepts of critical thinking, which often times results in academic failure. Much research has been completed regarding students from Asia, but little research has been done in regard to students from Africa. It is my hope that this study will help identify those methods which African student utilize for critical thinking, such that we can help them learn and be successful in their education in the U.S.

This is a qualitative study in which, once informed consent is obtained, students will be interviewed regarding their experience with critical thinking both in Africa as well as throughout their nursing education here in the U.S. The interview will take approximately one hour.

Participant criteria include students who are (a) native African; (b) who are first generation university students in the U.S.; (c) currently enrolled in a BSN program and are in at least their second semester of clinical experiences; (d) have been in the U.S. less than ten years; (e) attended elementary and middle school in Africa; (f) over the age of 18; and (g) are able to speak, understand and write in English.

If you have African students enrolled in your undergraduate nursing program who would potentially meet the above criteria, I would appreciate if you would pass along to them my interest in having them participate in this study. Participation by students will be strictly confidential and voluntary. They may withdraw at any time from the study with no penalty to them. If students are interested in participating in this study, they can contact me by email at dtyson2@gmu.edu or by telephone at 540.810.0073.

In addition, if it is required that I apply for approval through your institution's Institutional Review Board could you please let me know who I need to contact regarding the obtaining of such approval.

Thank you very much in advance for your cooperation and assistance.

Sincerely,

Appendix 2

Invitation Letter to Prospective Student Participants

I am currently involved in a research project exploring the African nursing student experiences related to critical thinking in the college setting. The project examines how African students work through classroom, homework assignment, and clinical situations in which critical thinking skills need to be used, and how similar or different those skills are in comparison to what they used in school in Africa. The study is being performed as a partial fulfillment of the requirements for my PhD degree in Nursing at George Mason University in Fairfax, Virginia. The study is under the supervision of Dr. Margaret Mahon.

Your participation in this project will provide useful information on this topic. You qualify for participation if you are a (a) native African; (b) first generation university students in the U.S.; (c) currently enrolled in a BSN program and are in at least their second semester of clinical experiences; (d) have been in the U.S. less than ten years; (e) attended elementary and middle school in Africa; (f) over the age of 18; and (g) are able to speak, understand and write in English.

If you decide to participate, you and I will determine an acceptable place on your campus for an interview. After you provide consent for participation, you will participate in an interview that will take approximately 45 minutes to one hour that includes background questions as well as questions regarding your experience with critical thinking.

Participation in this study is strictly voluntary. You may withdraw from the study at any point without penalty. Participation is not associated with any class grades or other benefits, except learning more about how nursing faculty can help African students succeed in Nursing. All data from this project are confidential and will be used for research purposes only. Data from the interview are anonymous. The names of the participants will not be connected to any information.

There are no foreseeable risks to you as a participant.

I will be contacting you by telephone in the next several days to discuss a time to meet and to answer any questions. If you have any further questions, please do not hesitate to contact me via email at dtyson2@gmu.edu or via telephone at 540-810.0073.

Thank you for your assistance.

Don Tyson, RN MSN PhD-c
George Mason University

Appendix 3

Interview Guide

The experience of African students studying nursing in the United States in relation to their use of critical thinking.

Demographic Questions

1. Age
2. Gender
3. African country of origin
4. How many years of pre-college education did you receive in your home country?
5. How long have you been in the US? How old were you when you left Africa? In what year did you come to the U.S.? How much schooling had you completed when you left Africa?
6. What was the predominant language in your home when you were a child? In your educational system?

Interview Questions

1. What was your education like in Africa?
 - a. Probing questions might include relationship with teacher; how you demonstrated understanding of material or class content; method of teaching;
2. How was your education in Africa different from your education in the U.S?
3. What is your understanding of critical thinking?
4. Tell me about your experiences with critical thinking before you came to the United States?
5. How have you been asked to use critical thinking in your nursing education?
Clarifying questions might include:
 - a. Think of a clinical scenario...in which nurses work and from your experience...where you needed to use critical thinking.

- i. Talk to me about how you would approach that situation as a nurse or student.
 - ii. How would you have approached it before you started nursing?
 - b. Describe challenges that you face as an African student using critical thinking
 - c. How do you use critical thinking while taking tests, problem solving, completing care plans and /or in the clinical setting?
 - d. What effect have these challenges had on your ability to accomplish your goal of obtaining a nursing degree?
6. How is what you have learned in the U.S. in relation to critical thinking different from what you were familiar with in Africa?
7. How can a professor help an African student learn to use Western critical thinking?
8. What should faculty learn from your culture about your way of learning and thinking?
9. Is there anything else you would like to say that would help me better understand your experiences?

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Curriculum Vitae

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