Digital Age Code-Switching in Pre-Service Teachers

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by

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DEDICATION

This paper is dedicated to my children: Jordan, Tyler, Carson, and Bailey. My love for each of you is greater than you can possibly imagine. All of you have unique gifts and talents that make you the wonderful young people that you are and it is the greatest honor of my life to be your mother. If my life has taught me anything to pass on to you, it is to never underestimate yourself. You may never know what you can accomplish until you push yourself past your own imagined limitations. Truly, there are no ceilings to keep you from climbing. While you consider what path you will take, remember that nothing worthwhile in life ever comes easy and it is the things for which you will work the hardest that you will be most proud of accomplishing. As I have tried to set the bar intentionally high, I know that I can expect great things from you. You are each amazing in your own special way and I will forever be the biggest cheerleader in your lives. Above all, I encourage you to live each day to the fullest, always be yourselves, and follow your dreams!

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ABSTRACT

In recent years, much attention has been given to the digital revolution and the many innovations that have emerged for obtaining information and communicating with others. Some negative attention has focused on the language of instant messaging and texting that is prevalent in society. The following phenomenological study explored the perceptions of four faculty members from a small private college and two faculty members from a medium-sized university in a Midwestern metropolitan area regarding the ability of students enrolled in teacher education programs to switch discourse between social writing and writing for academic purposes. The education department faculty participants were invited to bring samples of students' work at various levels of proficiency to discuss during a one hour interview, which also included questions about the general writing ability of students in the teacher education programs at both schools. Throughout the six interviews, the faculty members expressed a belief that writing is a process that develops over time with continued practice, articulating that errors in conventions were a common problem, but not a new one. Overall, the study found that pre-service teachers can code-switch easily from digital language to academic writing, but may need to be instructed on purpose and audience. It was the faculty's contention that through direct instruction and high expectations, the potentially negative influences of digital language may be mitigated. The participants' more critical concerns about the digital age were in relation to lack of depth in students' writing and decreased attention span.

Keywords: code-switching, digital language, digital generation, writing

Chapter 1: Introduction

In recent years, much attention has been given to an emerging and growing

manner of discourse known as digital language. While Crystal (2008) pointed to the

compelling idea that new modes of language are remarkably uncommon in history, not

everyone shares an interest in giving this type of communication acknowledgment.

Whether digital language takes the form of instant messaging on the computer or texting

on a mobile phone, there has been some concern that digital language has distorted

acceptable Standard English. Turner (2009) asked a critical question regarding the new

genre of communication, "Is text speak truly a problem or is its occurrence…an

opportunity to teach students about the nature of language" (61). With that query, Turner

created an interesting consideration for education and gave insight into the potential focus

for writing instruction in the future.

Digital technology has transformed the American way of life irreversibly (Jukes,

McCain, & Crockett, 2010). Modern innovations such as the personal computer, the

Internet, and wireless phone communication have risen in popularity and become a key

element of everyday life. The youth of today are the first generation to have grown up

with the usage of modern information and communicative technology (ICT). It is

difficult for them to relate to the life that existed prior to the digital age and the credibility

of the educational and communicative traditions of their parents' generation is often lost

on them (Prensky, 2010). Conversely, those raised and educated prior to the digital age

often misunderstand and devalue the technological knowledge and skills of our nation's

youth (Prensky, 2010). In essence, if it is arduous to teach old dogs new tricks, it is

equally challenging to teach new dogs old tricks. The corresponding review of the

literature indicates that there is a definite division among the generations in regard to the

matters of information and communication, particularly for academic purposes (Bennett,

Maton, & Kervin, 2008). This gap, however, is not a new phenomenon. While the

mainstream technological revolution is still relatively recent from a historical perspective,

debate over the written communication skills and the advancement in academic content

areas for American students has been ongoing in the United States for many decades and

continues to divide the population (Bennett et al, 2008). New forms of discourse, such as

instant messaging and texting, have largely exacerbated the conflict.

Background

The National Commission on Excellence in Education, under the direction of

former United States President Ronald Reagan, issued *A Nation at Risk: The Imperative*

for Educational Reform (1983) to report on the current position of the United States

educational achievement. The report boldly declared:

> Our Nation is at risk. Our once unchallenged preeminence in commerce,
>
> industry, science, and technological innovation is being overtaken by competitors
>
> throughout the world. We report to the American people that while we can take
>
> justifiable pride in what our schools and colleges have historically accomplished
>
> and contributed to the United States and the well-being of its people, the
>
> educational foundations of our society are presently being eroded by a rising tide
>
> of mediocrity that threatens our very future as a Nation and a people (1).

Just a little over a quarter of a century has passed since the commission reported to the

President and the American people that our educational system, our nation, and our way

of life were in grave danger. Low international academic rankings, steady illiteracy rates,

and a substantial decline in the scores for The College Board's Scholastic Aptitude Tests

(SAT®), taken by high school students, were provided as evidence of the potential risk to

our society. The grim reality of the report caused widespread alarm within the American

public that the United States would soon lose its dominance in world affairs. In the

aftermath that followed *A Nation at Risk*, America's educators scrambled to implement

the recommendations for significant and immediate educational reform.

In sharp contrast to the educational turmoil that dominated most of the 1980s, a

conflicting view titled, *Perspectives on Education in America,* was released in the spring

of 1993. Denouncing many of the claims made by *A Nation at Risk* (1983), the report

failed to convince the American people that our educational system was still

fundamentally effective, even with evidence to show a slight, but steady increase in

graduation rates for both high school and college students. *Perspectives on Education in

America* (1993) considered a wide-range of factors that potentially led to the general

theory of a crumbling and failing educational system, attempted to organize existing

educational data, and analyzed current trends.   Overall, the report portrayed a far less

dismal picture than *A Nation at Risk* (1983) and offered a more optimistic outlook for the

future. While the authors broadly acknowledged that it was not their original purpose to

wholly dispute previous educational reports and to occupy an oppositional stance in the

debate on educational reform, the report unintentionally created a firestorm of

controversy. Although often overlooked and underreported, a clear admission for much

needed educational reform in the United States was present in *Perspectives on Education

in America* (1993)*.

In the nearly three decades that have passed since *A Nation at Risk* (1983) was

published*,* the debate over educational progress and achievement has raged on over many

curriculum areas originally identified by The National Commission. One academic area

that has been consistently plagued by criticism has been writing. Inarguably, proficient

writing composition remains one of the most vital skills for academic and professional

success (Juzwik et al., 2006). Most experts readily agree that writing instruction has been

largely overlooked in American schools. Often labeled the "forgotten R," in the trio of

reading, writing, and arithmetic, the proper teaching of writing has been an area of

growing concern for many years ("Erasing One of the Rs," 2010). Unlike other content

areas such as math and reading, writing assessment is far more subjective in nature. In

spite of the complexity for evaluation, some formal assessment in writing has been

accomplished by schools and on college entrance exams for decades. It is the ambiguity

of concrete standards for writing, however, that has produced more deliberation than any

other curriculum area.

Figure 1: Concern from *A Nation at Risk* merges with the onset of the Digital Revolution

A Nation at Risk:
The Imperative for
Educational
Reform

The Digital
Revolution
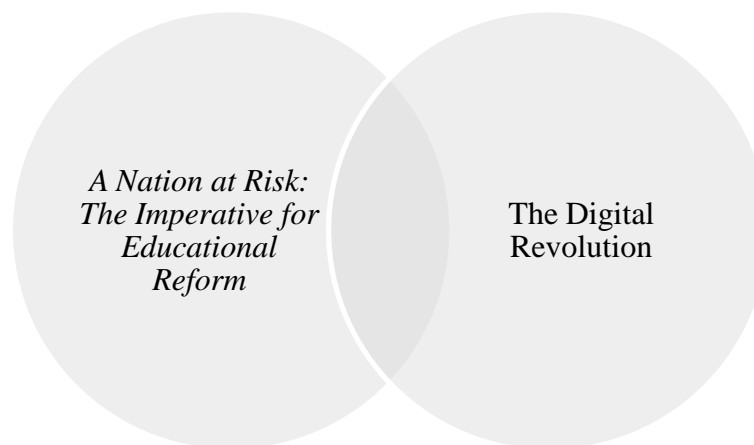
Figure 1. A Nation at Risk: The Imerpative for Educational Reform was created by the
National Commison on Excellence in Education in 1983.

Creating the most significant wave in the area of writing has been the arrival of

the digital age. The explosion of rapidly advancing technology has moved the

educational landscape into previously uncharted territory. Before the onset of the new

millennium, many educational and political reformers worried that American school

children were already lagging behind their international counterparts in the acquisition of

basic skills. With the added innovations in technology and communication, new fears

were raised regarding the ability of American school children to keep up with the latest

advancements and move progressively into the future. *A Nation at Risk* (1983), still on

the minds of many, had warned that other nations would technologically surpass the

United States if great measures were not taken to better educate American children.

Figure 1 depicts the merger of national concern with the digital age.

The early technology fears were quickly unfounded, as American children wholly

embraced the digital revolution and mastered new technology as quickly as it became

available. It was swiftly realized that younger students, exposed to technology at earlier

ages, had almost unlimited aptitude for employing new innovations (Bennett et al., 2008).

Prensky (2010) coined the phrase "digital natives" to identify and describe the younger

generations, coming of age in the new millennium, as technologically savvy and digitally

well-connected. According to Prensky, (2010) digital natives, also known as millennials,

generation Y, echo boomers, the net generation, or first digitals are characterized by a

birth year after 1980 and a reality that they are truly the first generation to have literally

grown up in the digital age. They do not know or remember a time before the age of

computer-mediated communication and they have few to no inhibitions about the usage

of technology. Much has been written in recent years about the digital natives in regard

to their superior technology skills, but also their innate ability to multitask far better than

their predecessors. The gap created by the variations in technological ability among the

generations is known as the "digital divide" (Kim & Bagaka, 2005). Digital immigrants,

those born prior to 1980, often experience difficulties relating to the digital natives, as

each group seems to speak a language that the other just cannot understand. (Prensky,

2010) In their book, *Born Digital: Understanding the First Generation of Digital*

Natives (2008), Palfrey and Gasser reasoned:

> There is one thing you know for sure: These kids are different. They study,
>
> work, write, and interact with each other in ways that are very different from the
>
> ways that you did growing up…Major aspects of their lives – social interactions,
>
> friendships, civic activities – are mediated by digital technologies. And they've
>
> never known any other way of life (2).

Palfrey and Gasser (2008) painted a vivid picture of the individual who has grown up

with digital technologies at his/her fingertips and with efficient communication skills that

far surpass that of previous generations, describing the students of the twenty-first

century as more sophisticated and discerning learners. It may be that these students are

better connected to the world and able to communicate universally, as they have multiple

devices and contexts with which to do so.

Within the world of fast-paced communication through digital medium,

multitasking is highly valued as a basic skill. For quicker and more efficient exchanges,

multiple variations on language have been adapted by the digital natives. The linguistic

modifications made within computer-mediated communication have created a new

vernacular that is frequently referred to as digital language. Digital language is often

characterized by shortened or abbreviated words, acronyms, the absence of punctuation,

and simple pictures used to convey emotions, known as emoticons (Baron, 2004; Plester,

Wood, & Joshi, 2009; Tagliamonte & Denis, 2008; Zhou, 2007). Often criticized by

older generations or digital immigrants as grammatically incorrect writing, digital

language is widely popular and regularly employed by digital natives (Turner, 2009).

Compared with other variations of the English language, digital language is viewed by

many educators as being similar in nature to a regional or cultural dialect or to modern

slang (Turner, 2009). It remains a commonly held belief; however, that digital language

does not constitute correct written English and should not be used in formal writing

(Turner, 2009).

Theoretical Framework

In the assessment of a theoretical base for this study, primary attention was given

to the work of Wheeler and Swords (2006) and the study of linguistic code-switching

within the African-American dialect of English. Looking at code-switching as the ability

to change between different forms of communication or discourse, students with primary

exposure to African-American dialects may experience difficulty when asked to perform

writing tasks in Standard English (Wheeler & Swords, 2006). Due to variations in style

and content of the dialect, many students of African-American descent appear to struggle

with writing in school, causing the number of African-American students placed in

special education to be disproportional to the general population (Wheeler, 2008). In

Figure 2, Wheeler (2008) asserts that teachers often identify grammatical errors in the

written work of African-American students, rather than the grammatical patterns of the

students' primary language. To explain the discrepancy, Adger, Wolfram, and Christian

(2007) showed a link between achievement for many African-American students and the

disapproving attitude of many teachers towards the African-American dialect, which

resulted in lowered expectations for those students. While still giving credibility and

support for the language used in the students' home environment, the work of Wheeler

and Swords (2006) supported the education of students on the formalities and

informalities of language structure and the guidance of students through the process of

making correct linguistic choices for each individual situation. Others also have

endorsed teaching students to use meta-cognition, in similar fashion to translating from a

foreign language,

Figure 2: Wheeler Model (2008)
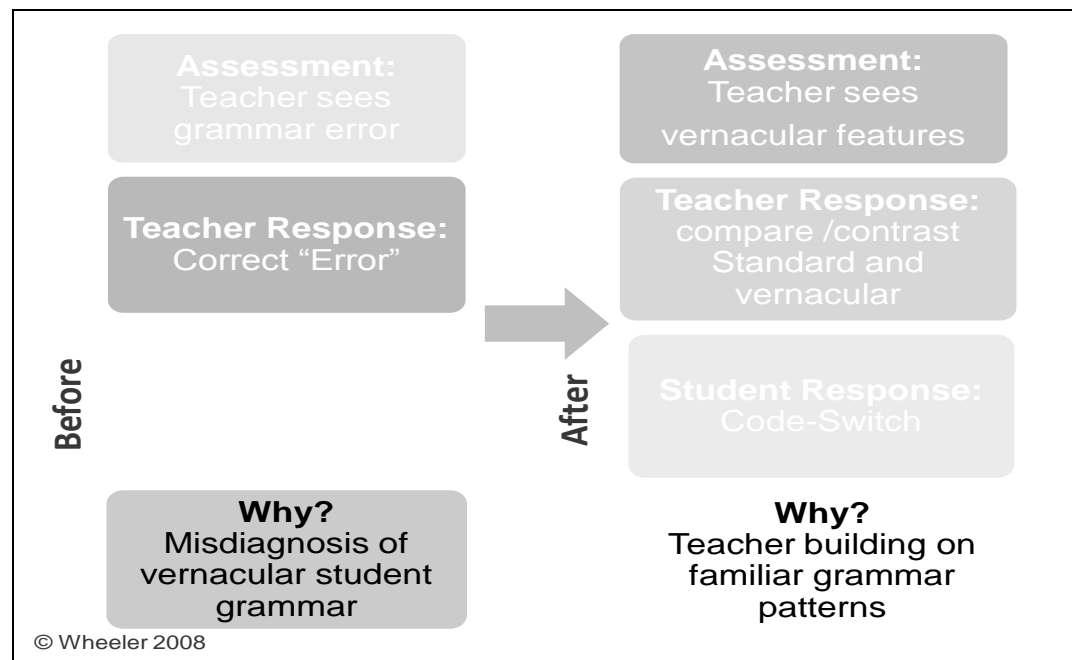
as a key step in the development of their academic writing skills (Jacobs, 2008; Turner, 2009). It is the active reflection on word selections from one language structure to another that may provide greater success in writing (Turner, 2009).

To establish a solid framework for this study, it was essential to acknowledge the existence and validity of digital language as an everyday means of standard communication in the twenty-first century. In 2005, Lewis and Fabos estimated that instant messaging was used by 70% of students from age 12-17, replacing e-mail as the most commonly used form of computer communication. Plester, Wood, and Bell reported in 2008 that approximately 96% of students used text messaging and that nearly half of those students preferred to utilize text messaging in place of verbal conversations. These astonishing numbers should not be overlooked. Whether credibility for the new literacy in American youth exists with digital immigrants or not, one fact remains clear; students are progressively writing more for pleasure in their everyday life and they are doing so in considerable numbers, without any prompting from educators (Hinchman, Alvermann, Boyd, Brozo, & Vacca, 2003). With the growing body of knowledge in the field of digital literacy, it is clear that the pervasiveness of digital language is too vast to be disregarded.

If the belief exists that digital language is a distinctive dialect of the English language, it then becomes necessary to give validation to the rules and standards of the language itself. In an examination of the writing practices common within digital language, Plester et al. (2008) identified five distinct customs present in the writing of the digital world: (1) number/letter replacement homophones (for example, c for see or 2 for too), (2) phonological reductions (for example, luv for love), (3) symbols (for example, #

for number), (4) acronyms (for example, lol for laughing out loud), and (5) slang or

"youth code" (for example, gonna or wanna). While not every instant message or text

message employs these conventions, it is these persistent patterns which have

distinguished the language as independent from others. In an academic setting, these

practices are generally considered unacceptable in formal writing and teachers strongly

discourage their usage. It is interesting to note that students' daily usage of instant and

text messaging far exceed that of scholarly writing, creating an inconsistency between

what they use most often and what is expected of them in academic settings.

Taking the concept of code-switching into the digital age, Turner (2009) looked at

digital language as yet another variation of English, analogous to a dialect. Turner

acknowledged that, like the slang used by younger generations, digital language has

become the primary discourse for students throughout the country. The use of digital

language through instant messaging and text messaging has been well-documented. It

was, therefore, not unexpected when the language of the digital world began to emerge in

academic settings (Turner, 2009). The carryover of digital language into schoolwork,

however, has caused broad concern that students' academic writing skills have rapidly

declined in the digital age (Turner, 2009). As previously quoted, it was Turner (2009)

who posed the key debate over digital language as a serious deviation in academic

writing or the educational possibility to teach students about two forms of languages.

Rather than viewing students' deviations from Standard English as grammatical patterns

of their digital language, some teachers may view variations in writing as critical errors.

It was Turner's contention that students should be provided with instruction and

classroom activities that validate both languages for a better understanding of proper

language choice, specific to each situation. Figure 3 demonstrates what a model of code-switching might look like, based on Turner (2009). The premise of code-switching, as discussed by Wheeler and Swords (2006) for some African-American students, and furthered by Turner (2009) for many digital natives, formed a theoretical framework in which to investigate the writing skills of students in relation to their ability to switch the content and style of language to suit specific audiences and purposes.

Figure 3: Code-Switching Model

Digital Natives

Academic Language   Digital Language

Direct Classroom Instruction in Elementary Grades

Formal Language   Informal Language

Code-Switching

Audience   Purpose

Figure 3. Based on Turner's work on digital native code-switching (2009).
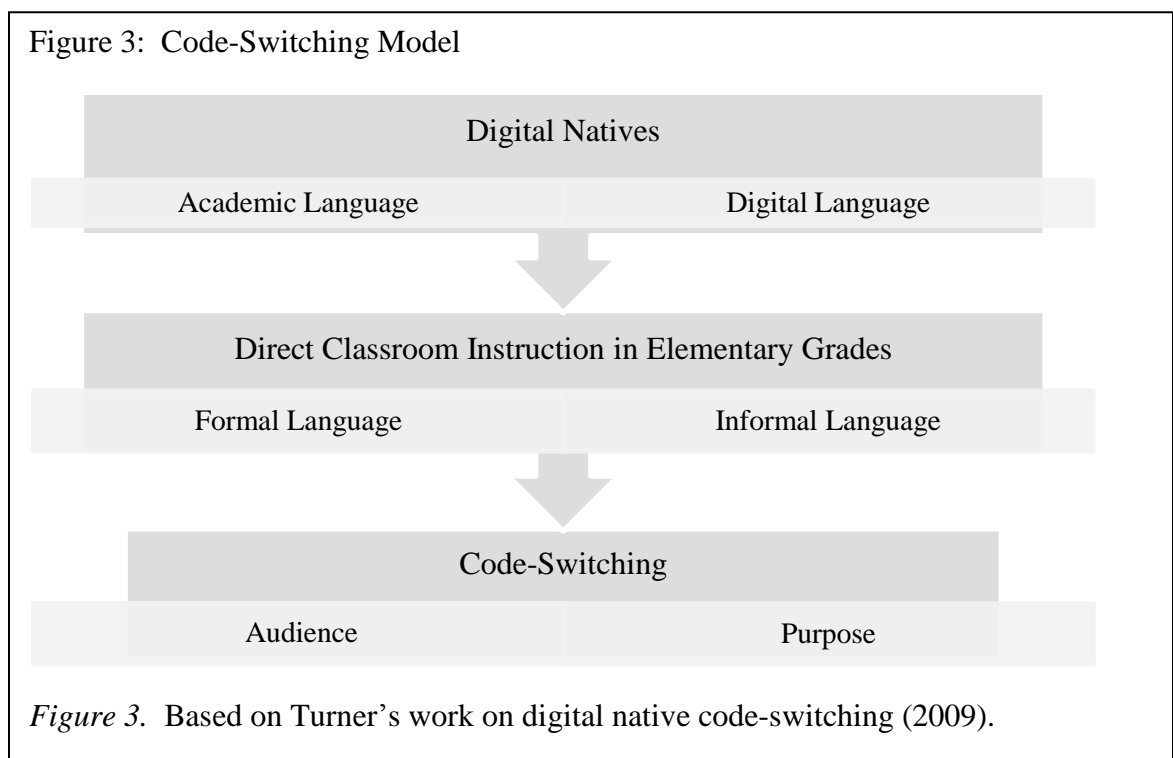
Problem/Purpose of the Study

As digital technology and the language of the digital world have become a consistent reality in the lives of students all over the United States, the concern over basic writing skills has grown. Educators now ponder the effects of pervasive information and communicative technology on students in the twenty-first century. While standard oral and written English skills are still a core part of the American school curriculum,

educators now realize that students live in a culture where they are continuously connected outside of school and are communicating more rapidly than ever before. It is gradually becoming recognized that the language of the digital world is increasingly becoming the primary discourse for the American student (Turner, 2009). With that acknowledgement comes the question, 'Is digital language causing the deterioration of traditional written English or are the digital natives simply proficient in two languages?'

Within the field of teacher education, the study of digital natives has infinite importance. The new digital generation of pre-service teachers, being educated in colleges and universities across the country, will be faced with the challenges of teaching the students of tomorrow. By understanding the digital natives, accepting their learning styles, appreciating their proficiencies, and engaging them in the classrooms, educators are better able to prepare them to teach future generations of students. While it is widely recognized that most digital natives have the technology skills required to teach in the digital age, current educators need to know if pre-service teachers in the digital age equally possess the basic skills needed to instruct the youth of tomorrow. On a daily basis, those who instruct in teacher education programs, witness the skills of pre-service teachers and assess their ability to communicate effectively. It is those faculty members who are in the best position to evaluate the capabilities of students as they write for scholarly purposes and make the most accurate determination regarding students' knowledge of the differences between social and academic writing. Therefore, this study was designed to explore the perceptions of college and university education faculty concerning the impact of the digital age on the writing skills of pre-service teachers and their ability to select appropriate language for academic writing.

Research Questions

Amid the various views in education concerning writing instruction and achievement, no clear answers have been forthcoming. A virtual certainty for teachers is that the field of education is perpetually shifting. As realities change, educational research must strive to regularly reevaluate educational conditions and examine the developing trends to give improved recommendations for best practice methods in all areas of instruction. Building solid academic foundations for America's children requires the rigorous and unremitting investigation of our own system. As we prepare college and university students to teach, we are obligated to maintain high standards and be resolute that they do the same. The future of the nation's youth will soon be in the hands of the teachers of tomorrow. It is critical for the American public to feel a high degree of confidence in the formal writing abilities possessed by future teacher candidates and to appreciate the contemporary skills that will support educational objectives for decades to come (Jukes et al., 2010)

Taking into consideration the inconsistent educational reports on the status of academic progress over the last thirty years, research into writing and other content areas of the curriculum continue to be relevant and insightful for classroom planning and instruction. The latest advancements in technology and communication have added another layer of complexity for future exploration. With so much recent innovation and its full impact on education yet to be fully realized, the media often raises a critical eye. In light of the unfavorable attention that instant messaging and text messaging have received in recent years, it is not surprising that the public concern over the widespread usage of digital literacy has grown (Judson, 2010). Researchers in education have begun

to respond with committed focus in this area. To that end, this research study sought to

investigate the perceptions of college and university faculty regarding the existing

conditions of students' writing proficiencies and the impact of recent technological

innovations on academic writing of students in teacher education programs. The study

was conducted with a specific and germane pattern of inquiry to examine the perceptions

of college and university education faculty in relation to the writing skills of their

students through discussions of student work and personal interviews. The design of the

study included three overriding questions which directed the interview process, the data

collection, the analysis through *NVivo 9*, the organization of the results and the discussion

of the findings.

(1) How do faculty members in teacher education perceive the basic writing skills

demonstrated by pre-service teachers?

(2) Do the faculty members in teacher education perceive any impact from

technology and digital language on the formal academic writing skills of pre-

service teachers?

(3) Are pre-service teachers able to switch modalities between social writing in

digital language and traditional academic writing?

Terminology

Descriptions. In the framework of educational research on informational and

communicative technology, it is important to define historically relevant terms and make

connections to the evolving vernacular of the digital world. Certainly, the language of

technology has added a broad spectrum of terminology to the English language

landscape. As new innovations have been developed, additional terms have been created

and have become part of daily vocabulary. While some terms can be used

interchangeably, others are unique to specific circumstances. Many are simply known by

their acronyms. The following pages offer descriptive explanations of important words

used within the study and a list of straightforward definitions for easy reference.

A good beginning for the discussion on digital age vocabulary starts with

Prensky's (2010) definitions of the digital natives and the digital immigrants. The digital

natives are those who were born after 1980. Unlike their predecessors, the natives

represent a new distinction in American society having experienced a lifelong exposure

to computer and digital technology (Prensky, 2010). Born prior to 1980, the digital

immigrants knew no such dependency on technology during their formative years

(Prensky, 2010). While many of the immigrants are struggling to catch up, some

disparity exists between those who can navigate new technology and communicate with

digital language and those who cannot. As previously discussed, the gap is known as the

digital divide (Jackson et al., 2008; Kim & Bagaka, 2005). Within education, the digital

divide represents a critical problem between digital natives and digital immigrants.

Digital language and communicative technology skills present a new challenge to many

digital immigrants. Most university faculty members occupy the digital immigrant

position while the majority of the students in their classrooms are generally natives.

While the Internet is regarded as one of the most significant accomplishments of

man in modern history, its commercial usage is still relatively new, in historical terms,

dating only back to 1992. The introduction of the World Wide Web and electronic mail,

also known as e-mail, gained immediate and tremendous popularity. The speed and

convenience of computer-mediated communication (CMC) caused an essential explosion into mainstream culture. The opportunities, for CMC, that followed included chat rooms and instant messaging (IM). Initially, chat rooms gained status with the nation's youth for group socialization. Real-time or synchronous communication quickly attracted students with rapid written exchanges involving multiple users, called interlocutors, could be known or unknown to each other (Baron, 2004; Quan-Haase, 2008). Instant messaging, introduced to online subscribers in May of 1997 through America Online's Buddy List, almost immediately surpassed chat rooms in usage (Baron, 2004). Similar to its predecessor for synchronous dialogue, IM offered a more private exchange between two interlocutors who were most often friends.

As multiple devices became available for connection, the field of information and communication technology (ICT) expanded. Throughout the 1990s, while the use of computers and the Internet were rapidly increasing, so was the dependence on wireless cellular phones. Wireless mobile phones allowed users to remain available and connected at all times. Eventually, the demand for wireless connection to the Internet became a reality and when the technology of cellular phone communication merged with instant messaging, the result became known as short message service (SMS) or text messaging (TM), also referred to as texting. Texting refers to the transmission of a typed message through a cellular phone. It alters the primary purpose of the cellular phone from one that is verbal in nature to one that is written. Like IM, text messaging is most often synchronous, but can also be asynchronous, similar to e-mail in that a response may or may not be immediate. It has been reported that digital natives prefer texting to actual telephone conversations for efficiency and ease of usage (Reid & Reid, 2004).

The messages sent through texting are said to be written in text language or text speak.   Text language is characterized by its shortened spellings, abbreviations, acronyms, and digital pictures to display emotions, also known as emoticons. The most commonly used emoticon is the smiley face conveyed with a colon and closed parenthesis which can be turned on its side for the effect (Baron, 2004). With instant messaging, the shortening of words and use of acronyms evolved for faster transmission of messages between interlocutors. The same reason applied to text messaging during development as earlier versions of cellular phones did not offer full keyboards for typing messages. Similar to standard home telephones, early mobile phones employed only twelve keys, nine of which held one numeric and three alphabetic characters each. To use the letters of the alphabet, it was necessary to push a button multiple times to utilize the letters of the alphabet. To reduce the number of button presses necessary, text messaging users often shortened words and used commonly understood acronyms. It was this early design of cellular phones that ultimately advanced the shortening of words far beyond what was done by instant messaging.

As the popularity of text language has increased, much debate has ensued over the legitimacy of the discourse. Similar to other dialects spoken within the United States, controversy surrounds the departure from Standard English usage. Rather than completely discrediting the employment of text language, many in educational research are giving credence to the new form of communication, while still discouraging its utilization in academic writing. The concept of code-switching, also known as modality switching, refers to the approach students use to determine the correct form of language for each set of circumstances. They essentially change back and forth between two forms

of discourse, exchanging one for the other. Code-switching, as it refers to digital

language and academic writing, provided the theoretical framework for this study. The

ability to code-switch becomes increasingly important when looking at the concept of

multiple literacies. In the modern age, literacy is no longer defined as a singular set of

skills, but instead as a complex acquisition of traditional and digital skills that are

necessary for life in 'new times' (Gee, 2000; Luke & Elkins, 1998). While the majority

of students, including pre-service teachers who are not yet teaching, use multiple forms

of literacy every day, they must understand the distinction among them and know the

appropriate uses for each.

Definitions. The following list provides definitions of key terminology used

within the study in an easy to reference guide.

Asynchronous Communication. Asynchronous communication is computer or

wireless conversation that is not conducted in real time and requires a wait time for a

response, example: e-mail (Baron, 2004).

Code-Switching. Code-switching is the ability to change between different forms

of communication or discourse. Within the context of this study, code-switching refers to

the ability to change between digital language and Standard English (Wheeler & Swords,

2006; Turner, 2009).

Computer-Mediated Communication (CMC). Computer-mediated

communication is messages that are transmitted through a computer or wireless device

(Tagliamonte & Denis, 2008).

Digital Divide. The digital divide is the gap between those who can navigate digital technology and those who cannot (Jackson et al., 2008; Kim & Bagaka, 2005).

Digital Immigrant. Digital immigrants are those born prior to 1980 and grew up without digital age technology (Prensky, 2010).

Digital Language. Digital language refers to the vocabulary and syntax of instant messaging and text messaging. Digital language can sometimes be referred to as text speak or text language (Prensky, 2010).

Digital Native. Digital natives are those born after 1980 and exposed to digital information and communicative technology for the majority of their lives (Prensky, 2010).

Digital Literacy. Digital literacy is the ability to navigate the technology of computers, the Internet, and mobile phone communication (Hull, Mikulecky, St. Clair, & Kerka, 2003)

Information and Communicative Technology (ICT). Information and communicative technology is the use of computers, mobile phones, and the Internet to find information and to connect with others for business and social purposes (Merchant, 2003, Quan-Haase, 2008).

Instant Messaging (IM). Instant messaging refers to synchronous written communication through the Internet with others that are known or unknown to the individual (Baron, 2004; Tagliamonte & Denis, 2008).

Interlocutor. An interlocutor is an individual on either side of computer-mediated communication (Tagliamonte & Denis, 2008).

Literacy. Literacy has been traditionally considered the skills of reading and writing only (Hull et al., 2003).

Multiple Literacies. Multiple literacies are the traditional skills of reading and writing, but also the digital skills of computers, the Internet, and mobile phone communication (Hull et al., 2003).

Pre-Service Teacher. Also known as a teacher candidate, a pre-service teacher is a student preparing at the college level for a career as a teacher (Mikitovics, 2002).

Standard English. Standard English is also referred to as academic language or formal language. It is the language most often accepted in schools (Turner 2009).

Synchronous Communication. Synchronous communication is a written computer or wireless phone conversation in real time, examples: IM and TM (Baron, 2004; Tagliamonte & Denis, 2008; Zhou, 2007).

Text Messaging (TM). Test messaging refers to written messages sent from a cellular phone or other mobile device. It can be synchronous or asynchronous (Plester, Wood, & Bell, 2008).

Assumptions, Delimitations, and Limitations

Assumptions. While Prensky's (2010) naming of the digital natives is primarily illustrative of the generation, it is possible that not every student born after 1980 is technologically savvy. For reasons that might include social-economic status, previous

educational history, or simple lack of interest, some students from the digital native

generation may have limited ICT skills. One major assumption of this study was that the

majority of the students represented in the research were skilled in technology. Today's

traditional college students, those entering college shortly after high school, should all

have a birth year that came after 1980, making some exposure nearly a certainty. Given

the statistics regarding the high level of usage reported in that age group throughout the

country, this assumption was not believed to be a considerable stretch.

Another assumption of the study was that nearly all of the students discussed by

the college and university faculty were truly part of the digital native generation. While it

is understood that some students choose to enter college at a later time in their lives, they

do not make up the preponderance of college students. It should be noted that the

interviewed faculty members were aware of the general population under review. It was

not assumed that a small number of non-traditional students would alter the faculty's

perceptions of code-switching for pre-service teachers.

The final assumption was that each participant was able to openly discuss the

general writing styles of their students without fears of disclosure or repercussions from

any of the institutions involved in the research. All identifying information was kept

completely confidential and secure. In the interest of contributing to the existing body of

knowledge in education, it was expected that each interview included the true perceptions

and beliefs held by the contributing participant without attempts to bias the study. Both

of the schools represented by the study maintain the position of employing dedicated

practitioners and reflective scholars, so it should be assumed that each participant offered

valuable insight to the research.

Delimitations. The first delimitation of the study was that it was restricted to the teacher education faculty. No attempts were made to investigate the writing skills of any other major field of study within the college or university involved in the research. It was acknowledged that similarities could exist between the disciplines, but it was not explored, reported, or discussed within this study. Some previous research relevant to other fields can be found in the review of the literature presented in chapter two.

Another delimitation identified in the study was the restriction placed on the participants. For inclusion in the research interviews, each of the interviewed faculty members had to occupy a full-time employment status. Recruitment materials were sent only to full-time faculty members. While this prevented part-time faculty or adjunct instructors from participating and possibly providing significant information, it was believed that the full-time faculty members had more exposure and, therefore, the most experience with pre-service teachers' writing.

The faculty participants themselves may have been another delimitation of the study. All of the data was provided exclusively by the six faculty members who responded to the request to participate in the study. No other college or university instructors agreed to be interviewed.   The participating faculty members may have had experiences that differed from others who were not interviewed.

The last delimitation of the study was that all of the collected data was limited to one mid-sized university and one small private college within the same city in the Midwest. Due to differences in admission qualifications, general education programs, and requirements for teacher candidates in teacher education programs at other

institutions, there may have been variations in the writing skills exhibited by the students and discussed by the faculty. While two different institutions were used for comparison, their close proximity to one another may have made them more homogenous than expected. It should be noted that findings from this study may not be indicative of students attending other colleges or universities nationally.

Limitations. Without question, the largest limitation of the study was the number of participants. In the original design of the study, only one study site was proposed, but after only two participants consented to be interviewed, another site was added to increase the size of the samples. The addition of the second site provided the study with four more participants, for a total of six. Had saturation not been met, the study would have required a third site. The study, while small in number of participants, was able to yield consistent data from the six faculty participants.

As the study investigated the writing skills of pre-service teachers from the perspective of their education instructors, the data consisted of the instructors' experiences and beliefs, rather than concrete assessment methods. Although significant credibility of the faculty was assumed, a possible limitation of the study was the degree to which the faculty's true beliefs could be described. Multiple types of questions were designed to reach the types of information sought by this study. Efforts to mitigate this limitation and attach weight to the expressed viewpoints through triangulation were provided with the discussion of the students' written work and an evaluation using a simple rubric.

The final limitations of the study were the time restrictions. In the interest of respecting the demanding schedule required of each participant, the research was limited to one interview, lasting 30-45 minutes, for each faculty member. To thoroughly cover the discussion of the students' work and all of the interview questions, the time was sufficient in all cases. It was acknowledged, however, that the conversations could have continued beyond the time allotment for additional information. The other time factor that might have limited the study was that the research was conducted within one semester. As the participants provided samples of students' work for the discussion, it was essential to conduct the interviews in the middle of a semester after writing assignments had been given. This limitation was not believed to have affected the outcome significantly.

Significance of the Study

In response to a nearly thirty year debate regarding the quality of writing instruction and writing assessment, multiple research studies have been conducted to address this public concern. Professional writing skills have been studied in nearly every discipline and some business and education leaders around the nation have expressed apprehension for the future (Allan, 1984; Brocato, Furr, Henderson, & Horton, 2005; Goddard, 2003; Hines & Basso, 2008; Munilla & Blodgett, 1995). Education represents an area with a distinctive cause for alarm that is not present in other professional fields. While proficient writing skills are the ultimate goal for college students, it is particularly critical for pre-service teachers who will teach the students of tomorrow. Research in relation to the skills of pre-service teachers is significant for future classroom instruction.

Inconsistent information over the years has caused considerable uncertainty within the American public concerning the writing ability of students nationwide. Incompatible means for analyzing trends and reporting data have led to a somewhat murky image of writing instruction in our nation's schools (Bracey, Fall 2008; Stedman, 1994). While standardized writing assessments possess some merit, the sole reliance on them does not provide the opportunity to appreciate students' writing practices for authentic purposes in their everyday lives. American teachers occupy a unique position for observing students' daily practical writing application as they progress from elementary school through high school. As those students move on to higher education, faculty from colleges and universities throughout the United States evaluate students' writing skills for a variety of academic and pre-professional tasks. It is believed that their unique perspective offers tremendous insight into the writing proficiency of American students. This study utilizes the collective knowledge of college and university professors to present a clear perspective and provide direction for education in the future.

Finally, this research is believed to be especially significant for illumination of digital age issues. As previously discussed, the controversy in recent years has left many with an unclear understanding of the impact of recent innovations. The students of today, known as digital natives, exhibit multiple literacies not generally possessed, nor understood, by previous generations. This study addressed the national concern regarding the effects of the digital age on the writing skills of pre-service teachers and their ability to code-switch between two distinct languages.

Chapter 2: Review of the Literature

Historical Perspective

As a component of the rationale for this study, a recent background of education

in the United States was presented briefly in chapter one, focusing on the discord of the

last thirty years. In the study of education, throughout history, it is important to note that

it has been regularly punctuated with considerable philosophical changes and that, under

constant scrutiny, educators have traditionally made modifications at the demands of the

American public. It is this ongoing public debate over the quality and the advancement

in education that stimulates improvement to curriculum and instruction. In tracing the

roots of the nation's most recent unrest in education, the review of the existing literature

was launched with an investigation into the work of The National Commission on

Excellence in Education, started under fortieth President Ronald Reagan. In 1981, this

group was directed by the Secretary of Education, T.H. Bell, to report on the quality of

education in the United States (1). The Commission's eighteen month-long investigation,

which included the study of colleges and universities, public and private schools, and

student achievement, ultimately resulted in the now infamous 1983 report titled, *A Nation*

at Risk: The Imperative for Educational Reform. The report made serious allegations

against the United States educational system and called for comprehensive changes to be

made within the entire American curriculum in content areas such as math, science,

reading, writing, and technology. One of the most startling revelations, within the report,

was the assertion that American school children, in terms of academic achievement, were

falling toward last place in an international comparison. Equally disturbing, the report

indicated that scores on college aptitude tests, such as the SAT®, had fallen 40-50 points

on various subtests between the years 1963 and 1980 (3). In looking toward the future,

the commission further charged that not only were American students behind in basic

skills, but that school children in the United States would continue to fall behind with the

rise in technological advancements, using strong language to say, "We are raising a new

generation of Americans that is scientifically and technologically illiterate" (4). The

commission made a multitude of recommendations; among them were calls for better and

more effective instruction in all content areas, including technology, increased

proficiency standards for students, and improved preparation in teacher education

programs.

Not everyone shared the dismal perspective on education in America. Nearly a

decade after *A Nation at Risk* (1983) was published, Sandia National Laboratories, under

the direction of the Secretary of Energy, James Watkins, launched a study to explore

many of the same issues such as, dropout rates, achievement test scores, and international

rankings. *Perspectives on Education in America,* which was often referred to as *The*

Sandia Report, was completed in 1991, but was not released widely until 1993.

Acknowledging that continuing progress was still needed in the American school system,

The Sandia Report debunked many of the claims made by previous educational reports

by describing them as broad and generalized. The report pointed to multiple

inconsistencies in recording and reporting educational statistics over the years, thereby

giving distorted results. *Perspectives on Education in America* focused on issues such as

race, ethnicity, and social-economic background to evaluate the differences in academic

progress, rather than relying on the consolidation of data for all groups. Analyzing

educational trends dating back as far as the 1870s, *The Sandia Report* actually showed

steadily increasing rates for high school graduation and college attendance for most of the

groups, although acknowledged fluctuating dropout rates for specific groups. During the

same time period, additional research reports were published which made similar

assertions about misinformation in regard to American progress (Bracey, Fall 2008;

Stedman, 1994) and supported crucial modifications in identified schools with higher at-

risk populations, rather than revision across the entire system (Sandia National

Laboratories, 1993). Additional research showed varied results, conceding various issues

to each side of the educational debate (Stedman, 1994). The enormous controversy left

the field of education with much uncertainty.

Perhaps it was the stronger language that was used or the more widely circulated

status of *A Nation at Risk* (1983) that produced a longer lasting impression on the

American public. The continued fallout produced what was described by many as the

"crisis in education" (McCombs, 2003, 93). As the American public cried out

collectively for extensive educational reform, law makers scrambled to uncover some

possible legislative solutions to the issues. In 1986, The National Governors' Association

began to examine the problems facing American education. In 1989, at the invitation of

forty-first president, George Bush, the United States Governors met for the Education

Summit to discuss educational reform. The group's main objectives were to establish

consistent national standards and a reliable system of accountability in education. Under

the recommendations made by the committee, *Goals 2000: Education America Act* was

passed in 1994 under forty-second president, Bill Clinton. It was described as, "one of

the first national efforts at comprehensive school reform to take a systemic approach to

producing change in schools" (Rink & Williams, 2003, 473). Among the ambitions of

Goals 2000 was to increase the American graduation and literacy rates, better education

of current teachers and pre-service teachers, and to raise the academic standards in all

subjects (Campbell, 2003). The noble objectives of the legislation, however, fell flat as

no system for implementation was provided. Lacking a clear-cut manner with which to

accomplish the educational goals, they appeared to be rendered useless (Campbell, 2003,

41).

Continued efforts toward reform in education were prevalent throughout the

1990s and into the new millennium. In 2002, *No Child Left Behind* (NCLB) was enacted

under President George W. Bush. The new piece of legislation attempted to right the past

inconsistencies from *Goals 2000* by addressing four major areas of concern: national

standards, assessment, accountability, and parental choice, while also providing federal

funding for implementation (Donlevy, 2002). Under NCLB, states were required to set

high performance standards for all students in schools receiving government funds.

Through the use of standardized tests, 95% of all students attending those schools were

expected to meet the standards set forth in each subject area (Donlevy, 2002). As

accountability was a major component of NCLB, the law held individual schools and

teachers accountable for student progress, as evidenced through standardized test scores.

When a school failed to meet the standards, the school was at risk of losing its federal

funding. This seemed somewhat counterintuitive to many, as one could argue that

schools with failing test scores needed additional funding for supplementary materials

and additional staff to provide better education. Under NCLB legislation, the choice to

transfer a student attending a "failing" school was granted to the parents or guardians of

each student. Clearly, individual schools stood to lose a lot if the students were unable to

meet the standards. Among the objectives of NCLB, legislators also sought to improve the quality of teachers, thereby improving instruction in the classroom. In most states, the requirement to hold, not only a teaching degree from an accredited college or university, but also to pass a basic skills test before application for state certification became the standard for all American teachers. Proficiency tests, such as the commonly-used Pre-Professional Skills Tests (PPST) created in 1986, promised to provide evidence that teachers entering the workforce were competent in the basic areas of math, reading, and writing (Harrington & Harrington, 2001; Mikitovics & Crehan, 2002). With comparisons made between the content of the PPST and the content of college entrance exams, resulting in correlated individual scores (Mikitovics & Crehan, 2002), there has been some debate over the possibility that the additional testing of pre-service teachers is redundant.

The passing of *No Child Left Behind* in 2002 had an enormous impact on education from a practical standpoint. The focus has shifted dramatically from educational process to outcome. With government imposed assessment standards that required individual school compliance, administrators and teachers were keenly aware that they must produce positive results every year, however possible. While the objectives of NCLB were respectable, there were many in education who opposed its approach. NCLB was described as having far-reaching consequences that affected all schools receiving federal funding with "an unprecedented level of federal involvement in education" (Matthews, 2004, 11). To that end, many felt that solid educational decisions were best determined by educators, rather than by lawmakers (Bracey, June 2008). NCLB continues to be a controversial piece of legislation.

With the complicated and ongoing educational debate during the last thirty years, public and legislative awareness has been raised regarding the quality of education in America. While not all of the attempts at reform have been successful and the failures have been far more publicized than the accomplishments (Bracey, 2008), great strides have been made toward raising the educational standards of our nation. Through the integration of technology, additional goals have emerged and educators have more areas on which to focus than ever before. With each new innovation comes the need for focused research to give educators an indication for its potential in the classroom. By studying the progress of students in our schools and the impact of new technology on their learning, we can better understand and implement the best practice methods for instruction.

National Concern over Writing

A Nation at Risk sparked concern in various areas of academic content, including written communication. For many reasons, writing has been traditionally considered the forgotten R of the original three Rs; reading, writing, and arithmetic ("Erasing One of the Rs," 2010). Clear and effective writing has long been known to be a skill that takes enormous time and effort to acquire (Allen, 1984). With minimal existing standardized curriculum for writing and mounting pressure to promote math and science, writing has been largely overlooked by many teachers. The lack of instructional time needed to teach specific skills and the lack of objectivity for assessment that is present in other subjects has caused writing to fall on the list of daily classroom priorities. For some teachers, the drawback of writing assignments centered on the lengthy process of reading and assessing papers which requires specific feedback, unique to each student (Allen, 1984).

The negative attitude of many students when confronted with writing tasks also

calculated into the lapse. With all of these contributing factors, it was not surprising that

writing instruction had become diluted, if not totally avoided, over the years.

As reading and writing have been viewed as critically compatible, reading

education has been investigated for its potential impact on the writing skills of students.

Within our schools, reading instruction plays a major role in the curriculum until the

middle school years when it is often replaced with other content areas (Engstrom, 2005).

The major disadvantage caused by the lack of continuation is that many students fail to

develop skills beyond that level. Students who previously struggled to develop better

decoding skills are left without further support. Additionally, as peers and social context

become increasingly important, many do not take advantage of reading for pleasure.

Without continuing exposure to examples of good writing, through reading, students'

writing skills often stagnate in the middle school years as well. Spelling and other

conventional skills also do not develop as they should. Another possible source of blame

for conventional errors has been attributed to helpful word processing tools such as spell

check and grammar check. With the click of a button, the software can identify mistakes

in conventional errors and make suggestions for corrections. The argument has long been

that students no longer have to have these skills when the work is done for them. With

the new versions of Microsoft Word, spelling errors can be corrected automatically,

making the writer less likely to take note of the error when writing.

In the years following *A Nation at Risk,* serious concern circulated regarding the

minimal writing proficiencies of college students. This was known to many in higher

education as, "the crisis in undergraduates' communication skills," with a high degree of

prevalence that was well-documented across all major disciplines (Allen, 1984; Brocato et al., 2005; Goddard, 2003; Hines & Basso, 2008; Munilla & Blodgett, 1995). As college students prepared for the workforce, the need for adequate writing skills became increasingly important, not merely as an academic competency, but also as a vital skill for life. For workers in nearly every level of society, written discourse has been considered a crucial skill expected of employees for clear communication in the workplace. In the critical educational climate that dominated the 1980s, many universities searched for ways to improve the academic and professional writing abilities of students. Higher education began to focus on the development of written proficiencies, including Standard English conventions, as well as clear and concise written communication. The concentration, not just in English courses, but across every major field of study was known as 'Writing Across the Curriculum' (Goddard, 2003; Munilla & Blodgett, 1995). The ideology behind 'Writing Across the Curriculum' was twofold; it increased students' exposure to academic writing and put the responsibility of teaching and improving students' writing on every teacher, not just on those in the English department. 'Writing Across the Curriculum' challenged students to improve the content and style of their writing for every academic course, thereby encouraged the enhancement of their overall writing ability. It also made demands on teaching professionals in every field of study to provide students with multiple opportunities to write and give additional feedback on the content, style, and conventions of their writing.

Amid concerns that college students were still deficient in relation to writing skills, numerous studies were launched to investigate the carryover of English writing skills into other academic disciplines and for professional preparation (Allen, 1984;

Brocato et al., 2005; Goddard, 2003; Hines & Basso, 2008; Hull et al., 2003; Munilla & Blodgett, 1995). Research on nearly every popular major field of study, within higher education, found that the majority of college students struggled significantly with aspects of written communication. Within the field of business law, Munilla and Blodgett (1995) found that not only were conventional errors overwhelmingly the most prevalent problem for students, but difficulties in style and content were present as well. Not unexpectedly, the faculty represented by the study reported insufficient time for the planning and grading of written work (Munilla & Blodgett, 1995). A study by Goddard (2003) investigated the outcome of a specific course designed to teach professional writing for the field of psychology. The results showed a marked increase in the level of students' outlook and confidence about writing, however, even with the implementation of the specialized writing course, students improved, but still displayed deficits in conventional competency (Goddard, 2003). Citing the lack of acceptable writing skills in all college students, another study in 2005 examined the outcome of a writing course on the writing abilities of journalism students (Brocato et al., 2005). The journalism study showed that the requirement of a specialized writing course, after unacceptable performance on a diagnostic writing test, improved the overall writing ability of those who took the course (Brocato et al., 2005). It was noted, however, that those who initially failed the early testing and took the class, were still unable to achieve top marks (Brocato et al., 2005). The study pointed to the idea that specialized writing courses do provide the means for improvement, but not necessarily mastery. Research conducted by Hines and Basso in 2008 sought to explore the perceptions of business professionals on the writing communication skills of college graduates entering the workforce. The results showed

that high-quality written communication was not only a substantially valued skill, but one

that was relatively low in applicant collection (Hines & Basso, 2008). The study

concluded that, "business leaders continue to lament that many recent graduates lack

fundamental writing skills necessary for success as communication professionals," citing

errors in conventions and content (293). Across multiple fields of study, the results have

remained consistent. Previous research continued to make the recommendation for more

focused instruction on academic and professional writing skills in every field of study

(Allen, 1984; Brocato et al., 2005; Goddard, 2003; Hines & Basso, 2008; Munilla &

Blodgett, 1995).

In the new millennium, the acquisition of writing skills is far more critical than

ever before (Juzwik et al., 2006). Our economy and system of business depend on our

ability to effectively communicate on a global scale. Since *A Nation at Risk* (1983)

sounded the alarm, various concerns have been raised regarding the proficiencies of

successive generations and our nation's ability to compete internationally. Concern over

writing has been well-documented over the last thirty years and research has concluded

that some deficiencies did exist. Anxiety over the writing skills of American students has

created unprecedented focus on the entire language arts curriculum in our educational

system.

The Digital Revolution

While the educational debate of the 1980s and 1990s raged on, technological

advancements surged forward with amazing speed. Devices became available seemingly

overnight to make life easier, more enjoyable, and more interesting than before. One

innovation that may have changed American life more than any other was the personal

computer. In an famous, but ironic statement, indicative of the pre-digital world of the

1970s, the founder, president, and chairman of Digital Equipment Corporation, Ken

Olson, said, "There is no reason anyone would want a computer in their home". Most

certainly, he was commenting on the size and degree of operating difficulty that were

common with computers that existed prior to the technological revolution. The

inspiration for using computers in the home, for a multitude of tasks, was still far beyond

the comprehension of the general public in the late 1970s. Up until that point, computers

were traditionally used only for government and business. Initially, the home computer

was designed and used only for word processing and home management. Within schools,

teachers occasionally used word processing for writing assignments, although it closely

mirrored traditional methods for writing instruction with an easier way to edit and create

a finished copy (Bacci, 2008).   As personal computers became smaller, less complicated

to use, and more affordable, they quickly became commonplace in homes across the

country.

Computer sales soared with the invention of the Internet and the launch of the

World Wide Web in 1992. Rapidly, the public realized that, with just a few keystrokes,

they could connect with the entire world through their personal computer. The Internet

offered the use of electronic mail, known as e-mail, for sending letters or short messages

to anyone with a connection and an e-mail address. Searching the World Wide Web,

commonly called 'surfing,' provided computer users with a window to the world. Vast

amounts of information became readily available nearly overnight. The explosion of

websites for nearly every person, place, or thing was rapid and massive. The

transformation of our society to the online world was undeniable. Posted on the White

House website, former United States President Bill Clinton offered the following

comments regarding technological progress during his two-term presidency, "Advances

in computer technology and the Internet have changed the way America works, learns,

and communicates. The Internet has become an integral part of America's economic,

political, and social life" (para. 1). Indeed, it has become an essential element of life

today. In 2010, Pew Internet and American Life Project reported that 74% of all men and

women in the United States use the Internet regularly.

In the early days of the Internet, social technology provided a means of

communicating that was quite different from e-mail. Known as the chat room,

individuals had the ability to log into a forum which enabled them to communicate with

anyone on the planet instantaneously by typing and sending messages. Other

interlocutors in the same chat room could view what was written by others in the chat

room and respond in a real-time conversational medium. Computer chat rooms,

designated by various interests, became a popular form of computer-mediated

communication (CMC) with many Americans.

Another form of CMC that gained extensive popularity during the late 1990s was

instant messaging, also known as IM (Quan-Haase, 2008). While the technology for

instant messaging had existed since the 1970s with Unix talk command, it was used

mainly in business and employed by a few colleges and universities in the 1980s, such as

the Massachusetts Institute of Technology's Zephyr and Dartmouth College's BlitzMail

(Quan-Haase, 2008). It did not become available to the general public until 1993.

America Online (AOL), an Internet Service Provider (ISP), was the first to offer its

subscribers a mode to determine which personal friends were online at a given time and

the option to send a direct message in seconds with the introduction of the Buddy List

(Lewis & Fabos, 2005). Instant messaging, through the Buddy List, was similar to the

use of chat rooms in that it provided users with a forum for real-time conversation with

someone in any location (Ribble, 2009). What made the Buddy List more personal and

ultimately more popular was the fact that users could connect only with people whom

they already knew and to whom they might want to talk regularly (Lewis & Fabos, 2005).

Instant Messaging, between friends, rapidly surpassed chat room usage and became the

preferred method of social interaction among the younger generation (Fox, Rosen, &

Crawford, 2009). As it simulated a real conversation, but lacked the face-to-face

element, users found creative ways to shorten the amount of time required to send a

message, thereby decreasing the wait time for the other person. Lewis and Fabos (2000)

discussed the use of IM as a social strategy, employing both reading and writing skills.

According to Pew Internet & American Life Project (2009), approximately 60% of teens

own their own computer, while most have access to a family computer (5). It is

estimated that 97% of college students use IM, with 69% indicating that they use it on a

daily basis (Quan-Haase, 2008). Reportedly used by over 500 million people worldwide,

instant messaging "has had a strong impact on communication" (Quan-Haase, 2008).

Clearly, it is a significant form of communication in the twenty-first century, with the

potential to have far-reaching implications socially and academically (Quan-Haase,

2008).

Another form of communicative technology that became available in the early

1990s was mobile voice communication. Early mobile phones, also called cellular or cell

phones, were similar to home telephones in that individuals could make and receive calls

from the mobile device. With cell phones came the possibility to be contacted nearly

anywhere, at any time, making business and social interactions exceedingly more

convenient (Zhou, 2007). As the world became increasingly fast-paced and the demands

for each individual's time expanded, the cell phone quickly grew in popularity. In 2003,

it was approximated that 56% of teenagers had access to a cellular phone (Ribble, 2009).

By 2008, the estimate for cell phone ownership among teens at the age of just 14 was

72%, increasing with age to 84% for 18 year olds. (Pew Internet & American Life

Project, 2009). Parents quickly capitalized on the need to keep their children reachable.

In spite of the convenience and speed for communication already available, the

creation of text messaging offered technology savvy consumers the ability to send brief

written messages from a mobile phone. By manipulating the nine numerical buttons

multiple times to include the twenty-six letters of the alphabet, messages were able to be

typed and sent from anywhere. Similar to instant messaging, but without a full keyboard

and requiring a multiple stroke approach for each individual letter, early text messaging

required a slightly increased amount of time to transmit a message than for traditional

IM. That particular drawback had no significant effect on the popularity of text

messaging. Originally inspired to be useful in business, text messaging was instantly

embraced by the digital generation. More than ever, users found ways to shorten words

and to use creative spellings and acronyms to decrease the time of transmission for a text

message. Text messaging has the ability to be either synchronous or asynchronous,

meaning that interlocutors can converse in a real-time discussion or simply send a

message to be received when the other individual is available. In this regard, text

messaging is similar to instant messaging and e-mail, depending on how it is used, which

may significantly affect its impact. Figure 4 demonstrates the new forms of

communication that became available in the digital age.

Figure 4: The Digital Age

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                    ┌──────────────────────────┐
                    │   The Digital Revolution  │
                    └──────────────────────────┘
                     ┌───────────┴────────────┐
            ┌─────────────────┐      ┌──────────────────┐
            │     Personal     │      │   Mobile Phone   │
            │    Computer      │      │    Technology    │
            └─────────────────┘      └──────────────────┘
          ┌──────┴───────┐                    │
  ┌────────────────┐  ┌──────────────────┐  ┌──────────────────┐
  │ The Internet and│→│Instant Messaging │  │  Text Messaging  │
  │ The World Wide   │  │                  │  │                  │
  │ Web              │  │                  │  │                  │
  └────────────────┘  └──────────────────┘  └──────────────────┘
```
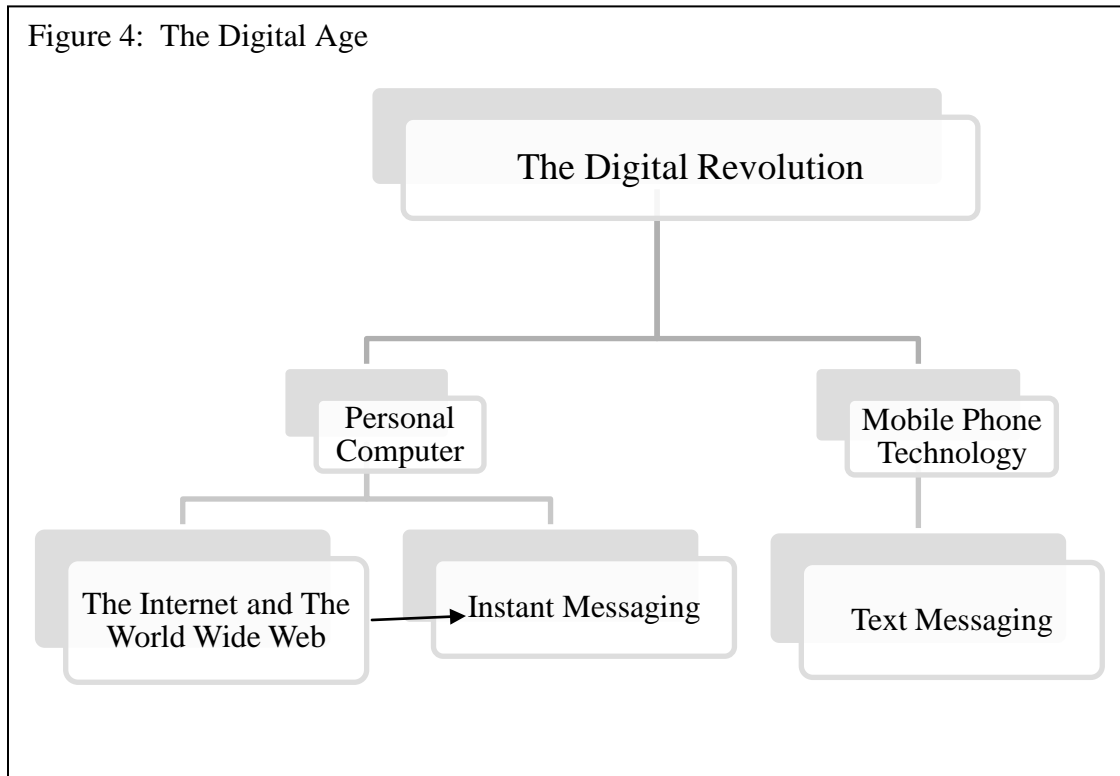
As phone ownership increased among teens, so did the use of text messaging. In

2006, 27% of teens reported sending and receiving text messages on a daily basis, in

2008 it was 38%, and by late 2009 that number had jumped to 54% (Pew Internet &

American Life Project, 2010). Additionally, 76% of all teenage cell phone owners

indicated they had sent a text message at some time (Pew Internet and American Life

Project, 2009) and Rosen (2010) found that the number of hours spent texting goes up

dramatically through the teenage years. In the future, those numbers are likely to

increase, as some youth of today agree that they would often rather text than talk on the

phone for social purposes (Plester et al., 2009; Ribble, 2009; Rosen, 2010). In today's

society, digital technology is essential for rapid communication and acquisition of

information. The statistics for the frequency of usage among various forms of

information and communicative technology (ICT) show increasingly growing trends.

The latest data shows that the age at which individuals begin using technology is

decreasing, giving the millennial generation a lifetime of exposure to ICT (Rosen, 2010).

The evidence shows that digital communication is here to stay.

Writing in the Digital Age

In education, it is nearly impossible to ignore the considerable impact that the

digital age has had on writing. With the technological innovations of the late twentieth

and early twenty-first centuries, writing has become a predominately social medium for

students. With the onset of technology, it is known that students write far more than ever

before, but predominately for purposes not academic in nature. New fears have surfaced

on the quality of the writing in which students' engage and the possible influences.

Never before have there been so many choices for written expression. Previously, in

schools, students may have written and passed notes to friends to communicate socially,

but with technology has come the opportunities for students to create e-mail, instant

messages, texts, blogs, and social network profiles (Lewis & Fabos, 2005). Research has

shown that students not only use these forms of discourse, but they do so in significant

numbers.

In recent history, the rise and popularity of IM has been well-documented by

many (Fox et al., 2009) and critics have pointed to its prevalence as a main cause for

inadequate writing skills (Harper & Rennie, 2008). As the nature of instant messaging

was created for a quick transmission of ideas (Ribble, 2009), the written discourse of IM

has evolved to some degree. Widely reported in the media, the language of IM utilizes,

"absent punctuation, lacking capital cases, special abbreviations, tolerance of

grammatical errors and so on" (Zhou, 2007, 399). It was Zhou's (2007) contention that

to maintain "synchronous communication," traditional conventions were often omitted by

interlocutors (401). Pictures, known as emoticons, made from punctuation marks were

used to convey feeling and emotions; the most common being the colon and the closed

parenthesis to indicate a smiley face (Baron, 2004). It was these types of deviations from

Standard English that caused the concern over the prevalent usage of IM among students;

however, little research has been done to study the full impact of the IM language

(Tagliamonte & Denis, 2008).

    While the overwhelming majority of digital natives (Prensky, 2010) are very

comfortable with the language, "IM challenges users who are only familiar with

traditional writing," (Zhou, 2007, 400). In a 2007 study, Zhou found that individuals

who use traditional conventions generally tend to continue their usage during IM, but

acknowledged that it could be damaging to younger students who had not yet developed

solid writing skills. The concern that IM has become exceedingly pervasive and has the

potential to negatively influence students has caused extensive hype in the media that

may be inconsistent with reality. Baron (2004) reported that shortened words, creative

spellings, acronyms, and emoticons were not as widely used in IM as previously

believed. While the media often reports that the language of IM is all students know and

use, Baron's (2004) research did not support that contention, finding that of all the

discourse from the study, only 0.3% was represented by abbreviations and 0.8% by acronyms. A study by Tagliamonte and Denis (2008) found that 'LOL,' the most common IM acronym used to say 'laughing out loud' was actually not as prevalent as 'ha ha'. Tagliamonte and Denis (2008) found that, of all the IM language in their study, 1.47% used 'ha ha,' while only 0.41% used 'LOL'. The same study found that 91.41% used the word 'you,' while only 8.6% shortened it by using 'u' (Tagliamonte & Denis, 2008). Jacobs (2008) similarly found that instant messaging language and emoticons, which have been often reported as overused in IM, were used with some frequency, but not excessively. Baron's (2004) earlier study had shown similar results with 0.4% of the discourse displaying emoticons. In 2010, a study by Rosen, Chang, Erwin, Carrier, and Cheever supported the assertion that overall usage was low, but also noted a correlation between lower digital language usage and a higher level of education.

Even when excessive use is not present, the concern has remained that 'textisms' create bad habits that negatively affect written language. In 2007, Dixon and Kaminska studied the effects of exposure to word misspellings and concluded that it had no damaging consequences. Plester et al. (2008) found no evidence to support the claim either and actually found implications pointing to a positive relationship between text language and written language. A 2009 study from Plester, Wood, and Joshi found even more optimistic results regarding the impact of text language. Not only did the study find evidence to completely dispute the negative effects generally associated with digital language, but the study results showed a positive correlation between the use of 'textisms' and general phonemic awareness (Plester et al., 2009). The ability to read and write in text language demonstrated a significant knowledge of written language in

general (Plester et al., 2009). While the study may have been somewhat limited by the

social-economic status of the population that was studied, further research was

recommended.

In practical reality, many teachers often complain that students' written work is

full of abbreviations and other IM language (Tagliamonte & Denis, 2008). That may be

due, in part, to students' lack of awareness or concern about the audience for whom their

work is intended. In a 2005 study, however, Lewis and Fabos found that students

regularly adjusted their writing as necessary and used conventions more frequently

depending on the intended viewers. Jacobs (2008) acquired similar results. This closely

matched the work of Turner (2009), based on the theory of code-switching, asserted by

Wheeler and Swords (2006), that writers often switch discourse depending on the

audience. Additionally, several studies have reported that the usage of acronyms and

abbreviations by young people declines as they grow older, making it less likely to occur

in the work of college students (Baron, 2004; Tagliamonte & Denis, 2008). Rosen et al.

concurred with the finding, but noted that digital language usage declined as students

were better educated making them more skilled at code-switching (2010).

With all of the negative publicity that instant messaging has received, it is

important to remember that IM can serve many purposes, even academically.

Capitalizing on the idea that it is a communicative medium that students know and use,

schools have found many ways to use it to their advantage.   College faculty members

often keep virtual office hours, inviting students to ask questions and engage in an instant

messaging forum with their professors (Quan-Haase, 2008). College and university

libraries offer access to instant messaging to give reference help for students who are

working on academic papers (Quan-Haase, 2008). This is especially helpful for commuter students who do not live on campus and for students who do not wish to be interrupted with a trip to the campus library while they are working.

With the overwhelming rise in the popularity of text messaging, old concerns about instant messaging and new fears about texting have emerged. The wide-spread usage of both has created a firestorm of controversy concerning the continued decline of Standard English (Turner, 2009). Many, however, fail to make the distinction between instant messaging and text messaging, which each have their own particular rules and standards. With some cause for optimism in relation to the effects of instant messaging, it was recommended that future research focus specifically on the impact of text messaging on standard written English (Tagliamonte & Denis, 2008). In 2010, Rosen et al. found that text messaging actually improves informal writing skills, but agreed that it may have some negative influence on formal writing skills. Positively, the same study discovered that better educated students make the switch between text language and formal writing (Rosen, Chang, Erwin, Carrier, & Cheever, 2010). In spite of some research-based evidence to the contrary, many still feel that digital language, as a whole, is impacting the entire system of written discourse for American students, although there still seems to be some uncertainty. Most would agree that there is still much research to be done.

Multiple Literacies

Looking back to 1983 when *A Nation at Risk* was published, one of the great concerns brought out by the report regarded American literacy. Within education, the

term, 'literacy,' traditionally has been used to encompass the acquisition of the skills of

reading and writing (Lewis & Fabos, 2005). The ability to read printed words and

communicate in a standard written manner have long been the goals of primary school

curriculum, providing students with the necessary competencies to progress to higher

education. Generally, it has been the consensus that being a literate individual provides

one with far more opportunities in life and greater chance for success. Part of the

controversy that was touched off by *A Nation at Risk* (1983) was the concern that if

students in the United States were failing to meet basic competencies in literacy, our

nation could not compete globally. The National Center for Education Statistics (NCES)

reported in 1993 that illiteracy rates in the United States have been falling steadily since

1870 and that even as far back as 1930, the illiteracy rate for adults was only around four

percent. In 1979, just four years before *A Nation at Risk* was published, the rate had

fallen to less than one percent of the total population.

       With the increased academic standards that followed *A Nation at Risk,* significant

changes were made to the core curriculum of American schools. While that was in

progress, so was the rapid infusion of technology into society. When the pervasiveness

of technology became too great to ignore, educators had to rethink education in terms of

twenty-first century learners. Luke and Elkins (1998) stated that, "many of our

assumptions about how people actually acquire and use literacy are themselves products

of the early 20[th] century" (5). Today's students have extensive access to information and

communicative technology on an infinite basis causing many to reconsider previous

views of literacy. With the broadness of the World Wide Web, Lankshear, Peters, and

Knobel (2000) addressed the idea that traditional literacy learning may be outdated.

Through e-mail, blogs, chat rooms, IM, texting, social networking sites, and other technology that exists today, students are engaged far more in various forms of reading and writing than ever before. Johnson and Kress (2003) pointed out that, "reading and literacy are embedded in social practice" (10). For that reason, we can no longer believe that reading and writing are skills that should be taught in isolation, nor are they skills used solely for academic tasks. The perception that the writing students do outside of the classroom does not count as serious literacy has a tragic flaw (Williams, 2005). Students today are reading, writing, and learning through technology, most often outside of a classroom, without the help of a teacher. To keep today's student engaged in the classroom, educators must tap into the knowledge and the skills that students use in their lives outside of the classroom every day. Education must honor the outside lives of students to have any relevance at all in their world. Students are becoming increasingly disinterested in school due to the widening gap between the digital world and the traditional classroom (Hinchman et al., 2004; Merchant, 2007).

Many in education currently argue that literacy now must be looked at from a different perspective. Our focus must change from viewing literacy as a singular accomplishment to recognizing it as an intricate and changing system which encompasses multiple components, many of which are pervasive in society, but are not necessarily taught in schools. Educators and researchers have termed this emerging concept as, 'New Literacy' or 'multiple literacies' (Gee, 2000; Hull et al., 2003; Johnson & Kress, 2003; Lankshear et al., 2000; Lewis & Fabos, 2000) bringing validation to the proficiencies that have become essential to life in 'new times' (Gee, 2000; Luke & Elkins, 1998). Expanding the definition of literacy to include a wide-range of traditional

and technological abilities, new research has begun to focus on how students utilize the

multitude of skills developed from life in the digital age. While the traditional sense of

literacy still stands as a vital communication skill for life, new mediums for learning and

communication have been created and acquisition of the new skills are proving to be just

as essential. Johnson and Kress (2000) discussed the critical need for multiple literacies

in business and the economy. The requirement of multiple literacies for maintaining

social relationships and status has been widely reported as well (Faulkner, 2005; Lewis &

Fabos, 2000). With the pervasiveness of technology in our society, it is nearly

impossible to not be affected by it in some way. The availability, affordability, and the

convenience of technology for information and communication compel its extensive

usage. In using these modern advancements, it becomes crucial to understand and

function literately in each type of medium.

There has been much discussion concerning the 'digital divide.' Initially, the

divide was understood to mean the discrepancy between those who had access to

technology and those who did not, but as it has become more readily available, the idea

of the digital divide has been refocused on those who can navigate the technology and

those who cannot or will not (Jackson, et al., 2007; Kim & Bagaka, 2005; Ribble, 2009).

As discussed earlier in chapter one, Prensky (2010) is credited with the conception of the

expression 'digital natives' and its application to the students of today, describing them as

"native speakers of the digital language of computers, video games, and the Internet (1).

In his analysis of the digital divide, Prensky (2010) examined the idea that the majority of

educators today are 'immigrants' in the digital world. To some degree, the immigrants

are capable of adapting, but continue to discredit the proficiencies and the preferred

learning styles of the natives (Prensky, 2010). Children in our society are exposed to the

informational and communication technology at critical stages of their young

developmental lives and it is due to that early exposure that they are generally more open

to new technological ideas and advancements (Ribble, 2009). Ribble (2009), however,

contends that each person experiences 'immigrant' status at some point during their life.

For the youth of today, the time of immigration is simply earlier and shorter than for the

previous generation.

Within the theory of multiple literacies, research has begun to focus on the study

of discourse selection, among the various forms, to choose the correct manner for each

specific situation (Turner, 2009; Wheeler & Swords, 2006). The work of Wheeler and

Swords (2006) examined this phenomenon and termed it appropriately as 'code-

switching.' While their work focused mainly on the capability of African-American

students to exchange their cultural dialect for Standard English, used in schools, the

theory holds true in a number of situations where code-switching is done by students.

Within our schools, an increasingly diverse student body may present multiple and

divergent forms of written and oral communication. In treating all students with fairness

and respect, teachers are asked to validate each student's familiar discourse and not view

it as an inadequacy of the student (Turner, 2009; Wheeler and Swords, 2006).

Furthering the code-switching theory into the language of the twenty-first

century, Turner (2009) expanded the idea to include switching from digital text language

to conventional academic writing. Analogizing the concept of exchange between the two

divergent literacies, the theory proposes teaching students how to 'flip the switch' for

each setting (Turner, 2009; Wheeler and Swords, 2006). Ultimately, the key to

successful changing of discourse is to educate students to consider their purpose and audience each time they write, making thoughtful choices about the content, style, and conventions (Lewis & Fabos, 2005; Turner, 2009; Wheeler, 2008; Wheeler & Swords, 2006). Rosen et al. agreed that, while there may be some negative influence from digital language on formal writing skills, better educated students are the most skilled at code-switching. While the practice of social writing has been studied extensively, Juzwik et al. (2006) noted, in a review of research from 1999-2004, that the concept of writing modalities was the least researched. More research has been done over the past few years, but there is still much work to be done.

It is important to note that while standard conventional writing remains the clear choice for most academic and professional types of communication, the environment for digital text language also has a major place in everyday interactions. The need to 'flip the switch' from formal writing back to informal writing is prevalent in a wide number of situations, mostly social. Turner (2009) points out that the usage of traditional writing within digital mediums may, in fact, "set [one] apart from the community in an uncomfortable way" (64). Albright, Purohit, and Walsh (2002) asserted that students are able to discern the difference between the different types of writing and they intentionally make the choice to misspell and abbreviate words in the context of digital communication.

In recent years, there has been much debate over the pervasiveness of the informal usage of computer and technology-based communication, almost to the exclusion of more formal and academic types of writing (Turner, 2009). Written expression within this medium has become its own literacy, complete with rules and conventions. Its daily

usage, by millions, is too extensive to be disregarded. In looking at literacy practices of

our society, Lewis and Fabos (2005) acknowledged the changing of the landscape within

language and the importance of digital literacies for today's youth. For the digital natives

in a social context, the navigation of digital communication is essential for establishing

and maintaining relationships (Lewis & Fabos, 2005). Ribble (2009) describes belonging

to the world of informational and communicative technology as 'digital citizenship'.

Unlike many other forms of communication, digital communication is 'multimodal' in

nature, requiring a blending of various skills within one context (Lewis & Fabos, 2005,

475). Digital literacies then refer to, "the skills needed to be a successful online reader

and writer" (Lewis & Fabos, 2005, 486). More and more, these skills are becoming vital

for everyday life. With the onset of the digital age still relatively recent, vast amounts of

research have yet to be conducted with regard to the impact of multiple literacies on basic

writing skills.

     The focus of the digital native generation also appears to be characterized by the

term 'multitasking'. As multitaskers, the digital natives have the capacity to perform

numerous tasks at one time, rather than focus on one job at a time. Students often engage

in instant messaging and text messaging while doing their homework, watching

television, or carrying out other activities. Fox, Rosen, and Crawford (2009) addressed

the concept of multitasking to explore how it distracts from each individual task, "thereby

dividing attention or forcing a switch between tasks" (51). The idea of changing gears

between tasks may be similar in analysis to code-switching in oral and written discourse.

In a 2009 study, a negative correlation was found between concurrent IM usage and

performance on cognitive activities, indicating that attention is more likely divided than

switched between tasks (Fox et al., 2009). Additionally, the study found that persistent

IM usage was associated with decreased grade point averages in college students (Fox et

al., 2009). While many argue that this skill serves them well, others agree that

multitasking produces inferior performance due to decreased attention (Fox et al., 2009).

Conversely, Jackson et al., (2007) found that, unlike extensive use of video games,

increased usage of computer and the Internet correlated positively to academic

performance.

Linguistic Implications

Given the enormous controversy and associated media hype that has come with

the new digital language, perhaps further exploration is needed. An interesting question

that surfaced through the literature review offered a new perspective: Is digital language

actually more like speech or more like writing, linguistically speaking? The wide-range

of media coverage would lead us to believe that communication such as instant and text

messaging most closely mirror written language, as they are a written form of discourse,

albeit, computer generated. With the notion of missing punctuation, abbreviated words,

and the creative spelling that are thought to be inherent to digital language, the negative

publicity has the American public concerned that the content and quality of written

language are being eroded. It has been suggested, however, that CMC such as IM and

texting offer a discourse that more similarly simulates speech as opposed to writing

(Albright, Purohit, & Walsh, 2002; Tagliamonte & Denis, 2008). Synchronous and

asynchronous exchanges, through instant messaging and texting, offer communication

that is generally more conversational in nature. Merchant (2003) portrayed the language

of e-mail in the same way, describing it as both "speech and writing." Baron's 2004

study concluded that IM, "represent [s] a blend of both spoken and written language conventions" (416). Lewis and Fabos (2005) similarly compared IM to speech in regard to the grammar and vocabulary used. Tagliamonte and Denis (2008) agreed, describing it as a "hybrid" (25).

Throughout history, language has continuously changed and evolved. Traditionally, the spoken vernacular of the younger generations, commonly referred to as 'youth code' or 'slang,' has been cause for complaint with older generations, perhaps because it is different from what they know.   In regard to spoken language, Tagliamonte and Denis (2008) stated that overall there has been, "a much broader contemporary trend toward more informal language generally" (25). This means that people are far less formal, in conversation, than previous generations. An interesting fact to note, particularly for digital language opponents, is that when compared, IM is actually "a more formal register than speech," (Tagliamonte & Denis, 2008, 18) complete with rules and standards all its own. Equally interesting for those concerned with the perceived alterations to the English language due to digital language, Tagliamonte & Denis (2008) found that changes in spoken language typically occur more quickly than in digital language. In regard to texting, specifically, Crystal (2008) asserted that 'textspeak' may be a developing new form of language, which is an exceedingly rare happening.

Within the literature, there are multiple perspectives with which to view the current trends and practices in communication. Some of the current research leans toward an unfair comparison of digital language and written discourse. Given the relative recentness of many innovations to our society, it is reasonable to withhold judgment until

research has offered a more comprehensive representation regarding the nature, the potential uses, and the impact of the latest technology.

Preparing Teachers to Teach Writing

Prensky (2010), who coined the term 'digital natives,' also refers to today's students as the 'Digital Generation' or the 'Net Generation'. The term 'digital native' typically has been used to describe those born after 1980. The 'D-gen' or the 'N-gen' is characteristically a bit younger, born sometime just before or after the invention of the Internet. This generation of students, who are just coming of age, will soon be teaching future generations of students. In regard to the teaching of writing, two important questions surface: What level of confidence do we have in their abilities? What are we doing to prepare them for the task of educating the students of tomorrow?

In the past thirty years, much progress has been made in the assessment of writing skills. The resulting literature on the topic, however, can be overwhelming and, at times, confusing. For the purposes of this study, the most current statistics used are those directly obtained from the National Center for Educational Statistics (NCES) within the United States Department of Education. Through the NCES, The National Assessment of Educational Progress (NAEP) assesses students in nationwide standardized tests over nine academic subject areas, including writing, and reports the results publicly in a document known as *The Nation's Report Card* (Salahu-Din, Persky, & Miller, 2007). According to the NCES website (2008), "The National Assessment of Educational Progress (NAEP) is the only nationally representative and continuing assessment of what America's students know and can do in various subject areas," confirming the authority

of the NAEP to report exclusively on national assessments (para. 1). For the purposes of

this study, focus is placed solely on the achievement of twelfth graders, those closest in

age to college students. The most recent statistics, as reported in *The Nation's Report*

Card 2007, showed that the number of students, nationwide, who demonstrated a writing

proficiency at the sufficient level, or higher, was 60% (Salahu-Din et al., 2007, 44). In

the study of the recent trends, it was noted that the writing scores for all twelfth graders

rose five points nationally during the period 2002 to 2007 (Salahu-Din et al., 2007, 36).

The results show a slight, but clear positive increase in student achievement within the

area of writing. Achievement and progress results are expected to be reported in writing

again in 2011.

Spawned by *A Nation at Risk* (1983)*,* increased standards for teachers were put

into effect under the NCLB legislation that followed to ensure that basic proficiencies

were present in those charged with the task of educating our nation's youth. Behind the

stricter guidelines was the idea that better educators would ultimately provide better

education for students and the hope that student achievement would rise (Mikitovics &

Crehan, 2002). Currently, most states require teacher candidates to take and pass either

the PPST or some other form of Praxis Test for teacher certification and state licensing.

In the remaining states, candidates must meet other stringent qualifications. A 2002

study, consistent with previous study results, found that scores on college entrance exams

correlated similarly to scores on the PPST, thereby seeming to measure the same skills

(Mikitovics & Crehan, 2002). On the PPST, a study from Harrington and Harrington

(2001) indicated the females perform better on the writing sections of the test. The field

of education is still predominately female, with males making up slightly less than one

quarter of all practicing teachers in the United States. In essence, the group scoring the highest on the writing subtests makes up the largest percentage of teachers.

In educating the future teachers of tomorrow, there are more factors to consider than ever before. Those currently in higher education are focused on employing best practice methods for instructing and ultimately producing high-quality educators. Following the adage, 'practice makes perfect,' it is imperative that students have multiple opportunities to practice reading and writing skills. Numerous studies have documented the need to add reading and writing classes to the college curriculum (Brocato et al., 2005; Engstrom, 2005; Goddard, 2003). While these classes do not guarantee that every student will become an outstanding reader and writer, research has shown that students do make progress toward becoming better readers and writers. A 2008 study by Harper and Rennie reported that many pre-service teachers had difficulty with language, in general, which raised questions regarding their ability to teach students about language. The study ultimately recommended a course in linguistic concepts for teacher candidates (Harper & Rennie, 2008). In the field of writing, it has been suggested that a best practice method is for instructors to read and write often with students (Kaufman, 2009). In a teacher education program, students must continue to learn solid academic writing skills, while learning how to teach writing to their students with, "teaching modeling that entails the academic demonstration of writing skills, strategies, and convention usage" (Kaufman, 2009, 338). In a 2009 study, it was found that by incorporating personal writing with students, students responded more favorably with, "increased motivation and willingness to take risks," in regard to written assignments (Kaufman, 2009, 347). Each experience with literacy offers an opportunity for growth and improvement.

When factoring in the idea of 'New Literacy,' several important questions surface that warrant further exploration. How do we teach the digital natives? What should our focus be: digital literacies or traditional literacies?   Should they be separated? Prensky (2010) discussed the two types of literacy in terms of their content, "legacy content" and "future content," (4). In order to reach the students of today, educators must teach both. A study by Judson (2010) demonstrated a positive relationship between technology literacy and traditional literacy achievement. That significant finding suggests that technology and language arts should be taught concurrently for the maximum benefit in both areas. Similarly, Walters and Fehring (2009) found that student learning was assisted in all areas of the curriculum by using Information Communication Technology (ICT). Current research strongly recommends that teacher education programs incorporate technology in all of the pre-service coursework required for teaching candidates (Kim and Bagaka, 2005; McPherson, Shiang-Kwei, Hui-Yin, & Mengping, 2007). The merging of literacy instruction with technology for pre-service teachers offers a broader view of literacy (Cervetti, Damico, & Pearson, 2006) and provides a best practice method for teaching a new generation of students (Witte, 2007). Many in higher education are already integrating technology as part of regular coursework through a multitude of innovations, replacing parts of the previous curriculum with online discussion boards, video conferencing, Web Quests, Wikis, blogs, concept maps, imovie and other digital experiences. The importance of offering validation to the outside online skills is vital not only for pre-service teachers, but for the students they will one day teach. By offering the opportunity to use the skills they possess outside of the classroom,

students can excel inside the classroom (Williams, 2005). Additionally, future teachers

may not need to rely on their students for technology assistance (Williams, 2005).

For the purposes of this study, the researcher explored the academic work of pre-

service teachers, as observed by those who teach them. The study sought to understand

the perceptions of the faculty regarding the ability of pre-service teachers to switch

between multiple forms of discourse in the digital age and make appropriate choices for

their academic work. In regard to writing, it has been established that undergraduate

students are among the groups that are studied the most often (Juzwik et al., 2006),

however, advancements in technology and new practices within the group compel further

study (Bennett et al., 2008). It is imperative that we seek to understand them and grasp

the range of skills that they possess (Bennett et al., 2008). Understanding them is the key

to teaching them. We must rely on critical research to employ best practice methods,

integrated with technology, for instruction in college campuses across America.

Chapter 3: Methodology

In the exploration of recent history and reflection on the advancements in communicative and informational technology, a pattern of change has emerged, altering the educational landscape dramatically and irreversibly. Unremitting debate on both sides of the issues facing educators have caused multiple changes to the curriculum, increased assessment of students, and standards for professional accountability to be implemented nationwide. With each new change, extensive research must follow to give credence to contemporary practices or to discredit them entirely. Additionally, with advancing technology, we look to research to assess the impact of innovations on students. It is the ultimate goal in education to employ best practice methods and to use the latest advancements that offer the greatest potential for student progress and achievement. The twenty-first century has brought many technological developments to the lives of nearly every American student. With the current wide-spread usage of digital language, a new field for research has become clear. Justifiable causes for distress have surfaced regarding students' significant emersion in the written jargon of the digital world. Among the serious concerns is the fear that the academic writing skills of the nation's student population are declining, in part, due to habits picked up from the practices of instant messaging and texting that are inconsistent with standard written English. The outpouring of concern from the American public has created an environment in which this study has the potential to offer some insight into the legitimacy of the perceived crisis or the degree to which it exists.

Qualitative Research Strategy

Creswell (2007) discussed the perspective of social constructivism as a means to explore an experience or a phenomenon present in our society, as encountered by individuals. Through carefully designed qualitative research, persons directly involved in the topic being studied are observed and queried for their perceptions. It is those perceptions that guide the basis and the outcome for the study. Creswell (2007) also asserted that the gathering of reliable and honest views from involved participants should be the main focus of the research, thereby giving a voice to those most affected by the topic. This seems intuitive as those individuals already established in the field should logically be the most well-informed and aware of the context in which the study operates. As this study sought to examine the academic writing skills of pre-service teachers, it therefore recognized that the most knowledgeable source for information on that specific topic was the teacher education faculty for whom the students write. It was the faculty's experience in the evaluation of students' written work that made them the most appropriate group for participation in the study.

Within the social constructivism view, Creswell (2007) indicated that phenomenological or grounded theory studies lend themselves well to the exploration of societal occurrences that may or may not be significant, in some way, to others. Taking the phenomenological approach, this study investigated the phenomenon of digital language usage and considered its impact on academic writing, as evaluated and communicated by college and university faculty. Faculty members were interviewed through a series of unrestricted questions, designed not to lead the participants, but to allow them the opportunity to express their genuine beliefs regarding students' academic

writing skills. Additionally, they were asked to bring anonymous samples of students'

work at various levels of proficiency for examination and discussion. In consistency with

Creswell (2007), the researcher did not offer opinions on the intrinsic value of the work,

but instead listened for and record each faculty member's explanation of the paper. The

resulting data was later transcribed and analyzed for recurring themes considered

important by the participants, as evidenced by significant or multiple remarks.

Qualitative Research Characteristics

Initially, all qualitative research starts with a perceived concern in a particular

area, requiring further knowledge of the topic for better understanding. Typically

questions surface that cannot be answered with straightforward statistical data, but

instead require a more involved exploration. What differentiates qualitative research

from quantitative research is the descriptive nature of the data collected. Rather than the

reliance on tests or surveys to provide answers to the study's overriding questions,

qualitative research provides narrative accounts from observations and interviews to give

greater context to the issue at hand. The participants in this study were given the

opportunity to assert their prevailing perceptions through the interviewing process to

provide extensive depth to the summative discussion.

In the book, *Qualitative Inquiry and Research Design: Choosing Among Five

Approaches,* Creswell (2007) also identified many important traits of sound qualitative

research. The traits described by Creswell (2007) include key factors of qualitative study

design, such as authentic environments for the study, social roles for the participants and

researcher, varied forms of data, and ways in which the data should be interpreted and

discussed. As this study purpose was to offer valuable insight to the existing knowledge in the field, the research study was designed to meet the critical standards of qualitative research put forth by Creswell (2007). Each crucial element is further discussed in the following sections with an indication of how the study complied with each criterion.

Gaining Entrance

To meet the terms of Creswell's (2007) standard for setting the phenomenological study in an authentic environment, the study was designed to interview teacher education faculty members on college or university campuses. The sole credibility of the teacher education faculty in evaluating student writing and ability level was established early within the study; however, several parameters were set to ensure that the population interviewed was in a regular position of assessing student work. For the purposes of this study, only full-time faculty members were considered for inclusion in the study. There was no distinction made between educators who taught primary education classes and those who taught secondary education classes, however, only those who taught undergraduates were included in the study.

In the original research proposal, the researcher requested permission from the Institutional Review Board (IRB) of a mid-sized university to seek a list of full-time teacher education instructors, actively teaching at least some undergraduate classes, from the chair person of the teacher education department at that university (Appendix A). The IRB gave authorization (Appendix B) for the research to be conducted at the university, but would not allow a study recruitment request or follow-up letter to be sent from the researcher through the electronic mail system on the campus. It was the

ultimate decision of the IRB for the chair person of the teacher education department to make the determination on the eligible candidates for the study and send the request letters on behalf of the researcher. The university chair person agreed and an initial request letter (Appendix C) was sent, however, none of the candidates responded within the first two weeks. A follow-up letter and final request (Appendix D) were forwarded to the same list of qualified candidates by the chair person, again on behalf of the researcher. The predominant reason for perceived lack of interest in the study was explained as a concern over the one hour time commitment for the study interview and many of the faculty members felt already overscheduled with commitments to teaching and other scholarly pursuits. Ultimately, only two faculty members from the university volunteered to be interviewed for the study, prompting the addition of a second research site.

To potentially offer contrasting perceptions to the study's final data, the researcher sought permission to interview faculty from a small private college. Authorization was given, both by the college and its corresponding Institutional Review Board, for research to be conducted on campus with the faculty from the college (Appendix E). No restrictions were placed on the researcher regarding the study's recruitment and follow-up letters. Additionally, a list of possible eligible candidates was provided and the researcher contacted them directly through the campus wide electronic mail system. After receiving the research request and the follow-up request, a total of four faculty members from the college agreed to participate.

Prior to the interviews, the researcher met briefly with each of the individual participants to explain the study and to make each volunteer aware of the rights

guaranteed to research study participants (Appendices F and G). All of the college and

university faculty members signed standard consent forms and were offered copies

(Appendix H). Following consent, each participant was asked to complete a short

demographic form, giving background information such as age, number of years of

teaching experience, and types of student written work typically assigned (Appendix I).

In the subsequent section pertaining to the participants, the statistical information for the

group, as a whole, is provided as it is relevant.

Setting

As previously mentioned, the study's design met Creswell's (2007) standard of

conducting research in a "natural setting" (37). Each interview took place on either the

campus of the college or university, as determined by the employment of each

participant. Once volunteers were established and each had signed the consent form, they

were contacted through e-mail to set up an interview. For the convenience and comfort

of each volunteer, the researcher allowed individual faculty members to determine the

exact time and location. Once arranged, the researcher arrived on campus to meet with

each of the participants as scheduled. During the data collection phase, four of the

discussions took place as previously scheduled and two of the appointments had to be

rescheduled to accommodate the participants' numerous obligations. Ultimately, all six

interviews were conducted without interruption to classes, meetings, or planning times.

Both of the university participants chose to be interviewed in a conference room

close in proximity to their own offices. The two conference rooms were nearly identical

with a large, wooden, oblong table placed at the center of the room and comfortable

upholstered chairs all the way around. Due to the overwhelming size of the table and the

researcher's desire to put the participants at ease, the researcher sat on the same side of

the table and next to each participant during the interview. Both the participant and

researcher turned their chairs inward for a face-to-face interaction, meeting Creswell's

criterion regarding social roles for the participants and researcher (2007). A small digital

recorder was placed on the table between the two to record the entire discussion. Spread

out across the table were the papers brought by the faculty participants for discussion.

For the anonymity of each participant and the privacy of the interview, the door to the

conference room was kept closed. No interruptions were noted during either of the

university interviews.

At the small private college, all four of the participants chose to be interviewed in

their own offices. All four of the offices were similar in size. The decor in each office

was varied to some degree by individual taste, but all four were comfortable and inviting.

Each held a large desk with the faculty member's chair on one side and additional seating

provided on the other side. The researcher took a chair opposite each participant for the

same face-to-face type of discussion present in the university interviews. Also, similar to

the university interviews, the recorder was placed on the desk or table between the two

and students' papers were scattered on the work surface for discussion. Three of the

participants opted to close the door for privacy, one did not. Some hallway noise could

be heard during the open door interview and other small interruptions were noted during

the other three interviews, but none were believed to have broken the focus of the

interview.

Participants

In the digital age, the steady stream of media can often misrepresent important issues and can also overshadow differing perspectives. One fundamental goal of this study was to gather authentic and accurate data to provide a more understandable representation of academic writing done by pre-service teachers in the current educational climate. This study sought to add to the body of existing knowledge with yet another piece of the whole picture, by presenting an informed perspective from professionals in the field. With the intention of putting confusing or conflicting test scores and statistical data aside, the study explored the classroom reality of academic writing done by students at the college level. The college and university faculty responsible for assigning and evaluating the student work was believed to be in the best position to assess and discuss the level of proficiency demonstrated by college and university students in authentic settings for this study.

Within the mid-sized urban location selected for the study, there were several potential college and university locations at which the data could have been collected. The first site chosen for this research was a mid-sized public university, situated within the heart of a growing metropolitan area in the Midwest. At the time of the study, the university offered an extensive array of study programs, at both the undergraduate and graduate levels, including teacher education. The second site chosen for the research was a small private college, also centrally located in the same Midwestern city.

As previously discussed, there was a slight degree of difficulty involved with the recruitment of participants for the study, resulting in a relatively small sample size of six.

With careful analysis, however, multiple common themes emerged in all of the interviews, indicating that the saturation level in relation to the original questions was met (Creswell, 2007). The group of research participants was comprised of two faculty volunteers from the medium-sized public university and four faculty volunteers from the small private college. In the interest of preserving the participants' identities, the university faculty members are identified as 1JRW and 2JRW and the college faculty members are known throughout the study as AJRW, BJRW, CJRW, and DJRW. They are designated differently, based on institutional affiliation, only for the purposes of comparison.

After initial entry to the field was granted and participants made themselves available for the study by signing consent forms, preliminary data was gathered. To give further depth to the description of each faculty member participating in the study, a simple anonymous demographic questionnaire (Appendix I) was sent out via campus electronic mail. The demographic questionnaire was designed to collect information from each participant, such as years of teaching experience, types of writing frequently assigned to students, and evaluation procedures for written work. The data assembled from the demographic questionnaire did not drastically impact any of the study's findings, but offered basic background information on each participant. Since the manner used for completing the form was not relevant to the study, paper and electronic copies were offered to each participant. The number was split equally between the methods. Three participants filled out the form online and three participants wrote their answers on the hardcopy provided. The questionnaire did not take more than ten minutes to complete.

Once collected, the data from the demographic from was used to make some generalizations about the participants as a group. Considering that women outnumber men substantially in the teaching profession, it was not surprising to note that all six of the faculty volunteers were female. The average age of the participant group was 52 and all of the participants fit the definition of a digital immigrant, meaning they were each born prior to 1980 (Prensky, 2010). In spite of chronological age and a digital immigrant status, all of the participants described regular personal and classroom use of various forms of technology such as e-mail, online discussion boards, blogs, Skype, and online submission of assignments. More than half of the interviewed participants said that they allowed their students to text message them in regard to classes, but none of the participants indicated that they instant message with or participate in outside social networking sites with undergraduate students. Two of the participants cited personal boundaries as the main reason not engaging in those types of communication.

Each of the faculty members that were interviewed indicated holding a doctorate level degree as their highest level of education. Among the faculty participants, the average number of years in teaching was calculated at 28.5 with a mean of 16 years specifically teaching at the college level. While one participant started her teaching career after the onset of the digital revolution, all of the others began their careers in education in the early 1990's or before. Additionally, the faculty volunteers from the medium-sized public university reported working with an average of 25-30 students in each class for a total of 60-85 students per semester, while their small private college counterparts approximated their number of students per class at 14-20 and 46-56 per semester. All of these numbers indicate that the participants had many previous years of

experience in evaluating the writing skills of pre-service teachers and extensive exposure

to large groups of students. In response to the preliminary questions presented on the

demographic form, the participants described the types of class writing assignments

usually assigned as journal writing, essay questions, lesson plans, article reviews,

reflective papers, analysis papers, and research papers. All six participants cited the use

of rubrics as their chief evaluation tool for all of the writing assignments. Table 1

illustrates the important demographic data regarding the research participants more

concisely.

Table 1

Demographic Data of Participants'

_____

Participants'	University (2)	College (4)	All (6)
Average age	56	50	52
Years of teaching experience	34.5	25.5	28.5
Years of college teaching experience	20.5	14	16
Number of students per semester	60-85	46-56	51-66
Average number of students per class	25-30	14-20	18-22

_____

While it was not believed to be problematic in the study, it should be noted that a

total of three of the faculty participants, one from the university and two from the college,

were known to the researcher. Each of the three had previously taught the researcher as a

student, although not as an undergraduate, which was the focus of this study. It had been more than a year since the researcher had been a student in any of the participant's classes. It should also be disclosed that the researcher was employed part-time at the university, but did not have regular contact with either of the university participants and only actually knew one of them.

Role of the researcher

The nature of this study was to gather authentic information from professionals in an established educational setting. In the study, the validity of the faculty's underlying knowledge was crucial. For that reason, the researcher pursued a "key role" as an interviewer, listener, and data collector (Creswell, 2007, 38). The researcher did not assert any personal views, nor biases in regard to the topic, but allowed the experts' views to provide the basis for the discussion. Creswell (2007) described this method as using the views from the participants' interviews, rather than the researcher's own, as employing, "participants' meanings" (39). More simply stated, the participants' thoughts and beliefs guided the study. Open-ended questions that invited each participant to discuss and elaborate on the subject of students' academic writing were asked (Appendices J and K). Moreover, to further encourage the faculty members to expand on the subject, the researcher created a sincere listening environment to let the participant know that she was providing important information for the study. As all data was digitally recorded for accuracy, the researcher maintained eye contact throughout the interview. At the conclusion of each session, the researcher wrote down any and all fresh observations from the interview, as field notes, after leaving the participant (Appendix L).

Ethical Considerations

For each of the schools represented by the study, the researcher sought full IRB approval prior to beginning the study. At both schools, an expedited review was deemed the appropriate choice as the participants were all of legal consenting age, were not considered a vulnerable population, and the risk to the participants was considered extremely minimal. Once IRB unconditional approval was granted at each institution, the study's participants were recruited using an e-mail request sent out by the researcher or the IRB's appointed department representative through the campus's electronic mail system. Faculty members, who were willing, participated on a voluntary basis and were under no pressure or obligation at any time. In compliance with each school's Institutional Review Board and with the greatest sensitivity for the rights of human subjects involved in this research, each participant was provided with a copy of *The Rights of Research Participants* (Appendix F) and any additional material required by the corresponding IRB for that institution (Appendix G). Additionally, consent forms were explained individually to each participant and copies were provided for each participant's consideration and signature. All six participants gave verbal and written consent.

For the protection of each participant, great care was taken to help ensure anonymity. Participants were identified throughout the study only by a code, assigned by the researcher and used on all documents pertaining to the study. The faculty members were not made aware of which colleagues participated in the study and which did not. Similarly, the researcher did not share information from one interview to the next. All of the data collected in the study was stored in three separate and completely secure locations.

Ethical considerations were also given to the student population taught by the participating faculty. While student work was discussed during the interview, it was not connected in any way to any individual student. Participants were asked to remove all identifying information prior to the interview. In cases where that had not been done, no documentation of personal information was made. Copies of the students' work were not retained by the researcher. Additionally, the rubrics completed by the faculty did not carry any identifying information about individual students and they were discussed in general terms only.

Data collection procedures

Collecting data for the study was a process that required multiple means. Initially, some background data was collected from the demographic form. As previously discussed, Table 1 summarizes the relevant demographic information that was gathered. After completion of the demographic questionnaire, a mutually agreed-upon time was confirmed for each interview to take place. Convenience for the participant was the key factor in determining the interview date and time. The setting for the interviews, as discussed previously, was also determined with the convenience of the participant in mind. Both of the interviews at the university took place on campus in one of two large conference rooms, each on the same floor as the participant's office. While they were different rooms, each room was essentially the same with a large, wooden, oblong, table in the center and upholstered chairs around it. During the conference room interviews, each participant was seated next to, but facing the researcher, keeping eye contact throughout the interview. A digital recording device was placed on the table between the researcher and the participant to accurately record the entire interview for later

transcription and analysis. All of the collected field notes were taken either before or after the interview, so as to provide each participant with an attentive listener. There were no interruptions during either of the interviews. Each of the interviews took approximately 40 minutes.

The college interviews were conducted in much the same way, with a few exceptions. The interviews on the college campus took place in the office of each participant, with the participant seated behind her own desk and the interviewer seated across the desk. The recording device was placed on the desk between the two. There was at least one noted interruption during three of the four interviews, but they were minimal and did not disturb the general flow of the interview or the concentration of the participant. The length of time for each interview varied from 35-50 minutes.

Each faculty member was invited to share multiple samples of student work at various levels of proficiency. The suggestion given to the participants was to bring an example of what they considered a low, medium, and a high quality paper to the interview for discussion. The names of the students were to be covered-up, or removed, prior to the interview. When that was not done, care was taken to ensure that the names were not documented in any way. Additionally, each participant was asked to bring copies of class syllabi, writing requirements, and any expectations of written work provided to the students. To begin each interview, the participants were asked to consider each paper in terms of its individual strengths and weaknesses. The researcher followed a scripted format of questions for the discussion of the work and asked for the faculty's assessment of each paper on a simple rubric provided in the interview (Appendix J).

After the written work was thoroughly scrutinized, the interview continued with a series of open-ended questions. The questions (Appendix K) were designed to be unrestricted in nature and to encourage critical thought and expansion by each participant. The questions were asked in a uniform manner and in the same order during each interview for consistency. The researcher did not interrupt or offer interjections, but gave each faculty member ample opportunity to thoroughly convey her thoughts regarding each subject. The researcher kept each interview on track and progressing, but also allowed for relevant diversions as they occurred.

All of the interviews were digitally recorded for accuracy. Privacy was granted to all faculty members by removing their names and any identifying information from the data. As previously discussed, they were identified by code number only during the recording and in regard to all field notes and transcripts. Each interview was followed-up with a personal hand-written thank you note and a small token of appreciation for the participant's time and shared information.

The six interviews were conducted over the span of four weeks. Periodic testing of the digital recording equipment was done to ensure that it was working properly and that no data was lost. Backup copies of each recording were made promptly after each interview, as were multiple copies of the corresponding field notes and transcripts. Computer copies of all files were stored in three separate and secure locations. As an extra measure of security, one hard copy of each transcript was made and stored in an additional secure location.

Data Transcription Procedures

The back and forth nature of the interviewing process was fairly straightforward with one distinguishing difference for this particular study.   In full acknowledgement of the technological roots in which this study was situated, the researcher sought to utilize a more efficient method for the later voice-to-text transcriptions. While software that can convert the human voice to written text has existed for many years, it has been growing in popularity recently. The completely individual nature of it, however, has rendered it nearly worthless in the field of interviewing or multiple user dictation. More commonly known as voice recognition software, these programs such as *Dragon: Naturally Speaking* created by Nuance Communications Incorporated can actually train themselves to analyze the vocabulary and syntax that are common to one user, helping the software make a reasonably educated decision in converting recorded voice to written text. It seems intuitive, then, that the software provides a more accurate transcription the longer one uses it. The main disadvantage for implementing voice recognition software to transcribe interviews is that when the software encounters a voice with speech patterns that are different from those of the primary user, it becomes difficult to transcribe.

For the purposes of the study, the researcher adapted the software program, *Dragon: Naturally Speaking* to transcribe the interviews in two dissimilar methods. Initially, for the first two interviews, a user profile was set up for the researcher on *Dragon: Naturally Speaking* to train the software to recognize and transcribe the researcher's voice using the distinct patterns of her speech. Once the first two interviews were recorded, the researcher played each of them at a slower speed, listening with a headset and dictating the entire interview aloud, word for word. The established user

profile recognized the speech of the researcher and transcribed the entire interview. As a transcription method, it was successful, but perhaps slightly tedious. With the remaining four interviews yet to be conducted and with the expert advice of many informational technology advisors, the researcher learned that the software allows multiple files for various users and can be trained for each individual user on separate files. In other words, many people can use it, just not at the same time. For the final four interviews, the researcher modified each of the interviews simply by removing her own voice from the recording. This was accomplished by turning off the recorder to ask the questions and turning it back on to record each of participant's answers, thereby generating a recording with only one voice. After each of the interviews, a new user profile was created on the voice recognition software for each of the participants by training the software with the voice recording of the interview. It took the computer approximately two hours to establish each user file; however, once each participant had a file in the system, the recording was played back through the computer for a complete interview transcription in thirty minutes or less. For those participants, the interview and transcription method were explained prior to each of the interviews. All four of the participants verbally consented and were guaranteed that after the interview was fully transcribed their unique user profile would be deleted. With no third party individual

Figure 5: Data Transcription Methods

Multiple User Profiles (4)   One Use Profile (2)
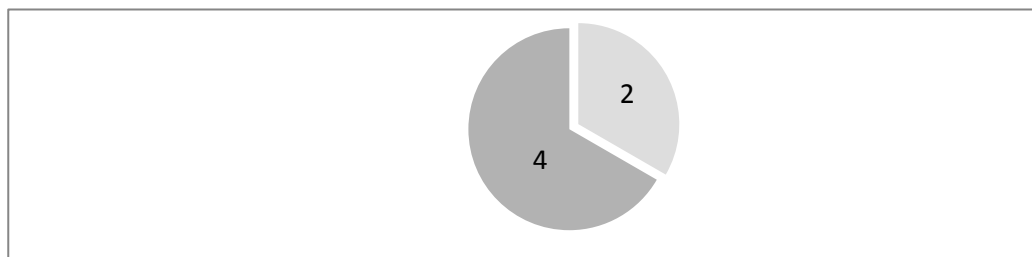
involved in any of the interview transcriptions, it is believed that greater confidentiality was provided to the participants. Figure 5 provides a visual example for the breakdown of the methods used to transcribe the interviews using *Dragon: Naturally Speaking.* In keeping with the high standards of the study and to ensure full accuracy, the researcher carefully verified each voice recording against the corresponding written transcript, making corrections to misinterpreted text as necessary and adding the original questions (Appendix H and I) in the order they were asked. The entire transcription process lasted only a few days longer than the interviews, providing a significant savings of resources.

Data Analysis Procedures

Upon completion of the data collection phase, the interview transcripts were transferred into the software program, *NVivo 9,* published by QSR International. The software is designed to assist researchers with coding and collapsing common themes from qualitative research study data. Once the data is carefully coded, with major themes and subthemes identified, the data can then be analyzed for concepts that recur in the interviews, supplying the results for the study. Through a carefully planned research design that provides a reliable triangulation of the collected data and rigorous analysis, the resulting findings can offer insight to other professionals in the field (Creswell, 2007).

Initially, the data was searched using "inductive data analysis," looking for common themes among the faculty (Creswell, 2007, 38). Mindful of the primary and fundamental questions presented by the study, the preliminary coding of the data centered on the initial themes that materialized in all of the interviews. Themes were then scrutinized through an "emergent design" to determine the importance of each idea, as

established by the faculty (Creswell, 2007, 38). An item breakdown of each theme was

studied to ascertain which themes surfaced regularly during the interviewing process. In

the initial coding phase, a total of nineteen potential themes surfaced. On the second

analysis, the data was collapsed and themes merged as appropriate. The interview

transcripts were reviewed in numerous stages and continued assessment of the data was

done until it was well-organized and concise. After careful consideration, it was

recognized that the preliminary nineteen themes could be reduced into several major

themes with many subthemes for a comprehensive response to the principal questions

guiding the study. The finalized themes were organized based on the sequential order of

the study's overriding questions. To ensure accuracy, the data was examined

independently for verification of the initial and subsequent coding. Precision was

confirmed by the exact correspondence of the codes in both evaluations.

Validation of Findings

Clearly, the findings from any study mean little unless judicious measures are

taken to ensure the validity of the study. Creswell (2007) recommends a total of eight

proven methods for achieving a respectable level of validity, suggesting that a minimum

of two be used in any one study. Corroboration from more than one source lends

additional credibility to the information presented. Within this study, two specific

measures were used to provide support for the resulting data.

This study offered the triangulation of data through a three-tiered data system.

Chapter two of the proposal presented the existing background knowledge on the topic

and relevant findings from other researchers, thereby providing a "theoretical lens" for

the study (Creswell, 2007, 39). The second tier of information came from the interview

process through discussion and faculty evaluation of the shared student work. The work,

at various levels of proficiency, offered indications of academic writing skills

demonstrated by a representative sample of pre-service teachers at low, medium, and

high degrees of skill. To get an accurate picture of the faculty's perceptions of the

students' writing ability, the discussion and evaluation of the work supplied one aspect of

the overall picture. The final support of the triangulation was provided through the

responses of the faculty members during the remainder of the interview. Through a

series of open-ended questions, each participant was able to present her own perceptions

of students' writing based on her experiences in working with pre-service teachers at the

college level. With three methods for the collection of relevant information on the

subject, the authentic and reliable data provided the basis for the ultimate outcome of the

study, thus meeting the standard of "multiple sources of data" and giving the study a

high-level of validation (Creswell, 2007, 38). Figure 6 illustrates the data triangulation

for this study.

Figure 6: Triangulation of the Data
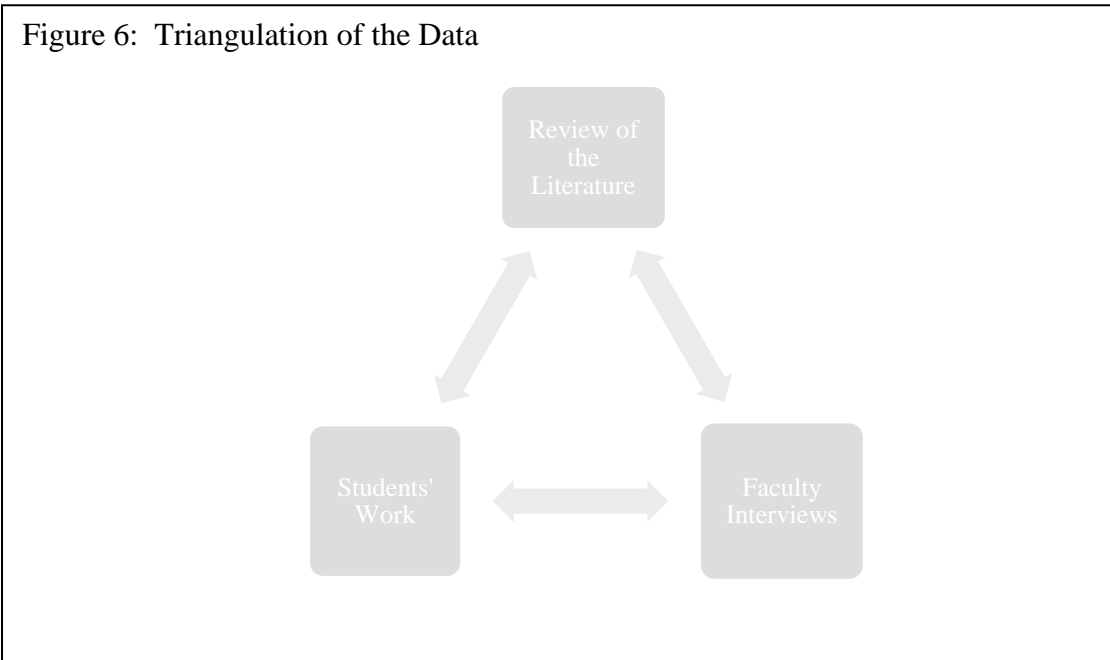
Providing the opportunity for the participants to confirm or refute any of the

findings and to contribute to the further validation to the study, the participants were

invited to take part in an examination of the themes in a practice known as member

check. Lincoln and Guba (1985) describe member check as a practice to improve

reliability by, "referencing data and interpretations back to data sources for

correction/verification/challenge" (108-109). In relation to each participant's individual

interview, a corresponding assessment of the concepts that surfaced from that specific

interview was prepared and sent to each faculty member, along with a copy of the

participant's interview transcript. Faculty members were not privy to any information

obtained from other participants. The faculty volunteers were asked to review the

information, ask for further clarification if needed, and alert the researcher if any

inconsistencies were noted. If no discrepancies were discovered, the college and

university faculty volunteers were asked to corroborate the information as factual and a

reasonable analysis of the themes brought out during their interview with a signature of

concurrence. All six participants provided a signature for the member check phase,

confirming each participant's agreement with the identified themes from the interview to

support the important findings from the study (Figure 7).

Figure 7: Corroboration with Member Check
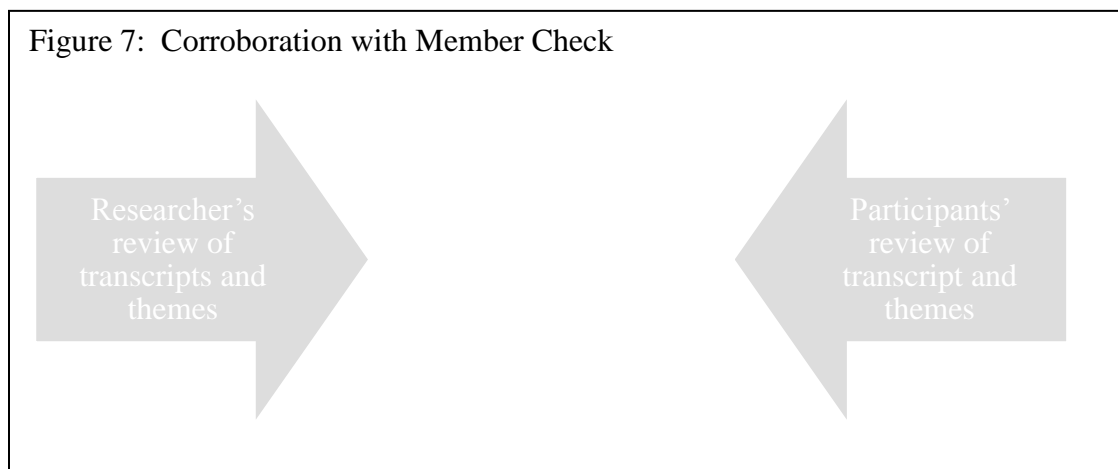
Chapter 4: Report of the Findings

As previously discussed, the digital revolution has produced a large number of life-changing innovations, but also much negative attention regarding the predominant use of such technology. The mainstream media may be responsible for generating the publicity that has heralded the ruination of Standard English in the written language of the digital generation. The pervasiveness of instant communication and quick messaging, with its shortcuts and abbreviations that do not adhere to generally accepted and long-held rules of academic writing, strike fear in the hearts of a more traditional generation and create widespread public concern about the professionalism of tomorrow's educators. With the professional careers and reputations of a new generation on the line, many in education feel compelled to investigate the effects of digital language on the academic writing skills of pre-service teachers to learn what adjustments must be made in the current educational system to accommodate today's learner, who is vastly different and more complex than those in previous generations. Without probing and questioning, the system that educates students in the twenty-first century will remain locked in a model that was clearly designed for simpler times, creating a paradigm in which students will learn far more outside of the classroom than in it. This research study was initially founded to solely examine the current state of academic writing among pre-service teachers within a college or university setting, however, during the probing qualitative nature of the study, many insightful themes emerged that not only provided the interesting results for the research, but also the basis for continuing investigation in the future. As discovered through "interpretive inquiry," the perceptions of the faculty, evidenced by their exact remarks during the interview, are included in the findings and discussion sections for further connections to be made by other researchers and educators

in the field (Creswell, 2007, 39). Without the intention of proving a given theory, the

study utilizes the discussion and findings sections to provide all of the significant

viewpoints which emerged during the course of the study, as a "holistic account," and

offers another portion of information to the existing educational landscape as it pertains

to the writing abilities of pre-service teachers (Creswell, 2007, 39). In relation to each of

the original research questions, the outcome of the study is detailed throughout chapter

four. A discussion of the results and recommendations for future research are provided in

chapter five.

Research Questions

To fully understand the study's findings, it is important to reflect on the study's

original purpose. As the study was conceived, the three following fundamental questions

were postulated within chapter one to guide the study and to focus the interview process:

(1) How do faculty members in teacher education perceive the basic writing

demonstrated by pre-service teachers?

(2) Do the faculty members in teacher education perceive any impact from

technology and digital language on the formal academic writing skills of pre-

service teachers?

(3) Are pre-service teachers able to switch modalities between social writing in

digital language and traditional academic writing?

Clearly, questions one and two were constructed with an overriding objective of

exploring the current status of academic writing of college students, enrolled in teacher

education programs, and the effects of digital-age technology on a student population that

was mostly comprised of the digital native generation. The study's theoretical

framework regarding the original work of Wheeler and Sword (2006) and the later work

of Turner (2009) on code-switching helped to establish the third and final question. Each

of the three principal questions formed the basis for the fifteen probing questions that

were asked of each faculty participant during her scheduled interview (Appendices J and

K). Additionally, to substantiate their interview responses, the participants were asked to

bring anonymous samples of student work, at varying degrees of competence, with them

to the interview for an in-depth discussion of the students' general writing proficiency,

common errors, and ability to write for different purposes and for diverse audiences. In

the course of conducting all six of the faculty interviews, the researcher collected a

substantial amount of significant information with which to address and report on the

three crucial questions that guided the purpose for the study.

Findings

   Question #1. To present a comprehensive report on students' overall ability to

write for academic purposes in the digital age, the study sought to investigate the

perceptions of college and university faculty members in teacher education. Each faculty

participant was invited to discuss various samples of papers written by students and to

answer a series of questions designed to ascertain the general quality of academic work

produced by students in the teacher education department at the college or university.

Each faculty member's assessment of the written work corroborated the views that were

offered in the subsequent interview questions. The six individual interviews yielded

three major themes in regard to the general condition of student writing in the digital age.

Learning to write well is a process. Throughout the interviews, all six of the faculty members addressed students' development of writing skills as a progressive achievement. The faculty members discussed various methods for the enhancement of the process for students.

One important aspect for facilitating the learning process is providing students multiple and diverse opportunities to write. All of the participants spoke about the numerous types of writing required of college students enrolled in teacher education programs. The faculty participants of the study were asked to explain the types of writing assignments commonly given to students. Collectively, they described a broad variety of writing projects that included quick writes, journals, creative writing, answering essay questions, lesson plans, reflective papers, analysis papers, philosophy papers, and research papers within the comprehensive education programs at both schools.

Keeping in mind that students develop at different rates, participants at both schools acknowledged another important piece in the process as the identification of struggling writers. During the interviews with participants from both the university and the college, it was discovered that schools typically offer assistance to less proficient writers with campus writing centers and seminars. Writing centers provide students the opportunity to improve their skills. Participant AJRW explained the early detection process in this manner, "[We] do a writing assessment...if they don't score minimum of a 12th grade level, we would require them to take a writing seminar prior to classes starting." Another participant confirmed that writing scores were not the only reason for students to receive help. Participant BJRW contended that faculty members were also trained to look for deficits in students' academic writing by saying, "We provide support

as soon as we [see] that [deficit] in the education department…we'd get them in to the

Learning Center for tutoring to get those skills up to proficient." Rather than simply

dismissing students who exhibit writing difficulties, colleges and universities provide

support in full acknowledgement of the process required to develop good writing skills.

While the writing centers and seminars are available to guide students through the

writing process, faculty members also reported often finding themselves in a position of

assisting students with their writing. Faculty member CJRW noted that, in addition to

training students to use the professional writing style endorsed by the American

Psychological Association, known as APA, ". . .we're also doing other writing attention

more and more," indicating that college and university professors recognize their very

important role in the advancement of the writing process with students. To that end,

faculty member 2JRW agreed by discussing specific techniques designed to help

students, "We come up with concepts that they can put in their paper," but admitted that

it is still a constant process by saying, "… but as you know about thinking, if you're not

at that level, it doesn't always work…nonetheless, it helps scaffold or bridge them up to a

level." In looking at writing as a progression, one that continues throughout college as

students prepare for professional careers in education, participant AJRW said, "So, we

really look at it as a development and we've got three years to get them there." AJRW

later summed it up more succinctly by saying, "Do students come in with college-level

writing? No. That doesn't happen, but by the time they leave, yes, it's there and it's solid.

We look at it in our department as a developmental process."

Immaturity is a factor in early writing. The faculty suggested that students need

time to grow as individuals and mature in their thinking, as well as their writing. In

looking over student work, participant DJRW described a paper from a student that did

not meet expectations by saying, "It just doesn't have a level of maturity that I would like

to see, so [this student] is still really beginning." Identifying the student as beginning

connected to the main theme for question one that writing, like maturity, is a

developmental process. While discussing the professional types of writing required in

education, the faculty member identified as 2JRW stated, "It's…the most common

problem because a lot of kids at this age…are still at a very concrete level. Doing that

level of analysis is difficult for them." Again, this participant linked maturity to the idea

of progression in writing.

As previously discussed, students continue to enhance their writing skills

throughout college from continuous practice, enrichment programs if needed, and direct

classroom instruction at the same time they are growing and maturing into young

adulthood. CJRW described a major difference in the writing approaches of immature

and mature students when writing research papers,

> Some of them, they just think if they've read something about that subtopic, then
>
> they can move on and then they wonder how they can get to 20 pages. It's where
>
> the ones who have that concept, their question to me is 'Can it ONLY be 20
>
> pages?' And so, I think that I really consider it an immaturity for work.

Over time, it is expected that students will mature in their thinking and consequently their

writing. It is equally anticipated that students will submit better quality work. Faculty

member CJRW added, "The good papers are just amazing...I would still say it's the

attention to content that's the most important part...they're showing maturity and

understanding of the issue." In the discussion of a high-quality paper, participant DJRW

described the work as, "written maturely at high-level that I would expect of an experienced writer of research work."   Many of the faculty members agreed that maturity is a key issue when it comes to developing good writing.

High-quality papers are the goal. As students mature and continue through the process of learning to write well, it is the explicit expectation that the quality of their work will increase with the ultimate goal of becoming competent writers in the professional field. With the intent to examine students' academic writing in the full spectrum from low to high quality work, all of the participants were asked to bring an example at each level and to define the parameters of a high-quality academic paper. In the assessment of a high-quality paper, participant 1JRW said, "It was the strength of this one...that this student really develops each one of her sections, she really gave examples to go along with her ideas and it was very complete paper." While perusing a high-quality paper, participant DJRW furthered the description with these comments,

> [In] the high-quality paper, the format was used extensively, citations were
>
> appropriate, paraphrasing was extremely clear, everything about APA formatting,
>
> good research and reflection and [the] review was complete, excellent level of
>
> detail…so [this student] nailed all expectations and then some.

To describe high-quality papers in general, participant 2JRW said, "They are able to understand at a very abstract level…and sometimes even provide analyses that are enlightening to me." She went on to jokingly sum it up by saying that the good papers, "They just blow you away." All of the faculty participants seemed to agree that exceptional papers included attention to many important aspects of skillful writing and that high-level work was ultimately the target for which students should strive.

When asked if weaknesses occurred in higher level papers, participant 2JRW said, "Very rarely...I mean the very top papers are just really bright people who can handle the grammar, can handle mechanics, and can see a whole lot of things that others can't." Participant BJRW agreed that high-quality work typically came from students who have reached that higher level of proficiency and offered this, "The high-quality example is from a student that's just a very strong academic student. Her work is just very in-depth, very high-quality…She's got a strong vocabulary [and] strong fluency." With high-quality work as the definitive goal of scaffolding students through the writing process, participant 2JRW added, "At the end of the semester, those final papers, just give me the thrill that keeps me teaching." Figure 8 illustrates the writing process in a simple format, demonstrating that immaturity is a factor and high-quality papers are the ultimate goal as students work through the process.

Figure 8: The Writing Process
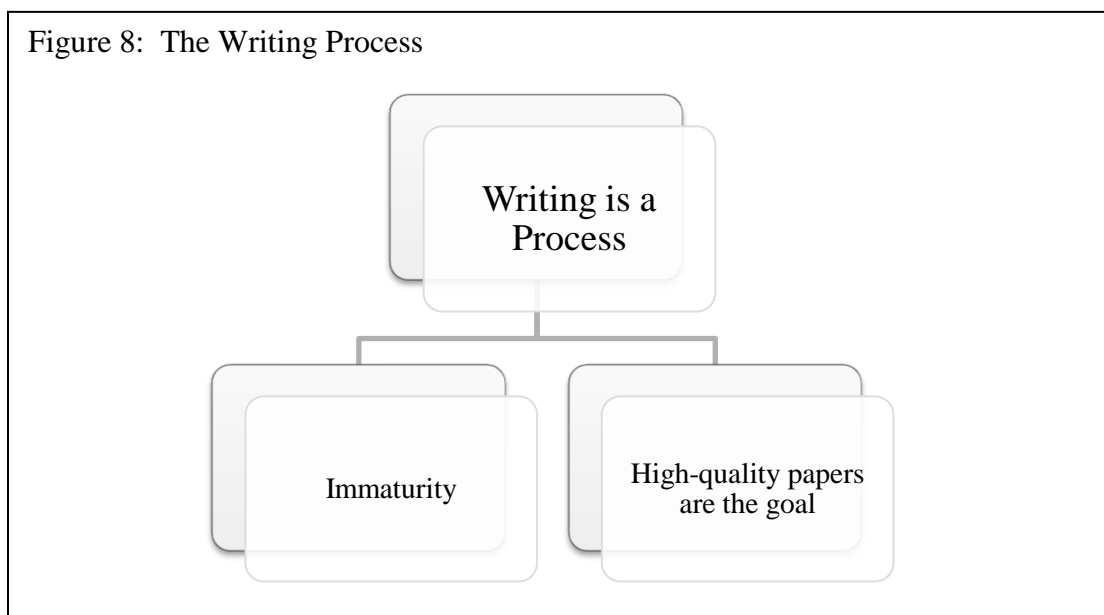
The most representative work is average to above average. Ultimately, this study sought to report on the condition of academic writing in pre-service teachers as

perceived by their college and university instructors. For thorough examination, each of

the faculty participants was asked to choose student work from the broad spectrum of

writing proficiency available to them at the time of the interview. To gain insight

regarding the quality of writing that was the most typical for college students in the

teacher education programs at the two schools, the interviewed faculty members were

asked specifically to comment on the level of work they felt was the most representative

of the students they teach. Overall, the faculty responded with answers that ranged from

average to above average as the most typical type of work submitted by students.

Table 2

Faculty Responses to Question Regarding Most Representative Work

Participant	Which, if any, of these papers is the most representative of the majority of papers you collect from your students?
1JRW	"probably the middle one"
2JRW	"the medium"
AJRW	"depends on the year...in the last three years here, it's been improving"
BJRW	"In terms of representation, for the majority, it would be between the average example and a weaker example."
CJRW	"The level I see is more high-quality papers."
DJRW	"I would say that it was between the average quality and high-quality."

None of the six faculty members communicated a belief that substandard work was

something they routinely received from students. Participant BJRW was the only faculty

member to estimate the work of students at average to below average in relation to

proficiency, but indicated that as students advanced to graduate school, the average

writing showed improvement from an average to an above average skill level. Participant

AJRW observed that, in her experience, the level has been improving and participant

CJRW placed the average skill level completely in the above average range. Table 2

illustrates the most concise answers that were provided by each participant in response to

question four on part one of the interview (Appendix J). Figure 9 provides a pie chart to

represent the answer proportion and distribution.

Figure 9: The Faculty Responses Regarding Most Representative Work

Faculty Responses

- Average
- Average to Below Average
- Average to Above Average
- Above Average
- Improving
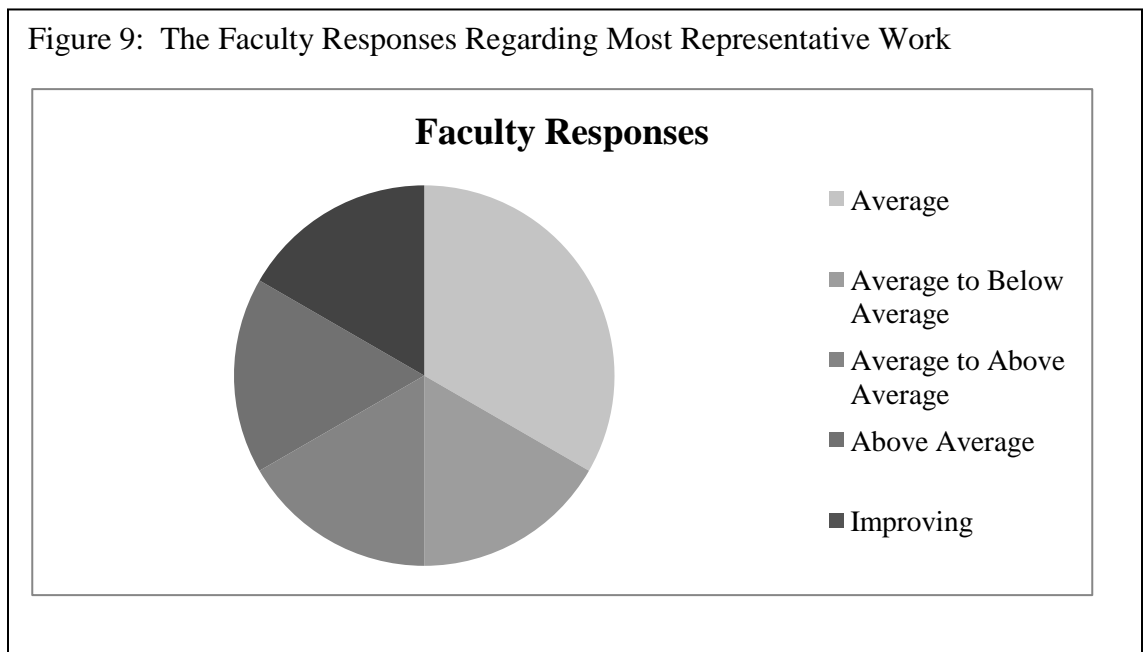
There are many common problems in lower quality papers. In looking at the

broad spectrum of papers brought to each interview, the participants were specifically

asked to consider the work at each level. With regard to academic papers of lower

quality, the faculty members were invited to identify common errors that were observed.

Among the six participants, four critical problems were addressed.

Students do not take the time to proofread their work. Good writers understand

that the final, and possibly most important, step in writing process is proofreading. A

total of five of the six interviewed faculty noted that many students simply do not engage

in re-reading their own work to eliminate unnecessary errors in mechanics and spelling.

Among the theories that were asserted to account for this seemingly avoidable problem

was the likelihood that many students hurry to submit work. Several of the faculty

members also alluded to the possibility that many of the students simply assume that the

basic functions of their word processing software will locate and correct all spelling and

grammatical inaccuracies. With that in mind, participant BJRW reasoned that when

papers were typed, errors appeared, but somewhat less often. She also acknowledged,

however, that while typed academic papers were better than hand-written, when typing

was combined with skilled proofreading and attention, the best results were yielded. She

said, "For the most part, when things would come in typed and we'd have a formal

editing process and more time given, I wouldn't see as many of those errors." Students

often fail to realize that no computer software can replace a critical eye when it comes to

proofreading and editing academic work. College faculty member CJRW said, "I am

always astonished by things…we have spell check and they'll turn in a paper with

misspelled words sometimes."   University faculty member 2JRW agreed, "One paper

was hilarious…[the student] wrote 'u' instead of 'you'…it's a mystery to me because

when you're typing in Word, it should show up anyway." Of the faculty members that

addressed lack of proofreading as a problem, all agreed that students must make a regular

habit of reassessing their own work before turning it in. DJRW said, "In terms of the

written work. . . if they've completed the editing process. . . then we get a better product.

. .but I don't think they check it through and that's a problem." In relation to digital

language, shortcuts in the writing process such as those seen in text messaging, may

appear in academic writing when students do not proofread carefully. AJRW said,

> We do some peer editing with them. . .and I will still catch things [from] the peer
>
> edit that even some of my top students are missing because they're so used to
>
> reading that, that they miss those little words altogether.

Issues with mechanical errors have always been and continue to be a problem.

Another widespread error in student work was identified as improper use of writing

conventions, such as punctuation and capitalization. Similar to proofreading as one of

the most frequent errors, five of the six interviewed faculty members named mechanical

errors as a serious problem in students' work.   As this study sought to explore the impact

of digital language on academic writing, it is significant to the outcome of this study that

the majority of the faculty believed that mechanics have always been a problem in

students' academic writing and not a recent development. Participant CJRW said, "I

don't know if I'd ever received a paper without mechanical errors". Participant 1JRW

seemed to confirm this by saying, "I've seen it throughout my whole teaching career and

I've been teaching in higher ed [ucation] for almost 25 years…so, it's been there and I

don't know that it's gotten worse lately. I guess, I don't think so." This was an important

finding to be discussed in chapter five due to the fact that many today attribute

mechanical mistakes solely to text messaging habits when, in fact, the problem appears to

have preceded the digital age.

Students often have a conversational tone in their writing. Students often write

precisely in the manner in which they talk, producing work that may not have the level of

professionalism required. Exactly half of the faculty participants commented on the conversational or creative tone in students writing. Participant CJRW felt that conversational writing was a particularly big concern, expressing it this way,

> I'd say the number one problem I have is colloquial writing…it also affects
>
> content when they use informal speech or they write the way they talk...I'd say
>
> that's the number one issue we have with poor quality papers.

When asked to give the biggest weakness of a particular low-quality paper, participant AJRW noted, "…the casual language...real casual lingo sliding in and they're not sure how to write in that third person or in that kind of vernacular." The problem was addressed by participant 2JRW in more specific terms, "...you see the word 'huge' all the time. That is just not a word you use for professional [writing], but they're undergrads. They're learning what vocabulary works in what environment."

Students' previous educational history is an important factor. The quality of the educational background from which a student originates can play an important role in that student's ability to write well. Without blaming any specific school district, AJRW discussed the discrepancies, "I can usually look at some of those things and tell you which district they came from by the quality of their writing and there's a wide variety of quality within the city and within the state." Faculty members were sensitive to the fact that students come to college from a variety of different educational experiences.

In looking at writing instruction in the lower grades, two of the faculty participants offered their opinions on different types of instruction and their effectiveness for students. Participant AJRW stated that,

When we were going through the period when we got all the kids from whole

language…I can tell you that not only did they not spell well, they did not write

well because they hadn't really made that connection with what we read is what

we write and what we write is what we read.

Giving her opinion on a better method for writing instruction AJRW said, "I've seen

improvement in writing since we have more elementary schools and high schools using

six trait writing."   In regard to six-trait writing as a more reliable method, participant

CJRW expressed approval, "Another thing I'm hoping is happening is that as they enter

college, they're getting better because now more of the schools are using six trait

writing." Clearly, the two participants agreed that improved instruction at the lower

grade levels is one step toward better college writing.

Table 3

Common Problems in Students' Writing Identified by Faculty

Common problems	Identified by faculty members
Lack of proofreading	2JRW, AJRW, BJRW, CJRW, DJRW
Mechanical problems	1JRW, 2JRW, AJRW, CJRW, DJRW
Conversational writing	2JRW, AJRW, CJRW
Previous educational history	2JRW, AJRW, CJRW, BJRW

There were a total of four common problems associated with lower quality work as identified by the college and university faculty members. Table 3 illustrates the writing flaws in relation to how many and which faculty members addressed the topic. In this format, it becomes simple to distinguish the issues that are seen regularly by the majority of the faculty. This will be further discussed in chapter five.

Question #2. The second overriding question of the study sought to ascertain the college and university faculty's observations of the impact of the digital age on students' academic writing skills. Putting the specific issue of digital language aside for a period of time and focusing primarily on the digital age as a whole, the faculty participants responded with some overwhelming and unanticipated concerns. Given that the speed and availability of information and communication have changed so dramatically in recent years, all of the participants remarked extensively on the changes they have witnessed in students' work. During the six interviews, two significant trends impacting students and their academic writing were identified.

Technology may be responsible for a lack of depth in students' writing. When probed specifically regarding the effects from digital technology on students' academic writing skills, the first two participants interviewed identified the most critical issue stemming from the digital age as insufficient attention to details or a lack of depth in the students' papers. Noting this as a change from students of the past, participant AJRW said "I'm not seeing the attention to detail in the paper writing that we used to see." Participant 2JRW appeared to have the same opinion, "Especially from the digital revolution thing and this does apply to writing too, that notion that they are not used to

getting into things deeply is definitely at work." When asked to elaborate, participant

2JRW succinctly illustrated the problem by saying,

> It is instead dealing with that 'click generation' that is used to skimming the
>
> surface of things and not adding. They will absolutely get by with less if they can
>
> and again, that's pretty historically true, but I think it's probably exacerbated by
>
> the digital revolution.

These comments indicate a clear sense that students' academic writing has changed with

the onset of the digital age, but perhaps not in the manner expected. It was this discovery

that prompted the addition of a question regarding depth on part two of the interview

guide (Appendix K) to explore the impact of the digital age on the depth in student

writing with the remaining four participants.

While discussing particular concerns for digital age students and the lack of depth

in their writing, many of the participants expressed concern over their apparent lack of

skill in gathering additional multiple layers of information on a topic. CJRW said, "That,

I think, is the most [common] thing to get them to have that depth . . . some of them. .

.think if they've read something about that subtopic, then they can move on." DJRW

furthered that notion, "I think….all the digital influences and technological influences

have affected the depth of their work...in terms of even searching for information."

DJRW later went on to say,

> I think they do deal with things at a surface level…when they go about writing,
>
> especially with the research writing, that they're used to skimming, they're used
>
> to quickly looking through information…rather than reading it in the depth that it
>
> should be [read].

Participant 2JRW concurred,

> Depth. I don't know what else to say, other than that. They are really used to just
>
> skimming the surface of things. They do not work to go deeper into concepts….
>
> if they can't find it quickly on the Internet, getting them to go to the library is just
>
> getting very hard to do. They do not expect to have to do that and that is really
>
> from the digital age.

University and college faculty members agreed that the digital age has made a

considerable change in the motivation of students to research topics in depth for

academic writing. They also acknowledged that the change may alter what happens in

the future.

The faculty members expressed some apprehension about the effects on their own

teaching.   Sharing the influence the digital age has had on classroom instruction,

participant CJRW said, " I think it's impacted in that because it is so easy to access not

very deep information, that we had to spend more time teaching students to go in-depth

and to teach them what depth is." BJRW alluded to the concept of instructing students to

use the available resources, "So, we need to teach them to be better consumers of

material and I think that still holds. Yes, the depth of work can increase because there's

so much material out there and so much information to find." University participant

1JRW also acknowledged the future possibilities, "They could access all sorts of

information...that could strengthen their papers. I don't know if they're doing that or not."

None of the participants indicated that the digital age has improved the depth of writing.

With so much technology available, students' attention spans appear to be

shorter. Another digital age concern that emerged from the interviews was the

possibility that the students of today could be so wired for technology usage that it has caused what appears to be a decrease in the attention span of the average student. While only two of the six participants identified reduced attention span in students as an effect of the digital age, it is important to report as a faculty concern. Similar to the lack of depth in writing that was previously discussed, university faculty member 2JRW described the problem as one that is emerging with today's students, "…I'm beginning to feel a lower level of concentration and focus…It's just, at times, very tough for them to pay attention." College faculty member DJRW expanded on the problem by offering her view of the diversion created by the numerous sources of information input available for students today,

> …communicating through my phone, through texting, or it's linked to my Facebook and I'm getting all these status reports…now I'm sitting in class and now we're doing this and so the different situations, I think, distract them from time to time.

It is all of these sources of input with which instructors compete for the time and attention of students. Utilizing a popular catchphrase of our time, participant DJRW discussed students' ability to handle multiple tasks at one time,

> They say they can multitask and they attempt to multitask, but as I've just been teaching we don't have the cognitive resources for all that. So, I also try to make them familiar with the intention or the choices as they do that, but they would say they can do it very easily.

As this participant explained, it may become more of a challenge for college and university instructors to maintain students' concentration during class time.   With

students' focus not entirely on the learning environment, the faculty participants

expressed concern that their classroom instruction was impacted and will continue to be

impacted in the future. University faculty member 2JRW admitted that, at times,

alterations to instruction have been necessary to accommodate students' reduced

attention, "…[I] start doing something and change it when it feels to me like their

attention spans are getting shorter, as a group." Through modification of instruction and

employment of multiple instructional methods, faculty members felt they may be able to

keep students more engaged during class time. College faculty member DJRW divulged

that it may require a great deal of thought and prior planning on the part of the instructor

by saying, "When they get so much information through other means, it's a challenge, as

an instructor, to deliver information in a way that's going to engage them."   With the

onset of the digital age, instructors are faced with more than ever before in terms of class

development and preparation. They are also charged with communicating explicit

instructions and guidelines for students. In evaluating the capability of students to keep

up with all of the informational and communicative technology, in addition to instructors

growing demands, participant DJRW was optimistic, "…I think they're getting better at

it, but it's laying expectations for what we expect that makes a difference with that." The

key issue of expectations was one that came up repeatedly throughout the interviews,

particularly in relation to question three.

    Question #3. The final and perhaps the most essential question investigated by

the study went back to the original theoretical framework in which the study was

fundamentally grounded: code-switching. Making the digital age distinction for the

theory of code-switching as a means of discriminating between digital language and

Standard English, the research was designed to explore the extent to which students can change modalities, selecting the most appropriate manner for each situation. The college and university education faculty participants were ultimately asked to share their views regarding their students' ability to successfully change discourse from social writing to academic writing.

  Code-switching abilities. In looking at the six participants' candid answers to interview question eight, part two (Appendix K), four of the six participants expressed a completely positive perception of the students' ability to code-switch. Table 4 shows that university faculty members 1JRW and 2JRW and college faculty members AJRW and CJRW believed that their students were capable of expertly code-switching for academic purposes. Participant CJRW confirmed this view, but qualified the statement with the indication that code-switching was often directly addressed by the college faculty and, therefore, had not become a problem in students' academic papers. Participant BJRW was the only participant to say that the undergraduate students in her classes did not always code-switch, prompting a discussion with the student to redirect the student's purpose for writing. Similarly, participant DJRW indicated a need for specific instruction regarding writing purpose and the audience for which the writing was intended. It was the belief of college faculty member DJRW that such a discussion raised awareness and therefore prevented potential code-switching errors.

  Overall, five out of the six faculty members appeared to be in agreement that students can code-switch, albeit, they may need to be reminded. Participant DJRW explained in greater detail,

…because our expectations are clear in terms of what we expect as they use those

things with us, that it's improved overall…[When] those kinds of things first

really hit…especially instant messaging…we saw that with no capital letters and

run on sentences and lower case punctuation…so, I do think it influences them,

but as long as we talk about situations and who you're addressing and the

audience, then it is less detrimental than I would've expected for most of the

students.

Table 4

Faculty perceptions of code-switching

_____

Participant	Looking at code-switching as the ability to change back and forth between multiple forms of discourse or changing from digital language to Standard English, how do you view the code-switching abilities of the students you teach?
1JRW	"Excellent. They understand that how they write in a text is not how you write in an academic paper, so I would say they are very adept at code-switching. They understand it. They get it."
2JRW	"But for the most part, no, I don't think they have any trouble doing that code-switching."
AJRW	"I think the ability is there."
BJRW	"Undergrads, as I said before, I have vivid memories of having to have discussions with students, when you do formal work for a class, you've got to kind of make that shift…I think for some students, they just aren't able to see the need to make that shift."
CJRW	"I think because we give it so much attention that our students are pretty good at doing that…that code-switching."
DJRW	"As far as code-switching…they have to be really aware…I think also because the instruction we've done and the suggestions we played out, that they see that. They purposely are seeing that and have to think about the different audiences that I'm addressing this with."

Participant CJRW was equally optimistic,

> I think the lower levels still have students who attempt it more and then we
> consider it a teachable moment…we just take them in and we explain to them
> why this doesn't work and what they have to do about it…we been able to get past
> it pretty well.

Many of the faculty participants alluded to the idea of high expectations as an explanation for students' understanding of code-switching.

College expectations are tremendously high. It was the contention of the faculty participants that expectations for college students are considerably high. All six of the participants addressed the issue of high expectations in some way. Faculty participants identified many areas where the standards are intentionally elevated.

There are standards for college entrance. Students entering college today must meet high entrance standards for admission into college. In all fifty states, the majority of colleges and universities require prospective students to take college entrance examinations such as the Scholastic Aptitude Test (SAT®) or the American College Test (ACT™). Individual schools set the level of competence at which students must perform to be accepted. In recent years, many schools have now added a writing assessment as a prerequisite to admittance, as well. On the writing assessment, students must demonstrate an overall proficiency in writing. A total of five of the six faculty participants addressed the increased standards in the area of writing. It was the contention of the participants that colleges and universities are seeing an overall improvement in the quality of work they receive from students trying to enter higher

education due to this increased standard. To illustrate this point, participant 2JRW said

confidently, "You have to understand that in our college, we have higher standards now

for admittance than we used to. So, quite frankly, the quality of writing has improved

greatly." As added justification for the high writing standards, DJRW said, "[we are]

more specific as to the level of expectation…and hoping that by specifying that, we'll get

higher quality, because it's a high-stakes moments in time." Participant 2JRW summed

up the value of the increased writing standards by saying,

> There was a period of time where I felt that the digital revolution was really
>
> hurting writing, but, on the whole, I do not feel that is the case…because before
>
> we had these standards, I would get extremely poor writing.

Clearly, many of the faculty had the same opinion that keeping the standards high is

beneficial to maintaining quality in teacher education programs. The process appears to

serve as enough of a deterrent to students for using unacceptable forms of written

language.

As previously discussed, colleges and universities also use writing scores as a

way to identify struggling writers and help them to improve their skills prior to enrolling

in coursework. This may help to reduce the number of students who are unable to handle

the writing expected of professionals in education. University faculty member 1JRW

said,

> They have to get a certain score on the essay that they take…to be admitted into
>
> the college of education. So, I think, that actually helps keep our good writers and
>
> keeps some students who are not such great writers out of our program.

College faculty member BJRW agreed, "There's that writing component that would keep them… from being able to be in the education program." With this hurdle for college and university program admittance, the expectations are high from the very beginning of a students' college career.

Expectations are clear and are given out beforehand. The high expectations do not end as soon as students are admitted to college. Once enrolled in courses, college and university students are confronted with lofty academic standards from their instructors. The single issue of classroom expectations was the theme where all six of the faculty members were the most vocal. In relation to the concern about digital language in academic papers, the majority of the participants resolutely believed that it had not become a problem simply because it was not permitted in academic work.

While new students might not be fully aware of specific policies, the rules are made clear very early in a student's academic career. Participant AJRW explained, "We see digital language come to our freshman writing, but usually by the end of freshman year we don't see it come into their writing." Perhaps, this relates to the immaturity issue previously discussed; however, it also illustrates that college expectations are rigorous enough to discourage the majority of students from using digital language for academic purposes. In an explanation of how digital language is dealt with at the college, participant CJRW said,

> …if anyone sends me an e-mail and it's not written correctly…we very kindly
> send it back to them and tell them that this is not written in professional
> language…and please resend to me in professional language and I will be happy

to answer you…we've been doing that long enough…so they just don't have a lot

of trouble with digital language.

Colleague AJRW reiterated that same protocol,

Usually when I get something like [that], I send it back and ask them to look at

the dispositions and then to resend the important information professionally and

we usually only have to do that once or twice and then it gets out in the freshman

group.

As a question of what the faculty will and will not allow, participant AJRW added this,

We're seeing less of that because we're so stringent about it here at the college

and it's across-the-board. I don't know of a department at the college that will

accept it…so, I don't see it in the papers as much as I thought we would.

With the faculty's dismissal of digital language for academic purposes, students are

reminded of their true purpose for attending college which is to become qualified

professionals. In reference to the professional dispositions that are expected of all pre-

service teachers, participant AJRW noted, "We do pull them back to those and you'll see

professional communication is there." As pre-service teachers, students are expected to

develop and apply professional communication in their writing. Participant BJRW

explained, "As I teach future teachers…knowing the importance of communication…that

is an impression…people do make judgments based on the quality of your writing." The

faculty plainly expressed the idea that the development and application of professional

writing is an important skill for students to learn.

When grading students' academic work, all six of the interviewed faculty members identified scoring rubrics as their sole method for the evaluation of students' writing assignments. With the grading parameters clearly illustrated on the rubric, all of the faculty participants indicated that the rubrics were distributed prior to each assignment. To explain the reasoning behind handing the rubrics ahead of time, participant 1JRW said,

> I give them those rubrics at the beginning of the semester. There's an
> achievement target for them…because I know the first paper that students write
> for most professors, they don't know how it's going to be graded because they
> don't know the professor. They don't know what expectations they have.

In this manner, students are given a blueprint for what is expected of their work. Acknowledging that it may be a learning process, students who fail to live up to the stated expectations are often asked to resolve any errors and resubmit the paper. University faculty member 2RW said, "We'll give back a paper…if there [are] mechanical errors, I just don't accept it. They have to turn it in again."

Additionally, students are often provided with other written instructions and examples of high-level work for comparison. With everything plainly spelled out before the assignment, it was the opinion of many faculty members that there should be little doubt as to the expectations. Participant 1JRW said,

> They can't say to me, 'I didn't know what you meant'. Well, I not only talk about
> it explicitly, but there's also a student example of a good one, so they should know

exactly what to write…I think I'm pretty clear on what it is they're supposed to

do.

Other faculty members discussed using instructional time to make expectations clear for

better quality work. Participant CJRW said, "I really give them a lot of instruction to

prepare them ahead of time and to show them examples of both. I think that's

helped…[with that] I think I get more good quality than poor."   With regard to giving

comprehensive expectations upfront, college faculty member BJRW summed it up

succinctly with,

> My experience, going through college as a student, was that it was that guessing
>
> game. You always turned in that first paper to figure out the professor and figure
>
> out what they wanted and how they graded…we know that's not good teaching.

The faculty participants from both the college and the university agreed that, beyond a

doubt, students are made aware of the expectations for academic work.

The APA writing style is introduced and expected of students earlier. Four of the

six interviewed faculty members cited APA as a key component in keeping the standards

high. Specifying that the professional writing style endorsed by the American

Psychological Association (APA) is the most accepted manner in the field of education,

college and university faculty members have begun to model and require its usage as

early as the freshman year of college for students. Teaching APA earlier has been a

major change from previous years. College faculty member CJRW spoke optimistically

about the change, "APA is another big issue because…up until this year we required

everybody from junior on to use APA in education papers. We now require freshmen, so

that may make a difference in my life in the future." Colleague AJRW admitted, "That's a real hard transition that I see for our freshman," but also viewed the change as potentially positive by saying, "[With] our freshman class, we begin introducing APA in the format we want it…so that's always our goal…that by junior year before they hit senior research and senior paper…there's no question." In regard to APA as the standard, university faculty member 1JRW said, "I'm very picky about APA style and I teach my students APA style. I model it every handout I give them…when they don't do it exactly the way I've taught them, I take off points." Clearly, the faculty members' conviction that students should be taught early to write professionally and held to that standard throughout college was an important theme connected to keeping the expectations high.

Summary

The findings presented in chapter four represent a comprehensive collection of the major themes and corresponding subthemes that emerged from the data gathered during thorough interviews with a total of six college and university faculty members. It was solely the views and perceptions of the participants that produced the identified themes and subthemes. While the sample size was relatively small, it did not preclude the research from offering valuable insight in relation to the three original research questions. The principal themes that surfaced in the research were addressed by multiple participants, spanning two separate institutions for higher learning, meeting the study's need for data saturation and giving added credibility to the outcome. Additionally, each faculty member reviewed their own interview transcript and the identified themes. All six participants concurred with the study's findings. After careful consideration of the data, a detailed discussion of the findings, their significance, and the researcher's

recommendations for future research are included in the fifth and final chapter of this

study.

Chapter 5: Conclusion

Purpose of the Research

With the primary purpose of the research firmly established in chapter one, three fundamental research questions guided the investigation into the academic writing skills of pre-service teachers to determine their ability to choose modalities between the pervasive social writing of the twenty-first century and the academic writing required in college as perceived by their college and university professors. It is believed that each of the three questions was thoroughly explored through the participants' discussions of the students' work and the participants' candid responses to the probing interview questions (Appendices J and K). As the resulting data was transcribed, analyzed, and coded for the themes that were presented in chapter four, valuable information for education, in relation to the three original questions, was considered. It was that insight which formed the basis for the discussion in chapter five.

Discussion of the Findings

Question 1: How do faculty members in teacher education perceive the basic writing demonstrated by pre-service teachers? In response to the overriding inquiry posed by question one, the faculty responded with three major themes and a variety of subthemes on the subject of the writing skills exhibited by pre-service teachers. The first theme that emerged to fully illustrate the faculty participants' perceptions of the students' academic writing ability was the strongly held belief that writing is a developmental skill. Experienced educators understand that, similar to numerous other proficiencies, competent writing is a skill that takes sufficient time and layered instruction to develop

(Allen, 1984). Early in their academic careers, students must be taught the crucial

elements of writing and be guided through the various stages of crafting high-quality

written work for a wide-range of different purposes. Notably, all six of the faculty

participants brought to the discussion the undeniable fact that writing is an ongoing

process that improves with time. The process, according to the participants, can be

greatly affected by factors such as immaturity, but high-quality work is the ultimate goal

for pre-service teachers.

Figure 10: The Writing Process (Revised)

Beginning Writers
Issues: immaturity, lack of proofreading, conventional errors, and conversational tone

Average Writers
Issues: lack of depth and shortened attention span

Professional Writers
High-quality, mature writing
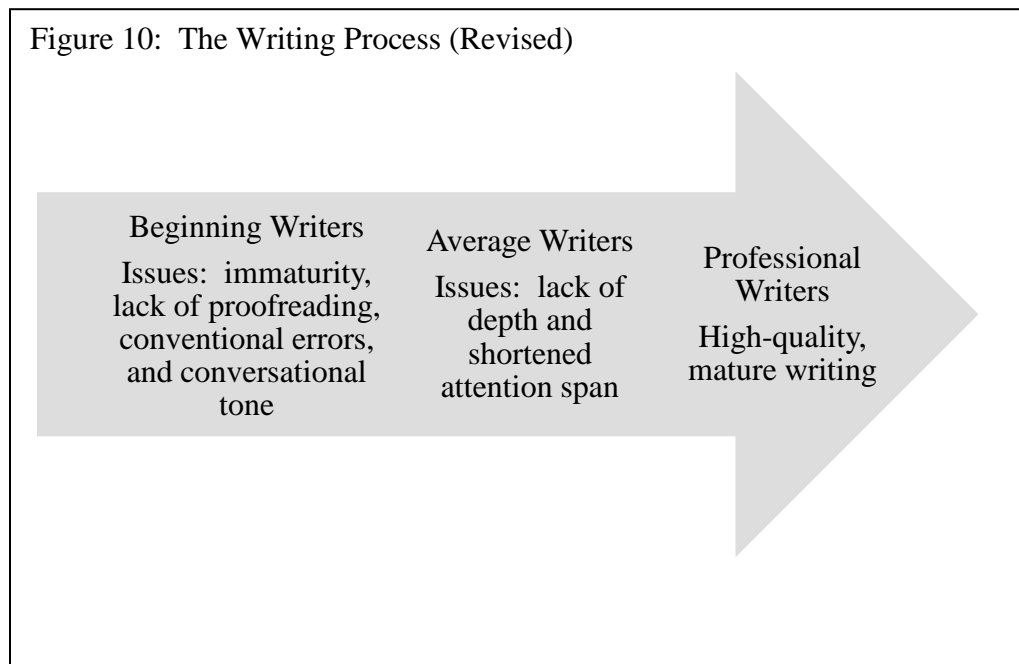
The finding on writing development positively connected to the existing literature

and confirmed much of what was already known. This study traced the concerns over

writing back nearly thirty years. In response to the controversy in the 1980s created by *A

Nation at Risk* (1983), schools addressed the issue of the writing process with 'Writing

Across the Curriculum," giving students more opportunities to write and improve their

overall skill level (Goddard, 2003; Munilla & Blodgett, 1995). This theme also

supported the work of Allen (1984) which asserted that as with the development of any

skill, competent writing takes time and practice to achieve. With additional time and

resources devoted to writing improvement, subsequent research indicated that the

majority of students made sufficient forward progress (Brocato et al., 2005; Engstrom,

2005; Goddard, 2003). Through the descriptions on the demographic form (Appendix I)

and the discussion provided by the faculty members during the interviews, it was

discovered that pre-service teachers are given a great deal of exposure to diverse writing

assignments throughout the course of their study. The implied intent of the college and

university professors was to provide continuous opportunity for the development of

writing skills for increased proficiency, with attention given to purpose for writing and

audience for which the writing is intended. Many of the faculty members pointed to the

fact that while students may not come in with professional writing skills, they continue to

advance their competence as they progress through college. Participant AJRW

summarized the theme with, "So, we really look at it as a development and we've got

three years to get them there." Figure 10 demonstrates the process in which students

develop throughout college.

Linked to the idea of writing as a continuous process, the faculty members offered

a reminder that many students entering college have not yet reached a level of maturity

necessary for professional writing. Understanding that the typical student enters college

soon after graduation from high school, it is logical to assume that the majority of

traditional college students are somewhere in their late teens to their early 20s. It stands

to reason, then, that younger students are more likely to have not yet reached the level

needed for skillful professional writing. Four of the six faculty members addressed

maturity level as an issue in student writing.

Through direct instruction and practice, the instructors described the process in which they scaffold students up to higher levels of writing proficiency, but acknowledged that the process takes time as the students mature (Thompson, 2009). This contention is important to the study's overall investigation into the effects of digital language. As students mature and begin to understand that while certain types of writing are permissible in one context, they may not be acceptable in others.   It is interesting to note that previous research showed an inverse correlation between students' chronological age and their usage of digital language in general (Baron, 2004; Tagliamonte & Denis, 2008). In agreement with the 2004 and 2008 studies, this study uncovered that while students, new to college, may initially attempt the use of digital language in academic work, they do not continue to do so. Participant AJRW said, "We see digital language come to our freshman writing, but usually by the end of freshman year we don't see it come in to their writing." Clearly, the usage of digital language in academic writing is associated with maturity, but as it will be further discussed with question three, it is also largely a question of expectations. Connected to the writing process, it is anticipated that as students mature and progress as writers, their academic work will improve in quality. The faculty was very clear and succinct in their assertion that high-quality papers are the achievement target reached through direct instruction and high expectations.

In part one of the interview guide (Appendix J), the fourth question asked brought out the second major theme as the participants were asked to identify the most representative type of work they generally received from students. As shown in chapter four, the faculty members did not reach complete agreement on this topic. Noticeably, the faculty members views are somewhat mixed. While the university faculty members

responded in nearly identical fashion by agreeing that average work is the most

representative type of work they collect, the college faculty showed slightly more

dissension. The college faculty showed an obvious gap between one college faculty

member who identified the most representative work as average to above average, while

another said average to below average. Another member of the college faculty simply

said the level has been improving. Only one college participant designated high-quality

as the most representative type of college work. This incongruity may be due, in part, to

differences in the teaching loads of the faculty participants, both in the number of

students and the type of students that each faculty member was teaching at the time of the

study. Readdressing Table 1 in chapter three, it should be noted that the average

university faculty member indicated that her average number of students per semester

was more than double that of the college faculty members, giving her a much broader

spectrum of students for comparison. Additionally, many of the college faculty members

revealed, during the individual interviews, that they were responsible for teaching a

combination of graduate students and undergraduate students each semester, possibly

affecting their expectations one way or the other. The previous research pointed to

general improvement in academic writing as evidenced by the most recent writing scores

reported by the National Center for Educational Statistics (NCES). The writing

assessments evaluated by the National Assessment of Educational Progress and presented

in *The Nation's Report Card* (2007) showed that over 60% of twelfth grade students were

proficient in writing with a 5% increase in writing scores nationally from 2002 to 2007

(Salahu-Din et al., 2007). More current results are expected later in 2011. This study's

findings would seem to concur that academic writing is commonly at an acceptable or

improving level for the majority of students. Taken as a whole, the trend appears to show

that pre-service teachers have at least average academic writing skills as perceived by the

majority of the faculty participants. Undoubtedly, this may be an area that should be

explored in greater depth.

      The third major theme identified within students' writing proficiency was

common and recurring errors. The most common and troublesome error in students'

papers was identified as a lack of proofreading. This was followed closely by errors in

mechanics, which may be strongly linked to the lack of proofreading. Highlighting the

ongoing problem participant CJRW said, "I don't know if I've ever received a paper

without mechanical errors." The identification of conventional errors as a fundamental

problem with college students' writing supports the findings widely reported in previous

studies (Goddard, 2003; Hines & Basso, 2008; Munilla & Blodgett, 1995). It is

important to note that problems with punctuation, capitalization, and grammar actually

pre-date the digital age. Recent attention, however, has been given to the concern over

conventional writing errors and the language of the digital age. In defining the focus of

this study, the review of the literature examined studies that addressed the connection

between increased mechanical errors and digital language. In 2009, a study by Harper

and Rennie reported that the language of instant messaging and text messaging had

further contributed to inadequacies in students' writing. Participants in this study were

asked specifically to comment on mechanical errors and students' use of digital language.

In relation to conventional errors, participant 1JRW said, I've seen it throughout my

whole teaching career…I don't know that it's gotten worse lately. I guess, I don't think

so." Five of the six participants agreed that issues with mechanical errors are not a new

problem in the digital age.

Another problem identified by the faculty participants, to a smaller degree, was

conversational writing. Half of the faculty recognized conversational writing as an

additional problem in students' writing, signifying that students write the way they talk.

Tagliamonte and Denis (2008) found that, overall, there has been a trend toward more

informal language, but interestingly found that that language used in instant messaging is

actually more formal than speech, dispelling the link between conversational writing and

the digital age. Revisiting the subject of writing as a process, participant 2JRW said,

"…they're undergrads. They're learning what vocabulary works in what environment."

This can be linked not only to the theme of common problems, but also to the theme of

writing process and immaturity.

Similarly, the faculty concern regarding students' previous educational history

also connected to the writing process. An unfortunate reality is that all school districts

are not created equally. Some schools may be lacking in the proper resources to teach

writing adequately. Some students, through no fault of their own, have deficits in their

writing skills. No matter what skills students brought with them to college, they are

expected to continue developing their writing proficiency. All of the interviewed faculty

members discussed the multitude of writing assignments given to students for sustained

practice. They also identified campus writing centers or seminars as a means to help

students who may have writing deficits, regardless of the reason, to help bridge the gap.

Previous research has shown that additional writing assistance can benefit college

students when weaknesses are caught early in a student's college program (Brocato et al.,

2003). Participants from both schools concurred that with preliminary testing of writing

skills, struggling writers were identified earlier and offered services for better college

success.

Throughout the exploration of the writing abilities exhibited by pre-service

teachers, the participants established many common themes. All seemed to concur that

writing is a process in which students must continue to expand skills as they mature

throughout their years in college. While the faculty generally agreed that pre-service

teachers' writing was at least near the average range, they acknowledged that high-

quality papers are the ultimate achievement goal. Through direct classroom instruction

and the expectations discussed in question three, students continue to develop their skills

for professional writing. Many of the concerns that prompted this study were addressed

in relation to question one. Similar to previous studies, the faculty identified the most

common errors as lack of proofreading and mechanical errors, which has been an

ongoing problem in education for years. No evidence came from this study to support a

negative impact from the digital age on writing conventions. This is later explained in

conjunction with college expectations.

Question 2: Do the faculty members in teacher education perceive any

impact from technology and digital language on the formal academic writing skills

of pre-service teachers? Looking beyond the simple issue of digital language in

students' work, faculty participants were asked to consider any other impact from the

digital age on the academic writing skills of pre-service teachers. Throughout the

interviews, two major concerns were articulated. It was the belief of the college and

university faculty members that students' papers were demonstrating a lack of depth and

the students themselves were showing a lack of interest during class time. The faculty

attributed these two major themes to the digital age.

The initial attention given to the discussion on the lack of depth in student writing

was so significant that it led to the addition of an interview question designed to explore

the participants' general feelings regarding depth in students' writing. It would seem

intuitive to expect that, with a greater wealth of information accessible to students

through technology, students would have the opportunity to create greater topic depth in

their papers through the utilization of numerous sources of information. It was the

contention of the majority of the faculty participants that, with the overwhelming amount

of information available, students have become less likely to delve deeply into any given

topic. Participant 2JRW described the recent situation by calling the students of today

the "click generation" and said that they are "used to skimming the surface of things."

She went on to express,

> …especially from the digital revolution thing and this does apply to writing too,
> that notion that they are not used to getting into things deeply is definitely at
> work…they will absolutely get by with less if they can and again, that's pretty
> historically true, but I think it's probably exacerbated by the digital revolution.

The identification of this particular limitation in the academic writing of students

is critical. Undoubtedly, many in education are already making adjustments to classroom

instruction to combat this negative aspect of the digital age. It may, however, take

additional time and planning for course programs and curriculums to catch-up with the

rapid speed of the digital age. Teaching students to look beyond the surface level of a

topic and search for more information may help students overcome this perceived

deficiency in their academic writing and improve their overall writing skills. It is highly

probable that the affects from the digital age on students will alter what and how college

instructors teach students in relation to academic writing. With the wealth of information

available and the ease with which it can be accessed, the potential to actually enhance the

depth of students' work with some direct instruction could be realized. While this

finding was unexpected, it may be arguably one of the most profound outcomes of the

study.

The participants also identified students' shortened attention spans as another

problem stemming from the digital age. With the massive availability of information and

communicative technology, two faculty members felt that they struggled to compete for

students' attention. For the last decade, the educational debate has focused on the distinct

possibility that traditional ways of teaching and learning may be outdated (Lankshear,

Peters, & Knobel, 2000). The growing problem of students becoming disinterested in

school, due to real-world technology and monotonous traditional classroom structure,

was also reported by Hinchman et al. in 2004 and by Merchant in 2007. While only two

of the participants from this study commented on attention span, it should be noted that

there were no questions which specifically addressed this issue. Between the two

participants who remarked on the shortened attention span of college students, their

views seemed to support the previous findings. The 2009 research study conducted by

Fox, Rosen, and Crawford on multitasking in the digital age concluded that managing

tasks simultaneously decreases performance. Along those lines, participant DJRW said,

"They say they can multitask and they attempt to multitask, but as I've just been teaching

we don't have the cognitive resources for all that". Without the "cognitive resources" to handle all of the input at one time, it would seem to be a logical assumption that students may not always be paying attention in classes. Participant 2JRW echoed that idea, "I'm beginning to feel a lower level of concentration and focus…It's just, at times, very tough for them to pay attention."

Possibly one of the most significant points of interest about this finding is what it may represent for the planning of instruction in the future. Mindful of the fact that they may be competing with other sources of input for students' attention, teachers must find new ways to engage students in the learning process. Through technological advancements, students can participate more than ever before. The faculty participants were asked specifically about a wide-range of digital age experiences for classroom use, including e-mail, blogs, discussion boards, online assignment submissions, video conferencing, instant messaging, and social networking. All six of the participants described various methods for students to collaborate and contribute to the learning process. With the pervasiveness of the digital world, the standard college lecture is surely becoming a thing of the past.

Question 3: Are pre-service teachers able to switch modalities between social writing in digital language and traditional academic writing? In reference to the title and theoretical framework in which the study was founded, the final question was undoubtedly the most critical. The existing literature, presented in chapter two, generally concluded that while college students' professional writing skills had been

Table 5

Summary of Previous Research

Researcher (s)	Year	Results found
Baron	2004	Digital language was not used as widely as expected
Lewis & Fabos	2005	Students regularly adjust language based on audience
Zhou	2007	Older students who already had traditional writing skills, used them in IM, but acknowledged it could be damaging to younger students
Dixon & Kaminska	2007	Exposure to misspelling in digital language had no damaging effects
Tagliamonte & Denis	2008	Slang terms like "ha-ha" are used more often than digital terms like "lol" and 91.41% used "you" and not "u"
Plester et al.	2008	A positive relationship between students' understanding of digital language and students' writing
Jacobs	2008	Digital language was not used excessively and students could adjust language based on audience
Plester et al.	2009	Digital language shows an increased phonemic awareness
Turner	2009	Students do code-switch from social writing to academic writing
Rosen et al.	2010	Digital language is not used excessively, but does improve informal writing skills. Formal writing skills may be negatively affected, but college educated students are better able to code-switch

an ongoing concern for many years, students' ability to code-switch between digital

language and Standard English had not yet become a major problem in most

circumstances. As many research studies, conducted over the last five years, have

documented the expansion in the practice of digital language, research must continue to

explore this crucial issue. Quan-Haase found in 2008 that over a half of a billion people

communicated with instant messaging worldwide and that 97% of college students

utilized it. As text messaging rose in popularity, Rosen (2010) found that the number of

hours spent engaged in texting grew throughout the teenage years. Interestingly, one

study found that little research had been done to study the full impact of instant

messaging on students (Tagliamonte & Denis, 2008). Giving consideration to the

increasing usage and the importance of creating future teachers who can demonstrate

high-quality writing skills in the professional field, this study sought to not only explore

the issue more fully, but also to distinguish itself with an investigation of the impact on

the code-switching abilities of pre-service teachers as perceived by college and university

faculty. Table 5 offers a summary of the existing literature.

The short answer to the question, 'Can students code-switch from digital language

to academic writing' appeared to be generally affirmative in regard to the previous

literature (Table 5). This research study's results supported previous findings. It may be

important, however, to make the distinction between *can* they code-switch and *do* they

code-switch. The faculty responses seemed to indicate that the ability is there, but

perhaps not always the desire. As previously presented in chapter four, half of the

interviewed faculty members indicated the need to provide direct instruction and

vocalized expectations, causing active thinking in students to make deliberate changes

from digital language to Standard English for academic writing purposes. This finding

substantiates similar findings about educating students on their purpose and audience

each time they write (Lewis & Fabos, 2005; Turner, 2009; Wheeler, 2008; Wheeler &

Swords, 2006). Setting and upholding high expectations will be the key to maintaining

academic work that is completely free from digital language in the future.

As discussed by the faculty participants, the digital natives demonstrate fluency in

two languages: the digital language they use for information and communication and the

formal language they use for academic writing. Upon entering college, they are given

direct writing instruction and upfront expectations from their professors to maintain high

standards. In each situation, digital native students must make the appropriate choices for

language based on the audience and purpose for which the writing is intended. Figure 11

is a revised model of code-switching for digital native college students, based on the

results of this study.

Figure 11: Model of College Code-Switching,

Digital Natives

| Academic Language | Digital Language |

Enter College

| High Expectations | Direct Instruction |

Code-Switching

| Audience | Purpose |

Figure 11. Based on the findings from Rose-Woodward (2011)
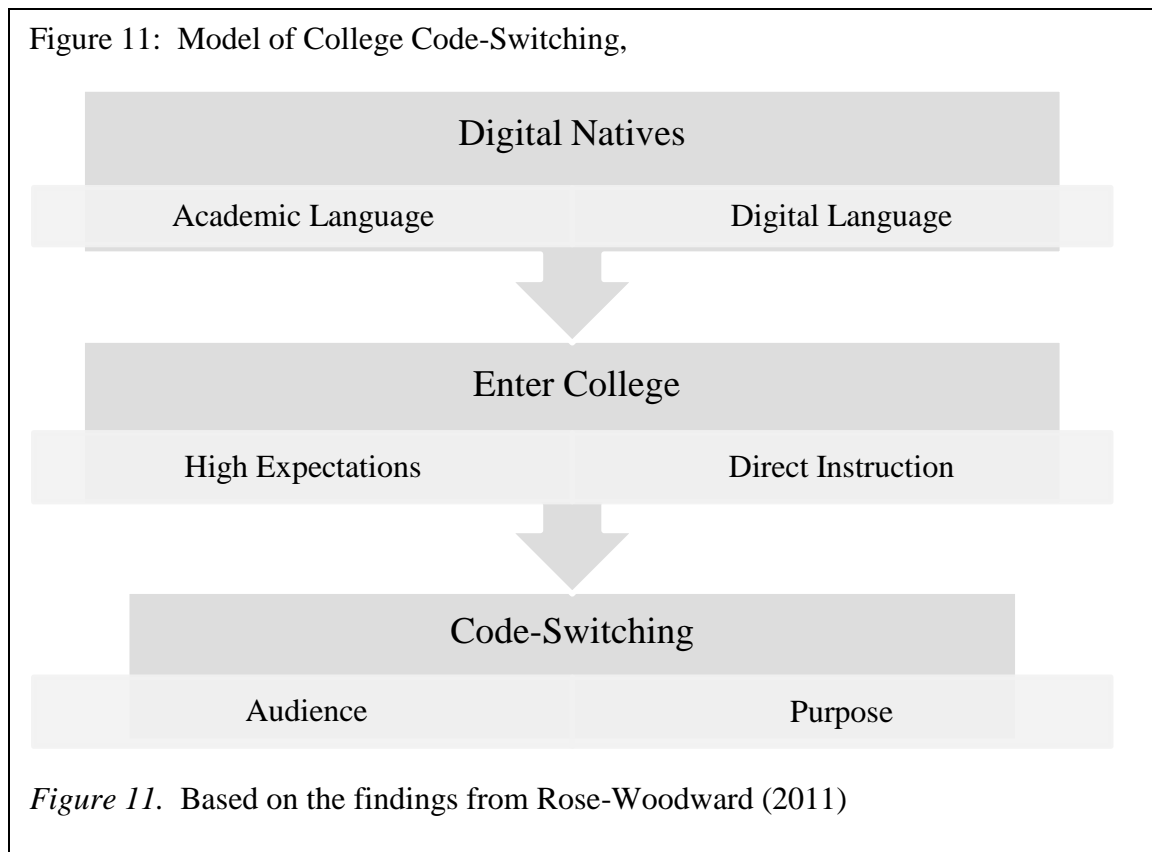
Predictably, the scholarly expectations in higher education are loftier than in the lower grades. Looking at a college education as an academic privilege and not an unconditional right, students should reasonably expect to be held accountable for college level work. Additionally, college students preparing for professional careers must learn to appreciate that adherence to exceptionally high standards will distinguish them as qualified and desirable candidates in a competitive job market. On the issue of expectations, and contrary to the many misconceived notions regarding the ruination of the written English language, the faculty participants offered various illustrations for high standards, including scores for college or university entrance and expectations for acceptable written work. With regard to writing proficiency, the criterion seems unmistakable according to the interviewed faculty members. Pre-service teachers must meet high entrance standards or they will not be admitted to teacher education program. The concern spawned by *A Nation at Risk* (1983) called for higher standards in college admission. It was the faculty participants' contention that the increased standards were largely beneficial. Mikitovics and Crehan (2002) found that college entrance scores on tests such as the ACT™ and SAT® correlated positively with scores on the later Pre-Professional Skills Test (PPST) required of all pre-service teachers. The college and university faculty represented in this study also discussed the addition of a writing assessment in the teacher education departments at both schools, designed to identify struggling writers and provide early support for the improvement of skills. Clearly, a key factor in maintaining high standards lie in the initial evaluations. The findings from previous studies and the faculty members' views would seem to suggest that students who are unsuccessful with early expectations and intervention attempts would likely not

qualify as quality teaching candidates. As a whole, the faculty expanded broadly on the

concept of high expectations throughout college and university programs. High standards

are set for writing with grading rubrics given out ahead of assignments, examples of

exemplary work provided for comparison, and professional writing styles, such as APA,

taught early in a students' college career. Several of the faculty members discussed

departmental policies regarding the usage of digital language in any communication

between the students and faculty members. Participant AJRW said, "We're seeing less of

that because we're so stringent about is…I don't know of a department, at the college,

that will accept it." The process of learning some of the expectations the hard way was

explained further by participant CJRW, "You usually get one or two of those and you

never get another one… so they just don't have a lot of trouble with digital language."

The study's findings strongly indicated that the use of digital language in academic work

is not a problem in pre-service teachers simply because it is not tolerated. High standards

are established early and strictly enforced throughout college. This discovery may

Figure 12: The College Writing Process, Based on Rose-Woodward (2011)

Figure 12. Based on the findings of Rose-Woodward (2011)
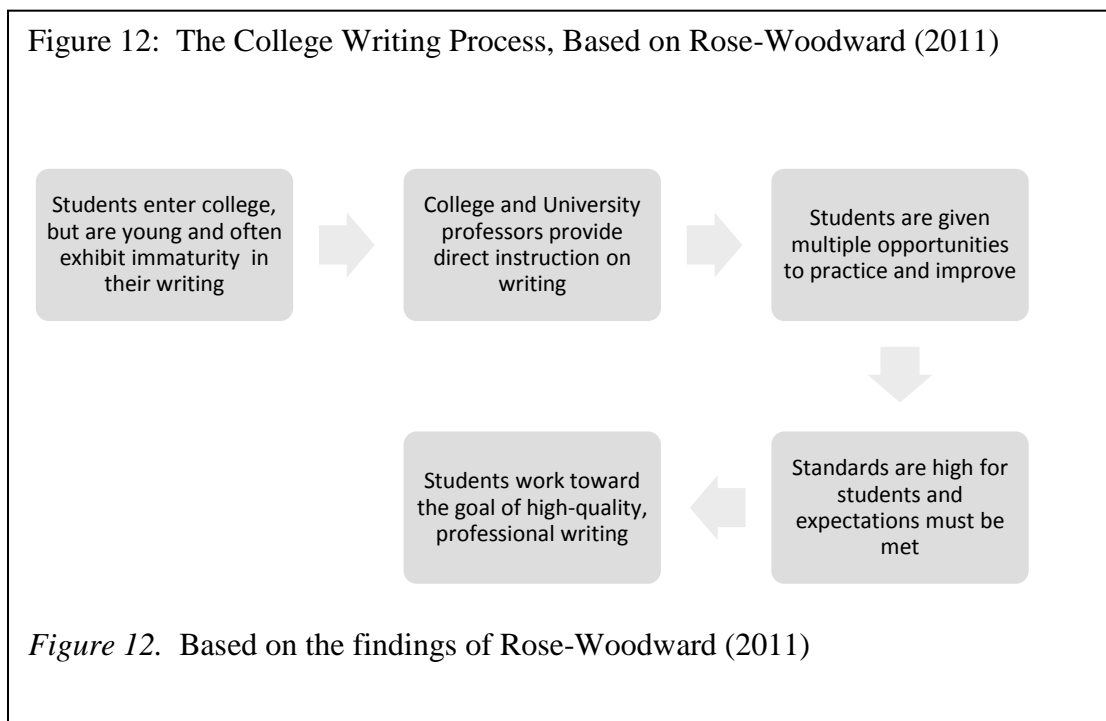
support the findings of Rosen et al. (2010) who reported that better educated students

handle code-switching much more adeptly. The research points to the idea that with

further exposure to direct instruction, practice, and increased accountability for students,

the potential for negative impact from digital language can be neutralized. Figure 12

shows the writing process at the college level, based on the results of this study.

Significance of the Findings

From a historical perspective, the digital age is still a relatively new area for

research exploration. It may be the rapid speed with which innovations develop and

advance that produces apprehension about the impact of technology on various aspects of

our society. Traditional teaching methods are being challenged and for the first time in

history, students are developing more literacy skills in the outside world than in the

classroom. Critical research is necessary to provide insight into students' of today and

planning for future instruction. After careful consideration of the study's key questions

and the central themes that emerged during the interviews with the college and university

faculty, this research study is believed to be significant on two levels.

First and foremost, in regard to code-switching, the study concurs with previous

research findings which have established that the digital language found in instant

messaging and text messaging are not as detrimental as the media has commonly

reported. At this point in time, students' ability to switch modalities in writing has been

researched and well-documented in numerous studies (Jacobs, 2008; Lewis & Fabos,

2005; Turner, 2009; Rosen et al., 2010). In response to specific concerns about

America's future teachers, this study distinguished itself by exploring the code-switching

abilities of pre-service teachers as perceived by those who teach them. The study largely

supported previous findings regarding students' ability to change discourse in written

language. Only one participant, 2JRW, offered an example of digital language in an

academic paper, "One paper was hilarious…[the student] wrote 'u' instead of 'you'…it's

a mystery to me because when you're typing in Word, it should up anyway." It was the

participant's feeling that the error had more to do with a lack of proofreading, than code-

switching. Participant 1JRW summarized the code-switching proficiency demonstrated

by future teachers by saying, "They understand it. They get it."

Within this finding, the more significant issue was the connection between the

students' process of learning to write well and the importance of establishing and

maintaining high expectations for college and university students. As students progress

through the writing process and develop as writers, guidance is critical. By providing

students with grading expectations and high-quality examples as an achievement target,

instructors scaffold students to
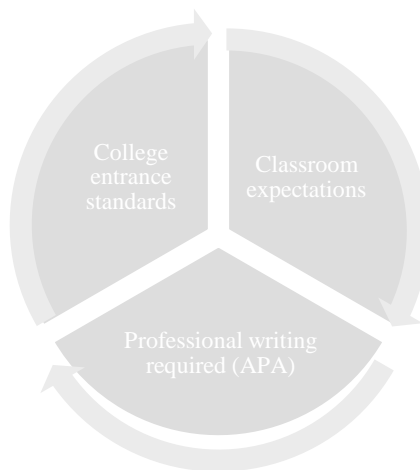

Figure 13: Expectation Model

Figure 13. Based on the findings of Rose-Woodward (2011)

higher levels of mature writing (Thompson, 2009). With the complete rejection of social writing for academic purposes, instructors are also helping students to make the distinction between acceptable and unacceptable modes of discourse for the professional field. Figure 13 illustrates the three pillars of keeping standards high for college students: entrance standards, classroom expectations, and professional writing requirements. In reference to Turner's assertion regarding the validation of both languages for code-switching, more than half of the participants indicated that they also allow their students to text message them. Participant AJRW addressed an interesting point by saying,

> Text messaging will almost always be a text message from them with the codes in them and since they know that I can read them, I don't get quite as excited…I haven't had difficulty with students being unprofessional in those…I'm not sure if I said, "Send me something professionally" that I wouldn't be shutting doors versus leaving doors open. So, I would say they have a harder time switching on things like text messaging when they're used to doing it in that than in a paper where it's a different kind of writing format. That's compartmentalizing what they do.

With more than half of the faculty participants permitting text messages from students, it appeared that the majority of the faculty participants were showing some level of appreciation for the students' primary mode of communication. It is important to note that, however, that all six faculty participants discussed high expectations as a proven method for the reduction of inadequate academic work from students. This finding is highly significant for planning future instruction.

The second significant point of interest from this study may be reported less, but actually represents two more vital problems associated with the digital age. The biggest concern with informational and communicative technology impacting students is not the wide-spread usage of digital language, as previously discussed. The most serious issue may lie in the lack of depth in students' writing and the shortened attention span of students as perceived by their college and university faculty. The two are universally linked to what participant AJRW referred to as the "click generation." Students in the twenty-first century have grown up with the ease and convenience of quickly clicking a button for instant information and communication. Through the faculty discussions, it was frequently indicated that, with the overwhelming amount of available information, students of today are accustomed to "skimming the surface" and seldom dig deeper to learn more. The faculty described this emerging problem as a lack of depth or inattention to details in their work. Connected to the same issue of the "click generation," the faculty also expressed worry on the subject of the students' seemingly shortened attention spans. Digital native students have a multitude of input sources available at their fingertips, dividing their concentration (Fox et al., 2009). It seems logical to assume that, in more traditional teacher-centered classrooms, competing for their attention is getting increasingly hard to do. Finding the means with which to engage these students remains a challenge for most college and university instructors who, at this point in time, were made up of digital immigrants. While only two of participants expressed concern about the change in level of students' classroom attention, four of the six participants commented specifically on changing teaching pedagogies to employ technology in the classroom. Figure 14 summarizes the significant findings of this study.

Figure 14: Conclusion of the Findings

Significance of Digital Age	Significance for Education
Digital language is not a problem. Students can code-switch.	Direct writing instruction helps students as they develop in the writing process.
Lack of depth in students' writing and lack of attention during instruction are becoming problems in the digital age.	High expectations for students' writing are critical.

Undeniably, future issues in education will focus on bridging the technological gap that exists between the natives and the immigrants and it will have a significant impact on planning instruction that will engage the students of tomorrow.

Recommendations for Classroom Instruction

High standards. As noted by the findings of the study, classroom instruction unquestionably is and will continue to be impacted by the digital age. While the need for high standards has been well-established and largely employed within schools, they should not remain inflexible. As technology develops, academic expectations should be continuously scrutinized, evaluated, and modified as circumstances change. With the rapid advancement seen in recent years, professionals in education may need to devote more time and energy into speeding up the process of change within the schools to diminish the idea that schools are lagging behind real-world technology. To produce

competent professional writers, colleges and universities must continue to guide students toward better writing with high evaluation criteria. Along these lines, participant BJRW said,

> So, [this is] not terribly different from…[what] instruction has been in the past, but we just have a new impact and a new force feeding into their skill set and their abilities and what is probably their most natural approach to written communication and that's going to need to be combated and worked through.

As discussed by the faculty participants, high expectations should also be consistently applied to all students throughout every department. Students should be made well aware of writing standards through direct instruction.

   Direct writing instruction. Given the significant writing issues described by the college and university faculty members, it seems reasonable to include a call for more comprehensive writing instruction in lower grade levels. It was the contention of several faculty members that the 6+1 Traits of Writing method, used in recent years, has made a substantial positive difference in the writing quality received from students (Culham, 2005), although they expressed concern that the digital age has diminished the depth of writing. Future classroom instruction should include objectives that will assist students in becoming more comprehensive researchers and writers. At the college level, required courses in writing and research may need to be added to the undergraduate curriculum to give students the direct instruction they need to produce high-quality and detailed work. In 2008, Harper and Rennie similarly recommended a class for pre-service teachers in linguistics, but did not address writing depth. It is the recommendation of this study that

both linguistics and writing depth be the focus of prerequisite classes. Additionally,

college and university instructors will likely need to expect that they will be required to

scaffold students through the process of thorough writing, no matter what subject they

teach (Thompson, 2009).

      Employment of a variety of teaching methods. During the interviews, several

of the participants alluded to the need to change methods of classroom instruction

regularly during a scheduled class to combat the perceived short attention span of

students. In discussing the "click generation," participant 2JRW said with conviction, "I

am changing the way I handle the class." This twenty-first century change brings with it

a requirement that teachers from kindergarten through college be well versed in a

multitude of teaching techniques. Participant DJRW said, "As far as balancing all those

kinds of things with traditional teaching…when they get so much information through

other means, it's a challenge, as an instructor, to deliver information in a way that's going

to engage them." It is equally imperative that many of the approaches utilize technology.

Previous studies have established the benefits of employing technology in the classroom,

particularly with pre-service teachers (Kim & Bagaka, 2005; McPherson et al., 2007). As

previously discussed, education should help bridge the technological gap between today

and students of tomorrow. Participant 2JRW said, "What they're being asked to do in the

classroom is totally against what this digital generation, in my opinion, needs to

grow…in their best interests anyway." It is highly important for pre-service teachers to

become skillful with classroom instruction that includes technology. Faculty must

redesign educational pedagogies that include various methods for the inclusion of

technology in the classroom. CJRW summarized this by saying,

I want them to be able to make it so that children can learn more because of

digital literacy and not spend so much time on maybe some old ways of teaching

that aren't necessarily interesting children…they still need to learn facts and

information, but there are so many better ways to learn it now.

In the book *Living on the Future Edge,* authors look at twenty-first century opportunities

for instruction,

Teachers must move away from seeing teaching as talking to an approach that

presents students with problems to solve so that students will be able to

accomplish tasks on their own. Teachers must also embrace the teaching of the

21st Century fluencies to keep their instruction relevant and to adequately prepare

their students for the realities of the modern world (Jukes et al., 2010).

Recommendations for Future Research

     Research on the latest technology. Keeping in mind the relative recentness of

the digital age, it is reasonable to assume that the full impact has yet to be studied and

reported. The book *Living on the Future Edge* remarked on the gap, "While the rest of

the world has undergone radical and repeated restructuring over the last 15 to 20 years,

schools have remained remarkably unaffected by these sweeping changes" (Jukes et al.,

2010). This also brings to light another important factor having an effect on research; the

speed with which technology is developing. Researchers may have a difficult time

keeping up with the latest innovations affecting education. There is an intuitive need,

within education, for more comprehensive research to investigate the influence of recent

advancements on the lives and learning abilities of today's students. New areas of focus

for research combine with existing issues to create an extensive list of topics for researchers to explore.

Research on lack of depth in students' writing. While the issue of students' ability to code-switch might temporarily be answered, future research in writing might focus on the influence of the digital age on the perceived lack of depth in students' work. Research concerning depth should concentrate on the writing process to determine if depth increases as the digital natives mature and develop as writers. Similarly, techniques utilized by colleges or universities and individual instructors to combat the depth problem in students' writing through direct instruction and other means should be investigated to establish best practice methods that are successful for creating better writing in students. Through the interviews, faculty participants discussed campus centers and seminars designed to assist students with writing. The participants also suggested that many instructors are already working with students during classroom time to develop better methods for uncovering and using information. Further research should explore the effects of such assistance.

Research on short attention span of students. Additional research recommended by this study should focus on the reduced attention span of digital age students as found in this study. Fox et al. reported that multiple sources of input are the cause of divided student attention (2009). While some research has been done, more is needed to determine how to adopt new teaching pedagogies that will engage students. An important aspect in this area should include technology-based intervention methods for getting students' attention and regaining focus in the classroom.

Conclusion

In the careful design and execution of this study, valuable insight has been gained regarding the writing proficiency demonstrated by pre-service teachers. The words and views of the six interviewed college and university faculty members addressed the three principal research questions and offered significant objectives for future instruction. Some of the study confirmed what was already known, but overall the study added to the existing knowledge of planning instruction for pre-service teachers. It is those students who will be faced with the challenge of educating the students of tomorrow. To that end, Jukes et al. asserted, "As educators, we must understand that our job is not just to serve what is or has been, but to shape what can, what might, and what must be" (2010).

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Appendix A: Request Letter to the College of Education

May 2010

To Whom It May Concern:

I am a doctoral student working on my Ed.D. at the College of Saint Mary in Omaha, Nebraska. For my dissertation, I am currently working on a research study entitled, "Digital Age Code-Switching in Pre-Service Teachers". The proposed study is designed to investigate the perceptions of teacher education faculty on the academic writing skills of pre-service teachers prior to entering student teaching or the work force.

I am interested in conducting research at your university. I would like to interview approximately 6-12 members of the teacher education faculty at their consent and convenience. I offer complete anonymity for the participants and the university contributing to the proposed research. I will provide proof of approval from the Institutional Review Board from the College of Saint Mary and I will additionally seek approval from your institution.

I would like to request a meeting to discuss the proposed study with you. I can be reached at (402) 290-6808 or (402) 493-7865. I am looking forward to talking with you.

Sincerely,

Jennifer A. Rose-Woodward M.S.

Appendix B: Institutional Review Board Approval (University)

_____

Office of Regulatory Affairs (ORA)
Institutional Review Board (IRB)

September 10, 2010

Jennifer A. Rose-Woodward
14819 Ruggles Street
Omaha, NE 68116

IRB # 500-10-EP

TITLE OF PROPOSAL: Digital Age Code-Switching in Pre-Service Teachers
DATE OF FULL BOARD REVIEW DATE OF EXPEDITED REVIEW 09-09-10
DATE OF FINAL APPROVAL AND RELEASE 09-10-10 VALID UNTIL 09-09-11
EXPEDITED CATEGORY OF REVIEW: 45CFR46.110; 21CFR56.110, Categories 5, 6 and 7

The Institutional Review Board (IRB) for the Protection of Human Subjects has completed its review of the above-titled protocol and informed consent document, including any revised material submitted in response to the IRB's review. The IRB has expressed it as their opinion that you are in compliance with HHS Regulations (45 CFR 46), applicable FDA Regulations (21 CFR 50, 56) and the institution's HRPP Policies and you have provided adequate safeguards for protecting the rights and welfare of the subjects to be involved in this study. This letter constitutes official notification of the final unconditional approval and release of your project by the IRB, and you are authorized to implement this study as of the above date of final approval.
Please be advised that only the IRB approved and stamped consent form can be used to make copies to enroll subjects. Also, at the time of consent all subjects must be given a copy of _The Rights of Research Subjects_ and "What Do I Need to Know" forms. The IRB wishes to remind you that the Principal Investigator (PI) is responsible for ensuring that ethically and legally effective informed consent has been obtained from all research subjects.
Finally, under the provisions of this institution's Federal Wide Assurance (FWA00002939), the PI is directly responsible for submitting to the IRB any proposed change in the research or the consent document. In addition, any adverse events and unanticipated problems involving risk to the subject or others must be promptly reported to the IRB.

In accordance with HRPP Policy, this project is subject to periodic review and surveillance by the IRB and, as part of their surveillance, the IRB may request periodic progress reports. For projects which continue beyond one year, it is the responsibility of the PI to initiate a request to the IRB for continuing review and update of the research project.

Sincerely,
Ernest D. Prentice, Ph.D.
Executive Chair, IRB

                                        EDP/kje

Appendix C: Participant Recruitment Letter

August 2010

DIGITAL AGE CODE-SWITCHING IN PRE-SERVICE TEACHERS

IRB #

Dear Teacher Educator,

You are invited to take part in a research study because you are a full-time faculty member in the teacher education department. The purpose of this study is to explore your perceptions of the academic writing abilities of teacher candidates. This research study is being conducted as part of the requirements of my Ed.D. program at College of Saint Mary.

You may receive no direct benefit from participating in this study, but the information gained will be helpful to provide insight into the writing skills of pre-service teachers.

Should you decide to participate, you will be asked to complete an on-line demographic survey which should take approximately five to ten minutes to complete. After completion of the survey, you will be interviewed at a convenient location on the campus where you work. The interview is expected to take approximately one hour. To the interview, you will be asked to bring samples of student work, at various levels of proficiency, with all names and identifying information removed prior to the interview. You will be asked to discuss the student work in terms of its merits and shortcomings and evaluate it on a simple rubric that will be provided. You will also be asked to bring your syllabi for your current classes along with any writing instructions that you give to your students to help with the discussion. Your interview will consist of questions designed to obtain your perceptions of the academic writing skills of pre-service teachers in the digital age. The entire study is expected to conclude during the winter months. After the study is completed, your review of your individual information may be required and will likely take an additional 30-45 minutes. Your participation is strictly voluntary. Furthermore, your response or decision not to respond will not affect your relationship with College of Saint Mary or any other entity. Please note that your responses will be used for research purposes only and will be strictly confidential. No one at College of

Saint Mary will ever associate your individual responses with your name or email address. The information from this study may be published in journals and presented at professional meetings.

Your response to this e-mail will indicate only that you have an interest in participating in the study. At the time of your interview, your signed consent form will indicate your informed consent to participate in the study. You may withdraw at any time by informing the researcher. This study does not cost the participant in any way, except the time spent completing the survey, the interview, and the review of the interview. There is no compensation or known risk associated with participation. Please read *The Rights of Research Participants* below. If you have questions about your rights as a research participant, you may contact the College of Saint Mary Institutional Review Board, 7000 Mercy Road, Omaha, NE 68144 (402-399-2400).

Thank you sincerely for participating in this important research study. If you have comments, problems or questions about the survey, please contact the researcher(s).

Sincerely,

Jennifer A. Rose-Woodward M.S.

(402) 493-7865 (402) 290-6808

Appendix D: Second Request Letter

September 2010

DIGITAL AGE CODE-SWITCHING IN PRE-SERVICE TEACHERS

IRB #

Dear Teacher Educator,

Last month you received an e-mail requesting your participation in a research study designed to explore the writing skills of pre-service teachers. As a faculty member who works with the population being studied, your participation and input will be extremely beneficial to the study. Understanding that you are very busy and that your time is valuable, you will have my assurance that your participation will take less than two hours of your time, will be spread out over many months, and will be scheduled at your convenience. Additionally, your interview will be conducted on your campus at a location near your office.

I hope you will consider being a part of this study.

Thank you,

Jennifer A. Rose-Woodward M.S.

(402) 493-7865 (402) 290-6808

Appendix E: Institutional Review Board Approval (College)

June 10, 2010

Jennifer Rose-Woodward

College of Saint Mary

7000 Mercy Road

Omaha, NE 68106

Dear Ms.Rose-Woodward,

Congratulations! You have done excellent work making the revisions the IRB has recommended.

Your research proposal is fully approved and your official IRB # is: CSM 10-24. Be sure to use that number on all materials relating to your project.

Your IRB approval extends through June 10th, 2011. If you should need an extension or change of protocol, please submit the Extension/Change of Protocol form that appears on page 38 of the new IRB Application Guidebook (posted to the IRB Community site).

At the close of your study, you will need to submit the Closing the Study form, which appears on page 40 of the same manual.

If you have any questions or I can assist in any way, please feel free to contact me. Good luck with your research!

Sincerely,

Dr. Sue Schlichtemeier-Nutzman

Chair, Institutional Review Board   *   irb@csm.edu

Office Cell: (402) 416-8599

7000 Mercy Road • Omaha, NE 68106-2606 • 402.399.2400 • FAX 402.399.2341 • www.csm.edu

Appendix F: The Rights of Research Partipants

THE RIGHTS OF RESEARCH PARTICIPANTS*

AS A RESEARCH PARTICIPANT AT COLLEGE OF SAINT MARY

YOU HAVE THE RIGHT:

1. TO BE TOLD EVERYTHING YOU NEED TO KNOW ABOUT THE RESEARCH BEFORE YOU ARE ASKED TO DECIDE WHETHER OR NOT TO TAKE PART IN THE RESEARCH STUDY. The research will be explained to you in a way that assures you understand enough to decide whether or not to take part.

2. TO FREELY DECIDE WHETHER OR NOT TO TAKE PART IN THE RESEARCH.

3. TO DECIDE NOT TO BE IN THE RESEARCH, OR TO STOP PARTICIPATING IN THE RESEARCH AT ANY TIME. This will not affect your relationship with the investigator or College of Saint Mary.

4. TO ASK QUESTIONS ABOUT THE RESEARCH AT ANY TIME. The investigator will answer your questions honestly and completely.

5. TO KNOW THAT YOUR SAFETY AND WELFARE WILL ALWAYS COME FIRST. The investigator will display the highest possible degree of skill and care throughout this research. Any risks or discomforts will be minimized as much as possible.

6. TO PRIVACY AND CONFIDENTIALITY. The investigator will treat information about you carefully and will respect your privacy.

7. TO KEEP ALL THE LEGAL RIGHTS THAT YOU HAVE NOW. You are not giving up any of your legal rights by taking part in this research study.

8. TO BE TREATED WITH DIGNITY AND RESPECT AT ALL TIMES.

THE INSTITUTIONAL REVIEW BOARD IS RESPONSIBLE FOR ASSURING THAT YOUR RIGHTS AND WELFARE ARE PROTECTED. IF YOU HAVE ANY QUESTIONS ABOUT YOUR RIGHTS, CONTACT THE INSTITUTIONAL REVIEW BOARD CHAIR AT (402) 399-2400. *ADAPTED FROM THE UNIVERSITY OF NEBRASKA MEDICAL CENTER, IRB WITH PERMISSION.

Appendix G: The Rights of Research Partipants

UNIVERSITY OF Nebraska Medical Center

THE RIGHTS OF RESEARCH SUBJECTS

AS A RESEARCH SUBJECT AT THE NEBRASKA MEDICAL CENTER

YOU HAVE THE RIGHT …

… to be told everything you need to know about the research before you are asked to decide whether or not to take part in the research study. The research will be explained to you in a way that assures you understand enough to decide whether or not to take part.

… to freely decide whether or not to take part in the research.

… to decide not to be in the research, or to stop participating in the research at any time. This will not affect your medical care or your relationship with the investigator or the Nebraska Medical Center. Your doctor will still take care of you.

… to ask questions about the research at any time. The investigator will answer your questions honestly and completely.

… to know that your safety and welfare will always come first. **The investigator will display the highest possible degree of skill and care throughout this research. Any risks or discomforts will be minimized as much as possible.**

… to privacy and confidentiality. The investigator will treat information about you carefully, and will respect your privacy.

... to keep all the legal rights you have now. You are not giving up any of your legal rights by taking part in this research study.

… to be treated with dignity and respect at all times

The Institutional Review Board is responsible for assuring that your rights and welfare are protected. If you have any questions about your rights, contact the Institutional Review Board at (402) 559-6463.

Appendix H: Informed Consent

IRB#: CSM 10-24/500-10-EP
Approval Date: 6-10-10/9-10-10   Expiration Date: 6-10-11/9-10-11

DIGITAL AGE CODE-SWITCHING IN PRE-SERVICE TEACHERS

You are invited to take part in this research study. The information in this form is meant to help you decide whether or not to take part. If you have any questions, please ask.

Why are you being asked to be in this research study?

You are being asked to participate in this study because you are a full-time faculty member in the College of Education and it is understood that you instruct, create assignments, and grade the written work of pre-service teachers as part of your position.

What is the reason for doing this research study?

Teacher Education Faculty are in the best position to assess the academic writing skills of pre-service teachers prior to student teaching. This study has been designed to explore the perceptions of university faculty regarding the impact of the digital age on the writing skills of pre-service teachers prior to student teaching and their ability to select appropriate discourse for academic and professional purposes. The study will seek to answer the following questions, (1) How do faculty members in teacher education perceive the basic writing skills demonstrated by pre-service teachers? (2) Does the education faculty perceive any impact from technology and digital language on the formal academic writing skills of pre-service teachers? (3) Are pre-service teachers able to switch modalities between social writing in digital language and traditional academic writing?

Participant Initials _____

ADULT Consent Form - PAGE TWO

What will be done during this research study?

Initially, participants will be asked to complete a short online demographic survey for background information only. Following the survey, a one-on-one interview will be scheduled at a time and location that is convenient to the participant. For the interview, each participant will be asked to bring samples of student work at various levels of proficiency. The participant will be asked to discuss the student work based on its strengths and weaknesses and evaluate it on a simple rubric provided by the researcher. Participants will also be asked to bring copies of class syllabi and other writing instructions given to the students during coursework for discussion. Additionally, the participant will be asked interview questions, designed to elicit his/her overall perceptions of the work of pre-service teachers. The estimated time commitment is approximately one hour for the interview. At the conclusion of the study, participants may be asked to review their own individual information obtained from the interview for accuracy. The estimated time commitment for review is 30-45 minutes.

What are the possible risks of being in this research study?

There are no known risks to you from being involved in this research study.

What are the possible benefits to you?

You are not expected to get any direct benefit from being in this research study.

What are the possible benefits to other people?

Participants' perceptions have the potential to provide insight into the current state of pre-service teachers' ability to select appropriate discourse for writing academically and professionally, giving possible directions for future instruction.

What are the alternatives to being in this research study?

Instead of being in this research study, you can choose not to participate.

What will being in this research study cost you?

There is no cost to you to be in this research study.

Will you be paid for being in this research study?

You will not be paid or compensated for being in this research study.

Participant Initials _____

ADULT Consent Form - PAGE THREE

What should you do if you have a problem during this research study?

Your welfare is the major concern of the researcher for this study. If you have a problem as a direct result of being in this study, you should immediately contact one of the people listed at the end of this consent form.

How will information about you be protected?

Reasonable steps will be taken to protect your privacy and the confidentiality of your study data.   Your name and position will not be associated with any of the information which you provide. You will be identified on the survey, rubrics, digital recording, and all field notes by code number only. Student identifying information will not be collected or recorded.

The only persons who will have access to your research records are the study personnel, the Institutional Review Board (IRB), and any other person or agency required by law. The information from this study may be published in scientific journals or presented at scientific meetings, but your identity will be kept strictly confidential.

What are your rights as a research participant?

You have rights as a research participant. These rights have been explained in this consent form and in *The Rights of Research Participants* that you have been given. If you have any questions concerning your rights, talk to the investigator or call the Institutional Review Board (IRB), telephone (402) 399-2400.

What will happen if you decide not to be in this research study or decide to stop participating once you start?

You can decide not to be in this research study or you can stop being in this research study, ("withdraw") at any time before, during, or after the research begins. Deciding not to be in this research study or deciding to withdraw will not affect your relationship with the investigator, with the College of Saint Mary, or with your institution.

If the research team gets any new information during this research study that may affect whether you would want to continue being in the study, you will be informed promptly.

Participant Initials _____

ADULT Consent Form - PAGE FOUR

Documentation of informed consent:

You are freely making a decision whether to be in this research study. Signing this form means that (1) you have read and understood this consent form, (2) you have had the consent form explained to you, (3) you have had your questions answered and (4) you have decided to be in the research study.

If you have any questions during the study, you should talk to one of the investigators listed below. You will be given a copy of this consent form to keep.

If you are 19 years of age or older and agree with the above, please sign below.

Signature of Participant: Date:

My signature certifies that all the elements of informed consent described on this consent form have been explained fully to the participant. In my judgment, the participant possesses the legal capacity to give informed consent to participate in this research and is voluntarily and knowingly giving informed consent to participate.

Signature of Investigator: Date:

Principal Investigator: Jennifer A. Rose-Woodward M.S.   Phone: (402) 493-7865

(402) 290-6808

Secondary Investigator: Lois Linden Ed.D.   Phone: (402) 399-2612

Participant Initials _____

Appendix I: Demographic Form

Welcome Teacher Educator:

Thank you for agreeing to participate in this study. Your input is vital. Prior to our scheduled interview, would you be willing to fill out answers to the following questions? This short two- page survey will take approximately five to ten minutes.

What is your current age?   _____

What is the highest degree you have obtained?   _____

How many years of teaching experience do you have?   _____

Of those years, how many are at the college level?   _____

How many classes do you teach each semester?   _____

What are you currently teaching?

_____

Approximately how many students do you have each semester?   _____

Approximately how many students do you have in each class?   _____

Please briefly describe the types of writing assignments you assign each semester.

_____

_____

_____

Please briefly describe your grading procedures for written assignments.

_____

_____

_____

Appendix J: Interview Guide Part 1

1. Talk to me about this work in terms of the directions and expectations that were given.

2. Can you explain your overall perceptions of each of these papers?

   a. What makes this one a low-quality paper in your opinion? Strengths?

      Weaknesses?

   b. What makes this one an average paper in your opinion? Strengths?

      Weaknesses?

   c. What makes this one a high-quality paper in your opinion? Strengths?

      Weaknesses?

3. Do any of these papers show evidence of influence from digital language?

4. Which, if any, of these papers is the most representative of the majority of papers you

   collect from your students?

5. Would you evaluate, for me, each of these papers on the following rubric?

	Advanced	Proficient	Progressing	Beginning
Content	The content of this paper exceeds expectations at the undergraduate level	The content of this paper is clearly written at the undergraduate level	The content of this paper needs some work to be considered written at the undergraduate level	The content of this paper needs a lot of work to be considered written at the undergraduate level
Conventions	This paper contains on conventional errors	This paper contains minimal (0-10) conventional errors	This paper contains multiple (11+) conventional errors	This paper contains so many conventional errors that it interferes with the paper's readability
Digital language vs. Standard English	This paper adheres to all of the rules of Standard English	This paper shows minimal evidence of influence from digital language	This paper shows an equal amount of digital language and Standard English	This paper shows more use of digital language than Standard

Appendix K: Interview Guide Part 2

1) Describe, for me, the types of writing assignments that are part of the classes you teach?

2) Talk to me about the standards and expectations you set for writing assignments and describe for me the evaluation procedures that you use.

3) Take me back to a recent writing assignment you gave in class. Describe the assignment, the instructions given, and your perceptions of the student work. Were the results typical? Why or why not?

4) Think about the writing assignments you have given over the years, what are your opinions about the level of academic student writing that you have seen? In terms of trends, describe overall strengths you have observed. In terms of trends, describe overall weaknesses you have observed?

5) How would you describe your current students' level of writing proficiency overall?

6) In an academic context, how do you use…..

   a. E-mail with your students?

   b. Blogs with your students?

   c. Discussion boards with your students?

   d. Online submission of assignments with your students?

   e. Instant messaging with your students?

   f. Texting with your students?

   g. Social networking with your students?

7) Think about your students in terms of digital proficiencies and their ability to navigate technology such as computers, the Internet, and mobile phone communication – what role does that play in their academic writing?

8) Looking at code-switching as the ability to change back and forth between multiple forms of discourse or changing from digital language to Standard English, how do you view the code-switching abilities of the students you teach?

9) How has the digital age affected depth in the writing of your students?

10) What final thoughts do you have about students, academic writing, and digital literacy?

Appendix L: Observation Form

Date: Interview # _____

Time: Participant #_____

Important notes about the setting:

Important notes about the participant:

Behavior of the participant:

Body language of the participant:

Additional information: