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# Studies in Teaching – 2007 Research Digest

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**Cultural Development in the K-12 Spanish Classroom**

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## Introduction

Foreign language education in the United States has become increasingly important as the country continues to diversify and as the world is becoming progressively more multilingual. To that effect, the American Council on the Teaching of Foreign Languages (ACTFL) introduced the *Standards for Foreign Language Learning: Preparing for the 21st Century* (ACTFL, 1996). This document offers guidelines for foreign language education by outlining five main goals which represent a student's content knowledge in the foreign language: Communication, Cultures, Connections, Comparisons, and Communities. Within the Cultures goal, the standards consist of an understanding of the relationship between practices and perspectives, and an understanding of the relationship between products and perspectives of the target culture (ACTFL, 1996). Following the development of the Standards, ACTFL created the *Performance Guidelines for K-12 Learners* (ACTFL, 1998) which provide a means to assess students' content knowledge at the Novice, Intermediate, and Pre-Advanced levels of proficiency. With regards to cultural awareness, the guidelines ask: How is the cultural understanding of your students reflected in interpersonal, interpretive, and presentational communication (ACTFL, 1998)? Cultural knowledge and awareness are integral to the development of proficiency and therefore play a significant role in K-12 foreign language education.

## Review of Literature

Culture is a multi-dimensional term that encompasses ideas, traditions, beliefs, skills, and behavioral patterns (Kuo & Lai, 2006). The development of a deep understanding of a culture is intertwined with one's proficiency in the languages of that culture. Therefore, "applied linguists and language teachers have become increasingly aware that a second or foreign language can rarely be learned or taught without

addressing the culture of the community in which it is used" (Hinkel, 1999, p. 2). Seelye (1993) characterizes culture as a comprehensive accumulation of everything humans have learned. Witherspoon (1980) adds that "just as anthropologists generally agree that cultures cannot be studied without attention to the native languages spoken within them, linguists generally agree that languages cannot be studied in isolation from the cultures in which they are spoken" (p. 1-2). Therefore, in the setting of the foreign language classroom, culture is an essential component of successful language acquisition.

The *Performance Guidelines* provide clear guidance to assess foreign language students' content knowledge (ACTFL, 1998). The *Performance Guidelines* are categorized by three modes of communication: "interpersonal (implying…culturally appropriate interaction); interpretive (implying sufficient knowledge of the target culture to understand culture-specific meanings); and presentational (implying selection of culture-appropriate contents and use of style and register…)" (Schulz, 2007, p. 10). As a result, as the learner gains proficiency, he/she is expected to examine culture more closely.

The development of cultural understanding has best results if it occurs over a long period of time as proficiency is developed. Early language education can aid in the development of a global attitude because during pre-adolescent years, children are more open to gaining global awareness and understanding. Furthermore, children who study foreign language can utilize intercultural and international communication (Curtain, 1990; Peterson & Coltrane, 2003). In the long run, this can be a professional advantage in a world in which globalization has broken down barriers between cultures and countries.

There are many different instructional strategies that can be used to increase cultural awareness in order to develop communicative ability and overall foreign language proficiency. For example, the use of original texts to compare students' understanding to that of a cultural insider is an effective instructional strategy because it is a contextualized way for learners to compare and contrast their culture with the target culture (Zapata, 2005, p. 263). This experience helps students demonstrate an understanding between practices and perspectives since the student has the opportunity to identify and analyze texts of the target culture. Another strategy is to create a cultural

atmosphere in the classroom using authentic visuals, readings, and audiovisual materials to emphasize cultural learning (Pan, 1995). This is important because it provides students with a context in which they can learn language and appropriate behavioral patterns of the target culture. Similarly, research suggests that technology is a key element of cultural instruction (Earp, 1997; LeLoup & Ponterio, 2003; Posthofen, 1994). The use of authentic materials, including those that employ technology, "helps to engage students in authentic cultural experiences" (Peterson & Coltrane, 2003, p. 1). These instructional strategies have the cultural components necessary to help students gain proficiency in the target language.

To be proficient in a foreign language one must attain a high level of communicative competence. This is impossible without a strong knowledge and awareness of culture because communication requires "an understanding of the cultural context within which meaning is encoded and decoded" (ACTFL, 1996, p. 439). Therefore, culture and language are inseparable. Curtain and Dahlberg (2004) assert that "culture is the most important context for language learning" (p. 225). The purpose of this study was to investigate instructional and assessment strategies that are utilized by Spanish teachers to develop cultural knowledge and how these strategies are used to develop overall foreign language proficiency in grades K-12. This study also investigated how these strategies aligned with the ACTFL *Standards* and *K-12 Performance Guidelines.*

**Methodology**

The study took place from September to December 2007. Data was collected in September and October 2007. The researcher conducted a two-tier study that involved six elementary school teachers, five middle school teachers, and six high school Spanish teachers in a public school district in North Carolina. They were chosen according to their master teacher status or through the recommendation of the researcher's advisor, and based on their willingness to participate. All personal data collected from the interviews and classroom observations was kept confidential and was not revealed in the final results and conclusions. The information collected during the interviews was not shared with the subject's principal. All study records are kept in a locked file cabinet where they will be stored until no longer scientifically useful, at which point they will be

destroyed. First, the researcher interviewed the subjects for approximately thirty minutes using a self-designed interview instrument. The interviews were audio-recorded for later reference. The questions on the interview instrument focused on the instructional methods and assessment approaches used by the interviewee to teach cultural knowledge and awareness in their classroom. Second, the researcher observed two teachers per level in their classrooms for one hour to ascertain how they incorporate cultural strategies and assessment in their instruction. During these observations, the researcher took thorough field notes. The researcher used the information collected during the interviews and observations to determine how instructional strategies and assessments are utilized to develop cultural knowledge in the Spanish classroom. The researcher was limited to interviewing only seventeen teachers and observing six classes, and believes that additional interviews and observations would be necessary to adequately investigate the use of culture in the K-12 classroom.

**Results and Conclusions**

The subjects have a wide range of experience and backgrounds. However, they seemed to define culture similarly and to understand the importance of teaching culture as an integral part of language acquisition. Even though their school's expectations may vary, the teachers also have high expectations that their students become more culturally aware and respectful of other cultures. Although the teachers did not feel that they use the *National Standards* or the *Performance Guidelines* to plan culturally-intensive instruction and assessment, their instructional strategies and answers to the interview questions revealed that they are constantly planning performance-based instruction and assessment. Most of the teachers felt that even though culture is an integral part of foreign language study, they are only able to teach it less than 51% of the time due to the prioritization of other aspects of language study in the curriculum. The teachers were able to identify the products, practices, and perspectives that are represented in their instruction almost effortlessly, showing how much they do actually incorporate culture in their classroom.

The teachers revealed that they use a wide variety of authentic materials and resources in their classrooms. The results also showed that they are very particular when it comes to selecting the cultural resources and materials to be used in instruction,

concerning themselves with presenting an accurate portrayal of the target culture and making sure they use appropriate resources for their students. From these results, the researcher believes that the teachers use culture in their classrooms more than they may believe. The teachers also revealed that they use many cultural activities and instructional strategies to teach culture. Many of the strategies seem to be a natural part of the teachers' daily presentations, such as the use of idiomatic expressions and cultural responses to praise and reinforce students' progress. The researcher believes that this is another example of how the teachers may have an inaccurate idea of the amount of culture that they actually use in the classroom.

In regards to assessment practices, the teachers are able to assess their students' cultural knowledge both informally and formally. The subjects feel that their expectations influence their instruction and assessment of culture tremendously. They also believe that culture is essential to developing proficiency in Spanish. All of the subjects concluded their interviews by saying that culture and language must be taught together in order to yield high Spanish proficiency. In fact, eleven subjects said that culture is an important, if not the most important, aspect of foreign language study. The observations reinforced the researcher's belief that the teachers effectively use culture in their instruction, both explicitly and implicitly. Therefore, the researcher concluded that the subjects are aware of the importance of incorporating culture into their lessons. Furthermore, even though the subjects may be uncertain about their use of culture in their instruction, it is evident that they do an effective job of creating performance-based instruction and assessment practices that aid their students in development of Spanish proficiency.

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**Where in the World is Writing in Social Studies?**

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## Introduction

Reading, writing, and arithmetic have long been acknowledged as important in education, but arithmetic is the only "R" that is deemed worthy of an entire content course. Because of the powerful place writing can occupy in learning, the National Council for Social Studies argues that effective teaching and learning in social studies must include teaching students to communicate successfully with writing. Their standards explain, "The social studies program should be designed to increase the student's ability to use the writing process to classify, interpret, analyze, summarize, evaluate, and present information in well-reasoned ways that support better decision-making for both individuals and society" (National Council for Social Studies, 1994). The justification for this emphasis on writing in national standards is its potential impact on other skills and learning content.

## Review of Literature

Rote memorization may seem like an effective manner of retaining social studies content, but Cantrell, Fusaro, and Dougherty's (2000) study has shown that significant experiences of writing based on content aids in students' retention. Head's (1989) study also found that a detailed written analysis of reading assignments by students can lead to better comprehension, understanding of the material, and critical thinking. Writing and critical thinking are processes that strengthen each other and become vehicles of learning essential content (Giroux, 1978).

Social studies education strives to create effective citizens (The National Council for Social Studies, 1994). An effective citizen participates in government and thinks critically about economic and political choices. Research is strongly encouraging of the benefits of higher-order questioning on students' critical thinking skills (Kloss, 1988; Redfield & Rousseau, 1981) and instruction at a high level of Bloom's Taxonomy. The

National Council for Social Studies argues that teachers should ask, "questions [that] call for thoughtful examination of the content, not just retrieval of information from memory (The National Council for Social Studies, 1992).

Many teachers do not effectively plan their questioning when creating lessons, and they may fall into a trap of asking only knowledge-based questions that require memory recall rather than synthesis or analysis of content (Gilbert, 1992). Several studies suggest using Bloom's taxonomy as a guide to ensure challenging questions that foster critical thinking (Aviles, 1999; Gilbert, 1992).Writing assignments are essentially questions that students must answer in written form with the opportunity for revision and reflection. It is reasonable to consider that a good pedagogy of writing would incorporate higher-order thinking to improve comprehension, retention of content, and effective citizenship.

Despite the encouragement and advocating for writing within social studies, studies have found that writing is not emphasized in most high school classrooms, although teachers believe it is a vital skill (Applebee, Lehr, & Auten, 1981). Newmann (1988) found that standardized tests, curriculum pacing guides, and textbooks pressure teachers to cover material superficially, challenging the practicality of spending time teaching writing. Giroux (1978) argues that writing cannot be seen as a field separate from social studies, but "it is a process that can be used to teach students a subject" (p. 301).

The research shows writing as a critical tool for learning, and the standards mandate its place in the classroom. However, studies have shown a disconnect between the writing advocated by state and national standards, classroom practice, and results of student writing performance. Therefore, the focus of this study is on secondary social studies teachers' perceptions of the amount and type of writing assigned and the reflection of this in their lesson plans.

**Methodology**

To identify potential participants, a survey was distributed to all social studies teachers in 13 high schools in a medium sized school district in the Southeast. The survey contained several questions about demographics, the teachers' philosophy of teaching and their incorporation of writing in the classroom. From the responses to the surveys, six teachers were selected to provide a variety of schools and subjects to study.

A document analysis on each participant's assignments over the week of November

5th – 9th, 2007 was undertaken to determine how much writing and what level of writing they assigned. The level of writing was determined by examining the verbs of the questions and comparing them to Anderson and Krathwohl's (2001) revised Bloom's taxonomy. The data were compared about the level of writing assigned with the overall amount of writing assigned in these classrooms.

Finally, interviews were conducted with all the participants. The interview questions were constructed to allow teachers to explain more about their teaching style. Most of the questions focused on what place writing occupies in their classrooms, including how the teachers taught writing. Developing the interview questions was influenced by Patton (1990). The interviews were used to add a third data source to triangulate conclusions.

**Results and Conclusions**

In the initial survey, five participants reported students writing usually five to fifteen minutes per day in their classrooms, with one teacher specifying that his/her students write every single day. The sixth participant said that classroom time spent on writing varies, but most of student writing is accomplished at home. Four teachers cited lack of instructional time as the main reason that more class time is not devoted to writing. Three reported that they do not stress writing because students are only assessed by a multiple choice test, the End of Course Exam. It was suggested by each respondent that more class time would be spent on writing if the assessment for the North Carolina Standard Course of Study for social studies encouraged it. No participant reported teaching writing more than twice a month, and three respondents responded that they rarely spend class time on writing instruction. However, every teacher uses some form of writing as an assessment at some point during the semester, some more than others. A participant explained, "My personal philosophy is that students who can write about the material have a greater chance of understanding the material."

Each participant discussed time constraints during the individual interviews. However, two groups of participants emerged in that discussion. Group A (Teachers 1, 3, and 5) reported lack of time to grade writing as the biggest deterrent to assigning it. All three of these individuals stressed the importance of providing focused feedback on all assignments, but particularly on student writing. Teacher 3 said, "We are always fighting against time, the pacing guide, content, and class size. Giving feedback is very important

so that we do not reinforce bad skills… Students are shocked when you actually read their papers and provide comments instead of a check mark." Teacher 1 added that to help improve student writing, guiding them through the process with modeling, scaffolding, and thesis instruction is imperative.

Group B (Teachers 2, 4, and 6) discussed the time spent preparing for the End of Course Exam as their reason for neglecting writing in the classroom. They stressed that there is no relationship between writing ability and the End of Course exam, and there is too much content that students are accountable for to allow real time for writing. Teacher 2 said, "In U.S. History, you don't write because there is absolutely no point. They are tested on multiple choice questions." When asked about the relationship between writing and the state standard exam, Teacher 4 simply responded, "There is no relationship."

Group A contradicted Group B because they thought that writing is still an important enough skill to spend time teaching it, even if it is not specifically assessed by the state. They reported the value of writing clear and effective sentences. Teacher 5 said, "They [the students] may never use the content itself… but getting your ideas across is invaluable." Teachers 1, 3, and 5 also emphasized the connection between writing and understanding of content. Teacher 1 said, "A teacher who's really paying attention should use writing because the EOC is really dependent upon reading comprehension."

After thorough document analysis of writing assignments, Groups A and B emerged identically as above. Group A assigned writing that required a higher level of thinking, but actually assigned less writing (in number of assignments. It was not always clear how long each assignment was expected to be). There were six assignments total; two assignments asked for the fourth level (analyzing) of the revised Bloom's taxonomy and four assignments aligned with the fifth level (evaluating). For example, Teacher 1 assigned, "Why is the voter the most powerful citizen?" requiring students to evaluate and make an argument, or the fifth level of thinking. Teacher 3 assigned, "Are Americans living up to their civic and legal responsibilities as citizens? Why or why not?" requiring students to break apart their knowledge or responsibilities and consider the relationship, or the fourth level of thinking.

Group B actually assigned more writing, twelve assignments total, but their assignments required much lower levels of thinking. Three assignments required the first

level of thinking (recalling), five assessed at the second level of thinking (explaining), three at the third level of thinking (applying), and one at the fourth level of thinking (analyzing). For example, Teacher 2 elaborated on one assignment during an interview. Students are asked to take notes from a few different textbooks on a historical figure. They write those facts on colored strips of paper, corresponding to the textbook color. After they write down all of the information they can find, they sort the facts and glue them on a poster board. Then, being careful not to plagiarize, they re-write those facts to create an essay. There is no real question, but is essentially a biography of a historical figure, or an assignment on the first level of Bloom's.

From the data collected, it is clear that writing is occurring at some level and at moderate regularity in each of these social studies classrooms. Group B's writing assignments of recall and explanation of terms or processes found in the North Carolina Standard Course of Study fit with their perceptions of the End of Course exam dominating class time, but did not reflect higher-order thinking. Therefore, an immediate conclusion is that the beliefs of teachers in terms of student writing serves as a strong influence over the amount and type of writing that they assign.

In terms of the North Carolina Standard Course of Study, an interesting conundrum emerges from this data. The Standard Course of Study (2006) explicitly states that "This course goes beyond memorization of isolated facts to the development of higher level thinking skills, encouraging students to make historical assessments and evaluations" (online). However, students are tested with a timed multiple choice test, where most questions are at the lowest levels of thinking. Therefore, despite the emphasis on higher order thinking in the Standard Course of Study, this was mitigated in this study by the manner in which students were tested, mirroring the results from Friedman's (2006) study which described a similar phenomenon taking place in Virginia. This devaluing of higher-level thinking in the assessment of state standards also clearly impacted teachers' perceptions of writing and the amount they assigned, reflecting other previous studies (Newmann, 1988; The Neglected R, 2003).

Group A managed to spend less time on writing, but made their assignments powerful by encouraging students to engage with the content and move up the scale of Bloom's taxonomy. While the North Carolina Standard Course of Study assessment does not

measure its objective of skills such as higher order thinking and writing, they are still important skills to teach in social studies. The ability to articulate an argument or idea effectively is invaluable for students, particularly to fulfill their civic responsibilities as citizens. The data shows a constant struggle against time to teach students both skills and all of the content necessary to do well on the End of Course exam. Skills such as reading, critical thinking, and writing can significantly enhance student learning of the Standard Course of Study rather than taking time away from it.

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**The Use of Music in the K-12 Spanish Classroom**

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## Introduction

In today's increasingly global society, the ability to communicate with and understand people of other language groups is an invaluable skill that continues to gain importance. As foreign language learning gains priority across the country, special attention is being given to the vision expressed in the *Standards for Foreign Language Learning* of making foreign language learning a K-12 experience for all students (ACTFL, 1996). One of the challenges teachers of foreign languages face as they try to make this vision a reality is identifying appropriate ways of stimulating and maintaining student interest in learning new languages and cultures. In order to do so, teachers need effective pedagogical methods and materials that both interest and instruct their students.

## Review of Literature

Music is an important part of every culture that appeals, in its variety of styles and forms, to people of all ages. By employing music as a tool for foreign language learning, teachers can take advantage of the undeniable appeal of music, using it to help promote student interest and motivation in learning the target language (Heusinkveld, 2006; Willis & Mason, 1994; Failoni, 1993; Claerr & Gargan, 1984). The fact that music appeals to people of all ages and the many different ways it can be used make it an appropriate tool for teaching all levels and age groups (Mora, 2000; Willis & Mason, 1994; Murphey, 1992).

In addition to music's ability to increase student motivation, its close relationship with language makes the use of music in teaching a foreign language a natural and appropriate choice. Music and language both represent valuable modes of communication and share certain fundamental characteristics, including rhythm, melody, pitch, volume, and pauses (Mora, 2000). Purcell (1992) suggests that teachers can use

the commonalities between music and language to help students develop a sense of the rhythm and intonation patterns of the language. Additionally, research with infants has suggested a strong connection between music and language development, which seems to propose music as a natural tool for foreign language instruction, especially in the beginning stages of language acquisition (Mora, 2000).

Brain research has supported the role of music in eliminating threat and enriching the classroom environment (Jensen, 1998). Foreign language specialists emphasize the necessity of creating a non-threatening environment in order for successful language learning to take place and agree that music helps to do so (Mora, 2000; Claerr & Gargan, 1984). Music can also be used to either energize or calm a classroom environment, to reinforce language by aligning it with melody, and to help speed and strengthen neural connections, allowing for clearer, more efficient mental processing (Jensen, 1998).

Music offers a wide range of uses in the foreign language classroom. Mora (2000), Failoni (1993), and Abrate (1992) have signified its importance in addressing multiple intelligences and diverse learner needs. Additionally, music has long been recognized for its effectiveness as a memory aide. Thus, many foreign language teachers use songs to facilitate the memorization of vocabulary and grammatical concepts (Failoni, 1993; Claerr & Gargan, 1984). Eddy (2007) and Murphey (1992), however, argue that using songs for memorization alone will do little to produce communicative proficiency in a foreign language. Rather, language must be put into communicative contexts in which the language is meaningful (Curtain & Dahlberg, 2005; Shrum & Glisan, 2005). Culturally authentic songs, defined as those written by and for a culture, are identified as being particularly useful in creating meaningful, communicative contexts (Eddy, 2007; Heusinkveld, 2006; Abrate, 1992)

Foreign language educators are discovering more and more how music can contribute to contextually-based foreign language learning and the development of language proficiency in terms of both communication skills – listening comprehension, speaking, reading, and writing – and cultural knowledge. Trapp (1991) observes that songs allow students to hear how the target language flows together (p. 438), and Abrate (1992) notes the ability of songs, particularly culturally authentic songs, in "training the ear to discriminate rhythms and sounds in the target language" (p. 170). Songs can

additionally provide the basis for class discussions, oral presentations, and a variety of writing activities, thus presenting students with valuable, meaningful opportunities for practicing oral and written expression (Eddy, 2007; Willis & Mason, 1994; Abrate, 1992; Claerr & Gargan, 1984). Many researchers note the role that singing can play in improving students' accuracy of pronunciation in the target language, which helps to improve their oral communication skills (Heusinkveld, 2006; Kramer, 2001; Mora, 2000; Failoni, 1993; Claerr & Gargan, 1984). Others argue that music can be used to support the development of reading and writing skills, since song lyrics are in and of themselves a form of literary text (Failoni, 1993; Murphey, 1992; Claerr & Gargan, 1984). Music can also support the development of students' cultural knowledge. By incorporating culturally authentic songs into their classrooms, foreign language teachers can give students direct insight into some of the products of the target culture (songs) and the practices and perspectives that surround them, meanwhile fostering cross-cultural sensitivity (Heusinkveld, 2006).

Professionals in the field of foreign language education have identified music's potential for enhancing foreign language instruction, emphasizing the fact that most people enjoy music combined with the many pedagogical benefits that music offers for foreign language learning. The researcher of this study sought to determine how foreign language teachers are currently using music in their classrooms. While the literature reviewed supports the idea that music can be used to enhance the teaching of any foreign language, the researcher focused on its use in Spanish classrooms. The purpose of this study was to determine: 1) the role music plays in the K-12 Spanish language program and 2) instructional strategies used to incorporate music into the Spanish classroom to promote language development.

**Methodology**

The two-part study involved six elementary school, four middle school, and six high school Spanish teachers in a public school district located in central North Carolina. Data was collected during October 2007. The subjects were purposefully selected for their master teacher status or through recommendation of the researcher's advisor. After permission and consent forms were obtained, the researcher interviewed the sixteen Spanish teachers using a self-designed interview instrument. Interviews lasted

approximately thirty minutes and were audio recorded, when teacher consent was provided, for use as a post-interview reference tool. Questions focused on the role of music in the K-12 Spanish language program and instructional strategies used to incorporate music into the Spanish classroom to promote language development. The second part of the study involved classroom observations. The researcher observed six of the teachers interviewed (two each from elementary, middle, and high schools) in order to see how teachers incorporated music into their teaching in the ways that they discussed in the interview. More specifically, the researcher took note of instructional strategies that the teacher used involving music to support Spanish language development. Interview responses and observation notes were analyzed in order to determine how individual teachers incorporate music into their teaching and how teachers of different grade levels use music to support Spanish language development.

**Results and Conclusions**

The researcher analyzed the information collected during the interviews and observations and found that K-12 Spanish teachers agree that music plays a valuable role in foreign language learning and are currently using music in their classrooms for a variety of purposes. Both interviews and observations revealed that the most common purposes for using music are as a memory aide, a strategy for promoting students' interest in Spanish through their enjoyment of music, a bridge between language and culture, and an instructional tool for teaching particular language concepts. However, responses and observations also indicated that music is being used at all levels to support all aspects of Spanish language instruction, including speaking, listening, reading, writing, and cultural knowledge development. The researcher found that there is a tendency for music to be used more for students' enjoyment and to teach specific vocabulary and/or grammatical concepts at the elementary and middle school levels and more for its cultural contributions at the high school level, though these findings were certainly not exclusive. Many teachers also indicated the usefulness of music in appealing to diverse learner needs. While the researcher found music to be used more frequently and consistently at the elementary level, all teachers said that they use music at some point in their teaching, and the majority of teachers agreed that music on the whole is an effective and appropriate instructional tool and resource for all ages and levels.

Teachers of all levels reported that when they have used music in their classrooms, they have noted significant benefits of doing so, and their students generally have responded favorably. Many middle and high school teachers who do not currently use much music in their teaching expressed the desire to incorporate more music but explained that time constraints, both in the classroom and with regard to planning time, and the large amount of material they are expected to cover prevent them from doing so.

Overall, the researcher found that music is currently being used in K-12 Spanish classrooms for many of the reasons emphasized by other researchers on the same topic. While the researcher feels that music could be even more beneficial if incorporated more often, especially at the higher levels, she acknowledges that limited time is an enormous factor when teachers are planning their instruction, and as Kramer (2001) emphasizes, successful incorporation of music into foreign language teaching definitely takes time and planning. However, the researcher encourages foreign language teachers to continue to use music in their classrooms, to expand their use of music as they are able, and to share resources and successful ideas with one another, keeping in mind the many affective and pedagogical benefits that music can offer their students. By incorporating music into their teaching, foreign language teachers of all levels can combine their students' enjoyment of music with the many pedagogical benefits that music offers for foreign language learning to help promote both their students' interest in language learning and their proficiency in the language. As a result, increasing progress will be made towards the vision put forth in the *Standards for Foreign Language Learning* of making foreign language learning a K-12 experience for all students (ACTFL, 1996), which will in turn further prepare students to face an increasingly global workplace and society.

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# Using Assessments in the High School Social Studies Classroom

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## Introduction

If teacher assessments and student products are to be used as proof of student learning, it might be prudent to know what types of assessments are being created by teachers and how these assessments are being used in the classroom. In particular, this qualitative study focuses on how four social studies teachers are using assessments in their high school classrooms.

## Review of Literature

A major component of teaching is assessment and teachers *should* be using assessments to inform their instructional practices (Savage, 2003). Pahl (2003) identifies several indicators of good (formative) assessments: "measurement of classroom work over the long term, feedback to students on what they need to do to improve learning, …assessment [that is] fully integrated with the curriculum and instruction of student work in progress, …a variety of assessment methods, …and involvement of teachers, parents, and the community in a positive collaboration to measure student and school success" (p. 214). Portfolios, exhibitions, and student-maintained (as opposed to teacher-maintained) records give students skills in self-assessment, record keeping, organization, and reflection (Inger, 1993). These types of assessments meet students wherever they are and encourage all students to demonstrate improvement.

Currently there is widespread use of standardized testing because of the No Child Left Behind federal legislation that was passed in 2001. Proponents of standardized testing herald its value both as a means of ensuring that all students receive fair and equal instruction and as a means of forcing schools to have high standards. However, critics of standardized testing point out its many shortcomings (Popham, 2005; Valenzuela, 2005). Several studies have recently shown that standardized tests cause teachers to feel

pressured towards teaching content and skills specifically for the tests (Abrams, Pedulla, & Madaus, 2003; McMillan, Myran, & Workman, 1999; Grant, Derme-Insinna, Gradwell, Lauricella, Pullano, & Tzetzo, 2002). Because of the increased usage of standardized tests across the nation, content of a more narrow scope is being taught at a more basic level and is increasingly being assessed using multiple-choice format which means that students may have excellent test-taking skills while still not increasing their mastery of content. (Shepard, 1989, 37-39). If we are going to put so much weight and emphasis on these tests, isn't it important to make sure that we know what we are testing, why we are testing it, and exactly how the test scores are reported so that they are most useful for public consumption? The focus of this study is to explore the beliefs and practices of secondary social studies teachers in terms of assessment in the classroom.

**Methodology**

Four teacher volunteers were solicited for this study via email. Teachers submitted samples of their assessments, gave one forty-minute interview, and allowed between four and ten hours of observations. During the interviews each teacher was asked to explain their beliefs about assessments. Then, teachers were asked to identify the informal assessment techniques that they use most often. Additionally, field notes were taken about formal and informal assessments as they occurred in the classroom. Teacher beliefs were identified during the interviews and observations, and then compared to the assessment analysis outlined above.

**Figure 2: QUESTION & ACTIVITY ANALYSIS BY FORMAT**

| Format of Question | Number of Questions |
|---|---|
| Multiple Choice | 426 |
| True/False | 18 |
| Fill in the Blank | 90 |
| Matching | 47 |
| Diagram or Map | 5 |
| Illustrate | 3 |
| Short Answer | 17 |
| Essay | 29 |
| Presentation or Product | 5 |
| **TOTAL QUESTIONS** | **640*** |

**Results**

*Assessment Results.*

Participants were asked to provide copies of assessments they had already used during this school year. Forty-five individual assessments were voluntarily submitted to the researcher for the purpose of this study: ten tests, sixteen quizzes, ten

essay assignments, seven projects, one classwork illustration, and one daily assessment (graphic organizer).

The teachers in this study use a wide variety of question formats within their assessments. Four hundred twenty-six Multiple Choice questions constituted approximately sixty-six percent of all assessment questions used in this study. Fill in the Blank was the next most commonly used format for questions; ninety questions fell into this category. Matching was the third most used format at seven percent (forty-seven questions). Five percent appeared as Essay questions (twenty-nine questions). True/False and Short Answer questions were used almost equally as much, each representing approximately three percent of the total assessments (eighteen and seventeen questions, respectively). Only one percent of the assessments required students to Diagram/Map or create a Presentation/Product. Illustrations made up less than one percent of the total assessments, appearing only three times out of six hundred forty assessment questions (*see Figure 2)*.

**Figure 3: QUESTION & ACTIVITY ANALYSIS USING BLOOM'S REVISED TAXONOMY**

| Question Type | Description | No. of Questions |
|---|---|---|
| Remember | recognize, recall | 387 |
| Understand | interpret, compare, explain, summarize | 134 |
| Apply | use to complete a different task | 69 |
| Analyze | differentiate, organize, deconstruct | 62 |
| Evaluate | critique, judge, defend opinion | 11 |
| Create | generate, plan produce | 6 |
| **TOTAL QUESTIONS** | | **669** |

The researcher reviewed six hundred sixty-nine assessment questions using Bloom's Revised Taxonomy. Fifty-eight percent of the assessment questions (387 questions) were in the Remember category. The Understand category held 134 questions, representing twenty percent of the assessments. The Apply and Analyze categories were nearly equal in distribution with ten percent (69 questions) and nine percent (62 questions) respectively. The final three percent of the assessment questions came from the Evaluate (11 questions) and Create (6 questions) categories. Seventy-eight percent of

the assessment questions used in this study came from the lower two levels of Bloom's (*see Figure 3).*

*Interview & Observation Results—Formal Assessments.* All of the teachers in this study used tests and quizzes throughout the semester for each of their classes. They reported that a primary reason for using multiple choice questions is because it mimics the format of the EOCTs. Teachers also said that some formats (multiple choice, true/false, fill-in-the-blank, matching, and some graphic organizers) were faster to grade than other formats (short answer and essay). Two of the four teachers always include review questions as part of each test as a way to consistently prepare students for the EOCTs. One teacher makes use of open-notes homework quizzes as a way of checking appropriate homework completion. Another teacher gives fill-in-the-blank quizzes weekly as a way to review and reinforce major concepts. All three of the teachers who use quizzes report allowing students to improve their grades by either completing test corrections or by re-taking quizzes. Each of the teachers in this study also assigned projects at least once per year.

*Interview & Observation Results—Informal Assessments.* All four teachers used direct student questioning each time they were observed. Each of them also reported that they asked students questions as a way to check for recall or understanding during each instructional period. Two teachers used written informal assessments at the end of class, three to five times per week (almost daily). Each of these teachers said that they did not grade these assessments but that they used them to figure out which topics to review before moving on to new information. A final type of informal assessment that was observed was the use of large class review games before tests or major quizzes.

**Analysis & Implications**

The teachers in this study use a variety of assessments, some of which require students to use a full range of critical thinking skills. Informal assessments such as questioning and daily writing activities are the most common ways that teacher in this study seek to know whether students are "getting it" on a day-to-day basis. Most of these teachers used such information to tailor their instruction to the needs of the class, whether it was a conscious decision or not.

The teachers in this study all made reference to the use of multiple choice questions as good practice for taking EOCTs at the end of the year. This may account for the large number of multiple choice questions present within these assessments. Formal assessments are also used as a means of motivating students to make efforts towards learning the material. In classes where students are allowed to re-take or complete corrections on formal assessments, they serve as tools for student self-evaluation, student practice, and targeted review. Long-term activities that require students to show the process of their creation encourage critical thinking skills as part of the activity.

The data show that the assessments in this study were primarily constructed using Remember level questions. One reason why there may be more questions from the lower end of Bloom's and fewer at the higher end is that products and projects as well as responses to higher-order open-ended questions require more time and effort to create. They also require more time to evaluate than simple recall questions. Further, fact recall is easily tested but separate questions are necessary to evaluate a student's ability to remember more than one fact. Therefore, fewer questions of higher quality are to be expected. It is not fair to assume that the use of fewer higher-order questions implies that teachers are engaging students less frequently with higher-order thinking skills. Additionally, it is not fair to assume that the use of recall questions in assessments implies that teachers spend the majority of their time teaching their subject only at the lower-end of the thinking spectrum.

Though all of the teachers in this study claimed that critical thinking skills were some of the most important things that they teach, not all of the teachers incorporated higher-level questions as part of their assessments. Only one teacher consistently asked questions and assigned projects or essays that incorporated a variety of Bloom's levels. Ironically, he was also the only teacher who said he felt like he was just trying to "drill it into their heads" so they would remember the information for the end-of-course test. It is possible that these teachers use a greater variety of assessments than were voluntarily submitted for this study. It is also possible that they feel like they encourage critical thinking in ways that do not include assessments. However, one wonders how they can know that students are thinking critically if they do not assess it. These teachers did not seem to be aware of the disconnect between their beliefs and their assessment practices.

## Conclusion

The results of this qualitative study cannot be generalized because of its small sample size. Still, a few conclusions may be drawn that will at least have an impact on the future instructional practices of the researcher. First, the presence or absence of an end-of-course test has an effect on the type and format of classroom assessments chosen by the teacher. Second, results of informal assessments have a greater impact on teacher practice in the short-term than do results of formal assessments. Third, teachers believe that formal assessments can serve both to motivate students towards learning and as a means of engaging students in processes from which they will learn skills that may or may not be directly measured by the assessment itself. Finally, teacher practices and teacher beliefs do not always match. These results could be used to inform further research about teacher use of assessments in the classroom, specifically for observing if and how North Carolina's new policy of using student portfolios has any impact on the instructional practices of its teachers.

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**The Calculator Conundrum: Effect of Calculator Use on Student Knowledge**

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## Introduction

The National Council of Teachers for Mathematics [NCTM] has called for a greater focus on teaching mathematics for understanding in order to develop students' mathematical thinking abilities (1989, 2000). While teaching mathematics for understanding has been the center of mathematics education reforms for several years, much of classroom practice is still based on procedural knowledge. Mathematics teachers have different perspectives about the effectiveness of conceptual teaching in their classroom. Some teachers believe that teaching students the "how" of subject matter is enough to get them to understand the "why." This difference in emphasis can be described as conceptual vs. procedural knowledge. With the introduction of the graphing calculator, a new type of knowledge, calculational knowledge has entered the classroom, as teachers, for the sake of time, ease, effort, or other reason, jump to teaching the calculator skills before teaching the basic concepts. History has shown a pendulum-like pattern of educational pedagogy – from "back to basics" theory to more progressive teaching for understanding theory. Some may argue that it is time for a healthy medium. This study will elaborate on how conceptual, procedural, and calculational knowledge influence students' abilities in the Algebra II classroom, and how teachers' methodologies influence these competences.

## Review of Literature

Conceptual and procedural knowledge were not specifically identified until the 1986 constructivist research of Hiebert and Lefevre. These researchers defined conceptual knowledge as knowledge that is "rich in relationships" and a "connected web of knowledge" (p.3). Hiebert and Lefevre define procedural knowledge as "rules or procedures for solving mathematical problems" (1986, p.7). This form of knowledge is

characterized by step-by-step, sequentially ordered instructions. According to Hiebert & Lefevre, conceptual knowledge "must be learned meaningfully" (1986, p.8), while procedural knowledge can be learned through rote learning.

With the introduction of technology into the classroom, calculational knowledge is one of these types that "lies in the intersection" of conceptual and procedural understanding (Hiebert & Lefevre, 1986), while still not truly included in either. Research has shown that technology in the classroom has changed the relationship between procedural and conceptual knowledge (Kaput, 1992). In the classroom, calculators "have become commonplace" (Ellington, 2003, p. 434), and the new debate is focused on how to maximize student benefit for its use. Despite these findings, the majority of educators believe that calculators should not be used until students have learned the mathematics by hand, according to a 1999 study by Ballheim (as cited by Ellington, 2003). Nevertheless, the introduction of the graphing calculator into the classroom created an "increase in the level of technological sophistication of the mathematics education population," allowing mathematics to progress farther at the high school level than ever before (Ellington, 2003, p. 435).

Conceptual, procedural, and calculational knowledge collectively form a student's competence about mathematics. This investigation strives to better understand the influence of calculator use on different types of student knowledge and how teaching methodologies should change to adjust to this influence.

**Methodology**

This study was conducted in four Algebra II classes in two public high schools in Forsyth County, NC. The first high school is a medium-sized, suburban school, with both Algebra II and Algebra II Honors classes offered, and 85.9% of students passing the End of Course Test yearly. The second high school is a large-sized, rural school, offering both Algebra II and Algebra II Honors classes, with 65.1% of the students passing the End of Course Test yearly. Of the 100 students asked to anonymously participate, 87 surveys were returned from both schools. Students were asked to complete a paper and pencil quiz to measure their knowledge of systems of equations. After this data was analyzed for different types of knowledge (conceptual, procedural, and calculational), the

teachers of the students were interviewed for further information on their teaching philosophy and methodology.

**Results and Conclusions**

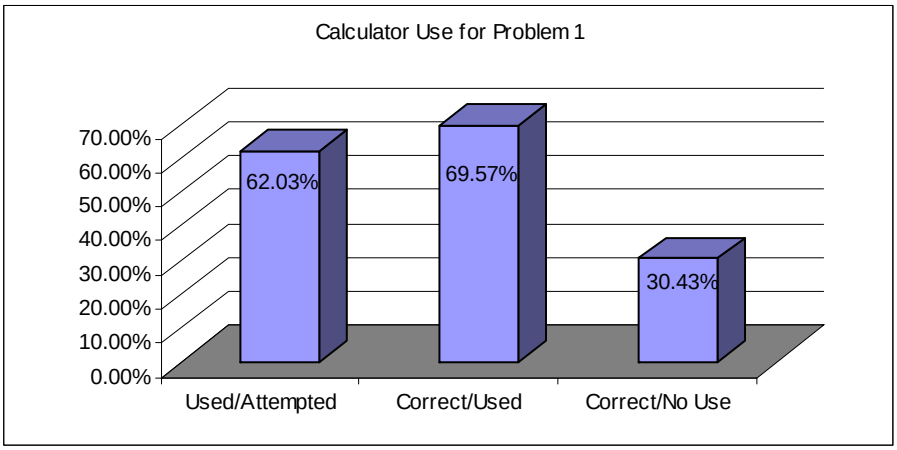
Each of the 86 students participated on the three-question survey, and their were tabulated in a data sheet to record the method they used to solve each of the three problems. All students fell into the following categories, or a combination of these categories: Matrix, Graphing, Table, Substitution, Elimination, and Guess and Check. Students were asked to record whether or not they used the calculator to solve each problem, other than basic arithmetic (adding, subtracting, multiplying and dividing), and what functions of the calculator they used for each problem. Of the problems attempted, 48.3% of the answers were correct.

For the individual problems, students were most successful on problem 1, which is noteworthy, since it had the widest variety of solution methods possible. Below is a table of students' methods used for this problem, and the percentage of students using that method.

Table 1. Methods Used in Problem One

| | Matrix | Graphing | Elimination | Substitution | Comb: E/S | Comb: G/S |
|---|---|---|---|---|---|---|
| Total Used: | 39 | 6 | 6 | 12 | 14 | 2 |
| Percentage Used/Attempted: | 49.37 | 7.59 | 7.59 | 15.19 | 17.72 | 2.53 |

Figure 1. Calculator Use on Problem One



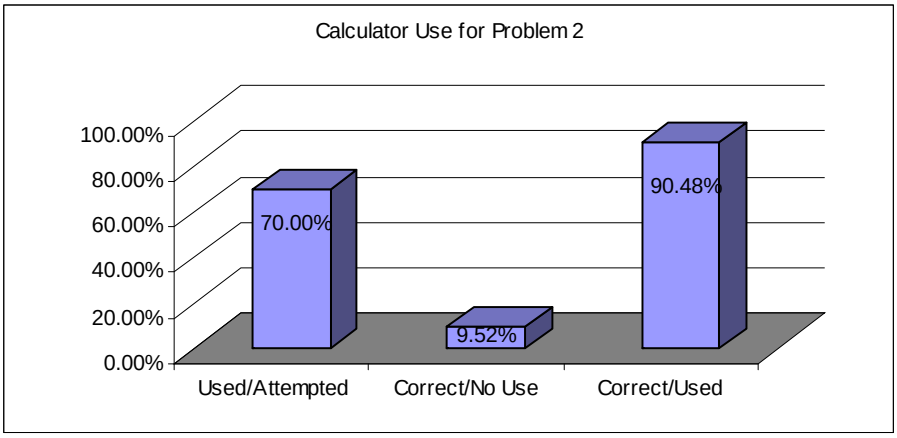
For problem 2, only 40 out of 86 students who participated in the study attempted this problem. Below is a breakdown of students' methodology for problem two.

Table 2: Methods Used in Problem Two

| | Matrix | Graphing | Table | Elimination | Substitution | Guess & Check | Comb G/T |
|---|---|---|---|---|---|---|---|
| Total Used: | 3 | 20 | 2 | 1 | 3 | 9 | 2 |
| Percentage used/Attempted: | 7.50 | 50.00 | 5.00 | 2.50 | 7.50 | 22.50 | 5.00 |

The easiest way to compute this answer was to look at the intersection of the two lines and 80% of the students who attempted to use graphing to solve correctly found an answer. Looking at calculator use, students in problem two used the calculator to find the correct answer more than in any other problem.

Figure 2. Calculator Use on Problem Two



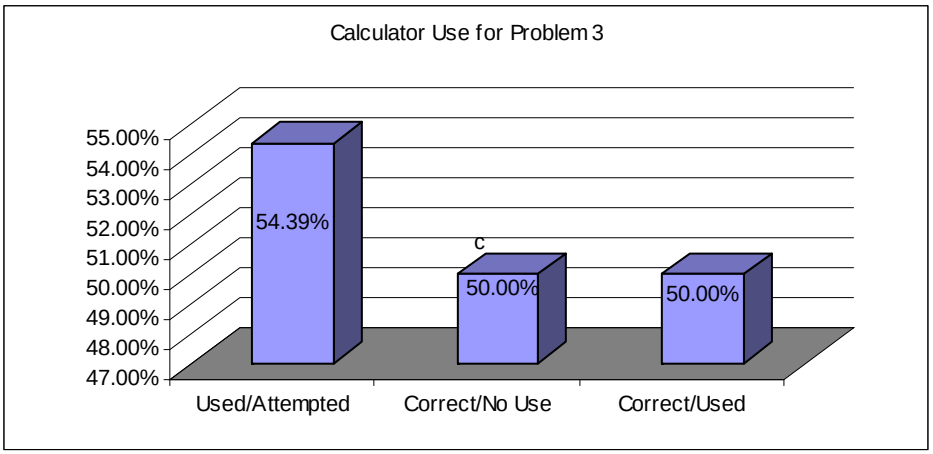

For the third problem a wide variety of methods were used for this problem, similar to problem 1. Below is a table representing the methodologies of students on problem three.

Table 4: Methods Used in Problem Three

| | Matrix | Graphing | Elimination | Substitution | Comb M/G | Comb E/S | Comb G/S |
|---|---|---|---|---|---|---|---|
| Total Used: | 18 | 8 | 12 | 9 | 4 | 5 | 1 |
| Percentage Used/Attempted: | 31.58 | 14.04 | 21.05 | 15.79 | 7.02 | 8.77 | 1.75 |

Focusing on calculator use for this third problem, 31 students out of the 57 used the calculator in some form to attempt to solve the problem.

Figure 3. Calculator Use on Problem Three




Other interesting trends found were from students who successfully answered all questions correctly. Five students found the correct answer for all three problems. Of those five students, four of them used the calculator for all three problems. Generally, students missed problems not from using wrong methods, but for not attempting any methods.

The three problems were chosen specifically to allow students to display their flexibility of method use. Some students recognized this flexibility, such as student Number 54, who stated that systems of equations were important to learn, "so you can solve a variety of data problems." Understanding why systems of equations are important helps to develop conceptual knowledge about how to solve them, unlike the use of the Guess & Check method, which shows little developed conceptual knowledge. When interviewing the teachers, one teacher believed she relied heavily on procedural knowledge, "giving students many different ways to solve a problem." The other teacher believed she reinforced conceptual knowledge by teaching calculational knowledge. Because Algebra II has an end of course test and students are allowed to use graphing calculators, both teachers agreed that they taught calculational knowledge heavily to assist students on the exam.

More interestingly, students who had a highly developed calculational knowledge, here defined as using the calculator for multiple methods to solve the three problems

correctly, also displayed a highly developed conceptual knowledge. Students who could use matrices, graphing, and substitution had greater success on completing all problems, or attempting all problems in general. This suggests that the use of the calculator does not hinder, but, in fact, benefits students' abilities to complete and understand problems. Second, there is evidence that when a good calculational knowledge was not sufficient to be successful on all types of problems. Students like number 77 displayed only one method of solving, using matrices, for all three problems, but only correctly solved problem 1. The student's only explanation for the lack of other methods was, "it was the way I was taught to do it."

In sum, students with a deep conceptual knowledge performed better on the three-question survey than students with a basic procedural knowledge. Also, students with a good calculational knowledge, but lacking in other types of knowledge did poorly on questions that were not suited to their methodology. These understandings came out of both the data analysis as well as the teacher comments. The results of this study contribute to the growing literature based on conceptual and procedural knowledge, and their role in the classroom.

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**How Students Engage with Technology in the Social Studies Classroom**

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## Introduction

With the pervasive impact of technology on American society in the 21st century, and more specifically, on teen culture in the 21st century, it really should come as no surprise that some educators began to think about combining subject matter with this technology that was already a large part of so many teenagers' lives. A 2003 study produced by the National Center for Education Statistics found ninety three percent of all public school instructional rooms have access to the Internet (National Center for Education Statistics, 2003). The apparent prevalence of technology meant that availability was no longer an excuse for lack of integration of technology in education.

The State of North Carolina developed a standard course of study centered on computer/technology skills. Recognizing that technology is undergoing rapid change with new advancements appearing constantly, the curriculum is aimed at preparing students to be "active, lifelong learners in a technology intensive environment," (North Carolina Standard Course of Study, 2007). There are three K-12 competency goals for the computer skills curriculum that include the need to understand important issues of a technology based society, the ability to demonstrate knowledge and skills with the use of computers and other technologies and the ability to use a variety of technologies to access, analyze, interpret, synthesize, apply and communicate information. The fact that students must demonstrate at least a basic mastery of computer skills in order to graduate reflects the growing significance of technology in education.

## Review of Literature

Although the field of research of technology and social studies is relatively new, benefits of integrating technology unique to the subject matter have already been discovered. Van Hover, Swan and Berson address one of these distinct opportunities for

using Internet-based digital primary source images, with their emphasis on historical thinking and the ways digital images can facilitate these skills (van Hover, et al., 2004). They advocate the use of digital images to foster historical thinking and argue that images not only constitute an important component of primary digital sources but also provide important connections to the community and promote inquiry in social studies (van Hover, 2004). Several research studies have examined various aspects of integrating technology into the social studies curriculum and their effects.

Mason, et. al (2000) found using online resources can help teaching and learning social studies content and enhance the subject matter. Results from studies of specific ways that social studies teachers use technology have been less definitive. VanFossen's (1999-2000) "Analysis of the use of the Internet and World Wide Web by secondary social studies teachers in Indiana," revealed that many teachers were "low frequency" Internet users. VanFossen argues that of those who did use the Internet, few integrated it in a way that fostered higher order thinking and instead the Internet was used mainly as "glorified information gathering" (Vanfossen, 1999, p. 104). Thus, instead of being used as an enhancement or enriching supplement as Mason, et. al describes, the Internet is used for routine, rudimentary tasks that could easily be completed without technology (Friedman, 2007). Whitworth and Berson came to a similar conclusion when they reviewed the social studies and technology literature from 1996 to 2001 and discovered "Internet use and accessing information on the Web was the most common use of technology in social studies," causing "a concern that technology is simply a more sophisticated and expensive way to meet the same learning outcomes as produced by more traditional methods," (Whitworth & Berson, 2003).

Some research in the field has been designed towards examining effective integration and the student response to the integration of technology in social studies. Students have different perceptions of the value of the Internet being used in a social studies classroom as Milson concluded in his 2005 case study of sixth graders using the web based inquiry approach (Milson, 2005). Tally and Goldenberg (2005) surveyed students in social studies classes with teachers trained to use digitized primary sources. Students consistently cited three things that made their new class (with a teacher trained to use digitized primary sources) different from previous social studies classes including

using technology to learn in new ways, working with primary sources to gain deeper understanding, and learning individually and in small groups (Tally & Goldenberg, 2005). Thus student engagement seems to be a key component of effectiveness when looking at the integration of technology and social studies content. This study will ask what are students doing (how do they interact with material and engage with the technological medium) when teachers use computer technology in different ways in the social studies classroom?

**Methodology**

In order to identify potential participants, an email notification explaining the study and requesting participation was sent to all social studies teachers in the Winston-Salem/Forsyth County School District in Winston-Salem, North Carolina. Teachers willing to participate were asked to respond to the study coordinator. Seven teachers, from four different high schools in the district, responded and all seven teachers were invited to participate in the study. Observation times were arranged between the teacher and the study coordinator. The classes of participating teachers were observed using Erickson's observation method, with the hopes that the reader will be able to "experience vicariously the setting that is described" (Erickson, 1986, p. 145). The researcher used the same observation checklist for each observation to ensure that regardless of the type of activity, the same types of occurrences were being charted. Field notes (qualitative research materials gathered, recorded and compiled during the course of study) were also kept by the researcher during each observation occasion (Gay, 2006). Each teacher was observed between one and three times and at least one of these observations included a lesson that integrated computer technology. The researcher was a non-participant observer in each scenario, thus was "not directly involved in the situation being observed" and did "not interact or participate in the life of the setting being studied" (Gay, 2006, p. 414).

In addition to the observations, each participating teacher was interviewed using Patton's standardized open-ended interview method (Patton, 1990). Each teacher was asked the same set of questions, in the same sequence that was carefully pre-arranged by the researcher. The researcher did ask follow up questions when a more elaborate response was wanted, but tried to ask the list of eight questions that were pre-determined.

Only one interview was recorded with an audio device, the other interviews were recorded with extensive notes taken by the researcher.

The final piece of data collection involved a student questionnaire (a written collection of self-report questions to be answered by a selected group of research participants), distributed to the students in four of the participating teachers' classrooms (Gay, 2006). The questionnaire consisted of nine multiple choice questions and two short answer questions. Students had the option of choosing not to complete the questionnaire, and it was completed during class time with the permission of the participating teacher. Questionnaire results were tabulated individually by question and kept separated by participating teacher for comparison purposes before being compiled together.

**Results and Conclusions**

The interviews with teachers, analysis of student questionnaire responses and reflection on field observations concluded three slightly distinct, yet all inter-related themes regarding what is happening when technology is integrated in the social studies classroom. The first theme suggests supplementing teacher-centered instruction with technology is advantageous for student engagement. Observations of teacher-centered instruction supplemented with technology typically involved a teacher using a PowerPoint presentation to aid in lecture, or using a laptop to project a documentary or images from the Internet. This type of teacher-centered use of technology was found to be more common both in observations and also as reported in teacher interviews and student questionnaire results. The second trend discovered through the study proves that the effectiveness and student engagement of a student-centered activity that integrates technology is highly dependent upon how well the activity is monitored and structured. Observations of different classes performing various student-centered tasks on computers suggested student engagement and time on task was closely linked to the structure of the activity and how much the teacher monitored students during class. A third theme, made apparent through the study, is less conclusive. It suggests technology is merely a tool for teachers to use, similar to any other resource, and it does not guarantee better student engagement or results. Observations of the same class with technology rich lessons and lessons without technology suggested that technology may not always impact student engagement. All three of these findings suggest the impact of the integration of computer

technology in the social studies classroom on student engagement depends on a variety of factors. How the technology was being used had a large impact on the associated student engagement. In teacher-centered lessons where technology was used as method to attract attention and garner excitement, as well as provide visual references, the student engagement varied from student to student. It seems some students respond well to this type of instruction, while others prefer direct, hands-on interaction with the material. Students were nearly evenly divided on their preferences to questionnaire questions asking whether they prefer reading an article online versus in a textbook; prefer when their teacher lectures using the overhead projector versus using the Internet in front of the class; and prefer viewing historical images on the Internet versus viewing historical images in a PowerPoint presentation created by their teacher. This reiterates the idea that all students learn differently and thus the response to the integration of computer technology will likely vary from student to student.

**Implications for Practice**

The results from this research study support the need to diversify pedagogy and attempt to make content appeal to students various learning styles. Since it is evident from this and previous studies that the inclusion of computer technology-whether in a teacher centered or student centered setting *can* increase student engagement for some students, it is important for teachers to use the technology tools available to them from time to time. Technology may be a resource that engages and appeals to some students, however it is important to expand lessons and the resources used to reach all students. When technology is integrated, it is essential that close attention is paid to *how* it is being used. The technology itself, as well as the activity, needs to be scaffolded for students and students need to be closely monitored. Teachers cannot assume that students know how to use the technology, while at the same time; teachers shouldn't use students' inexperience with technology as an excuse for avoiding it. Technology can be a great resource for increasing student engagement, however if it is over-used or used inappropriately, then it can become ineffective. Teachers must stop and reflect on the effectiveness of the resources they use and scaffold instruction for their students.

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# I Want My MTV: The Importance of Pop Culture References Within Secondary English Classes

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One of the most common dilemmas that high school teachers in general and, more specifically, English teachers run into is the somewhat seemingly outdated nature of much of their curriculum. Most students find it hard to believe that anything written by Sophocles or any other "dead white man" can still relate to their 21st century lives. Teachers are constantly struggling therefore to find new ways to engage their students and make all the literature relevant, as well as interesting. Mayberry (2004) suggests that "by starting with and using cultural items with which students are familiar and can relate, student interest in studying the subject may increase…" (p. 3. See also Cheung, 2001.). In other words, incorporating aspects of their daily lives into their classroom lives may increase their interest in what the "dead white men" have to say. The question this study seeks to answer is, does the use of popular culture references have an effect on student participation and engagement?

## Review of Literature

Studies have shown that the use of popular culture, be it film, music, or current events, has had a positive effect on the comprehension and performance of students within those classrooms, as well as assisting students in connecting with text that might otherwise seem outdated and unimportant in their modern world (Hobbs, 1998 and Mahiri, 1996). "If you can find something that interests your students and relate it in some manner to your subject matter, it is likely that you will keep their interest and attention longer" (Mayberry, 2004, p. 19). With this in mind, it would seem only reasonable that in order to help our students connect with the literature they need to read and understand in order to survive and participate in higher academic scholarship, we, the teachers, should take advantage of the things they already know about and are passionate

about. Morrell (2000) observed this very thing in his own English classroom; when he assigned extensive pieces of literature, the students became uncomfortable, nervous, or simply shut down and refused to participate in discussion (p. 3). Morrell (2000) suggests that by connecting works with pop culture, links between the old world and today are clear (p. 5). In fact, the similarities between *Cyrano de Bergerac* and the romantic-comedies they watch today are overwhelming. More importantly, however, students love to talk about pop culture because they are passionate about their music, television, and movies and they will debate and discuss those topics for hours. This is the enthusiasm and interest we want them to exhibit in *The Great Gatsby*. This is not to say that the use of popular culture within the classroom should ever come before the use of the texts themselves, but rather as an extension. "There are ways to supplement textual material [with popular culture] to help bring to life the words on the printed page" (Martinez, 1994, p. 264. See also Madden, 1972.).

**Methodology**

The 40-hour nonparticipant observation study took place within the classrooms of four English teachers at a high school in the Winston-Salem Forsyth County School District who volunteered to assist with the study. Descriptive observation field notes were taken to identify the pop culture references made and in what context they were made. This included any reference to songs, television shows, current events, other popular literature, slang, newer technology, and movies. Basically, any non-academic reference made that was meant to further the understanding of and increase student engagement in the subject being discussed was recorded. Tallies were kept of student participation, focusing specifically on number and quality of questions/statements posed by students. The questions and statements were broken down into two categories: simple recall and complex deeper understanding. Simple recall refers only to the recollection of information, primarily one-word responses to the questions like who, what, where, when, how. Complex deeper understanding refers to questions and statements that require the students to be more elaborative and tend to include personal response to the material. Each teacher was observed ten times in order to assure equivalency and avoid bias.

**Results**

As a result of the 40 hours of observation of the four high school teachers across 13 weeks, I recorded 1,016 tallies of types of student responses. Table 1 illustrates these responses broken down by the type of response and the individual teachers.

**Table 1.** ***Percentage of Responses Classified by Response Type and Teacher***

| *TEACHER* | *SIMPLE* | *COMPLEX* | *TOTAL* |
|---|---|---|---|
| A | 74.0% (316) | 26.0% (111) | 100.0% (427) |
| B | 95.7% (133) | 4.3% (6) | 100.0% (139) |
| C | 88.6% (225) | 11.4% (29) | 100.0% (254) |
| D | 66.8% (131) | 33.2% (65) | 100.0% (196) |
| ALL | 79.2% (805) | 20.8% (211) | 100.0% (1016) |

*NOTE: Numbers in parentheses indicate responses of each type.*

The total number of responses across the teachers during the observation ranged from 139 (Teacher B) to 427 (Teacher A). These figures suggest that the four teachers varied in the amount of student responses they elicited. Table 1 also shows that the four teachers differed in the distribution between simple and complex responses. The percentages range from approximately two-thirds (Teacher D) to almost 96% (Teacher B), with close to 80.0% of all responses classified as simple. This suggests that all four teachers elicit substantially more simple responses from their students.

Table 2 focuses on the individual teachers' usage of popular culture references, showing that there is a wide range of variance among the teachers, with Teacher C only using one pop culture reference and Teacher D using 38.

Table 2. Pop Culture References Classified by Teacher

| *TEACHER* | **POP CULTURE REFERENCES** |
|---|---|
| A | 13.3% (8) |
| B | 22.0% (13) |
| C | 1.7% (1) |
| D | 64.4% (38) |
| ALL | 100.0% (60) |

*NOTE: Percentages are of the total tallied pop culture references across all teachers.*

All four teachers spent a great deal of class time reactivating prior knowledge through simple factual review. The typical questions only required one or two word answers based entirely on factual information (who, what, where, when, how) with no

elaboration. In contrast to the standard and honors classes, however, there was a far larger amount of complex thinking in Teacher A's AP classes and Teacher D's seminar classes. Although class still began with simple factual recall, the students then elaborated on their answers, often including personal response or interpretation.

In the classrooms, I observed identifiable classroom management and engagement issues, although instances were far more prevalent in some classrooms. Teacher A had very few classroom management issues within her classes, so little class time was lost correcting those issues. She did, however, have some minor engagement issues. Her classes overall seemed to be engaged, however, as evidenced by the total number of student responses shown in Table 1. While Teacher B was reviewing, the students would talk loudly over her, draw in their notebooks, put their heads down and sleep, or openly text message on their cell phones. This led Teacher B to stop reviewing and begin correcting the behavior. Overall, Teacher B had the least engaged classrooms of the four teachers. Teacher C struggled with engagement in her honors class, mainly due to the presence of two incredibly talkative and distracting students. While she attempted to teach, the students would interject their own comments, causing Teacher C to stop teaching while the class responded with laughter. While these students took Teacher C's attention away from the lesson, other students would put their heads down on their desk or text message on their phones. In her AP classes, however, Teacher C had no classroom management issues and only the occasional student side conversations or heads down on desks. There were no observed classroom management or engagement problems in Teacher D's classes. When Teacher D wrote notes on the board, every student wrote the notes in his or her notebook. It would seem that he had the most engaged classes.

Most of Teacher A's popular culture references seemed to be made to strengthen student comprehension. For example, in her AP classes, while studying *The Grapes of Wrath*, Teacher A brought up the movie *Crash* as an example of racial tension, stereotyping, and social perspective in comparison to the treatment of the Okies within the novel. The majority of the students had seen the movie and were able to use that example as a foundation for talking points on the novel. Although Teacher B had more pop culture references than Teachers A and C, Teacher B's references were primarily side comments irrelevant to the material being taught. A relevant example is when

reading a short story, the students encountered the word "mortician," which none of them were familiar with. Instead of giving the dictionary definition, Teacher B brought up the television show *CSI* and explained that the person who does the autopsies is a mortician. Overall, it would appear that Teacher B's use of pop culture references had less to do with comprehension of subject matter and more to do with her personality. Teacher C's one pop culture reference was used in connection with an introductory lesson on ballads in her AP classes. In order to explain the subject matter ballads were written about, Teacher C mentioned tabloids stories. This sparked a short discussion of sample stories from the students and example ballads from the teacher. Teacher D made frequent and avid use of pop culture references in connection with the subject matter being discussed. His references appeared to be used for the sole purpose of assisting the students with comprehension. He even had a handout on the various archetypes present within Joseph Campbell's "Hero's Journey" concept with pop culture examples for each. To explain the "Father-Son Conflict" archetype and the "Mentor-Pupil Relationship" archetype, Teacher D referenced the *Star Wars* trilogy, pointing out that Luke Skywalker and Darth Vader obviously fulfilled the former archetype, while the students pointed out that Luke and Obi Wan, and Luke and Yoda fulfilled the latter. Overall, it would appear that Teacher D's pop culture references may have served as reinforcement of the subject matter, as well as further comprehensive connections for his students.

**Discussion**

I observed far more simple recall student responses and teacher questions than complex ones. One explanation for this is the fact that simple recall teacher questions and student responses are easier to create and answer and therefore more likely to generate immediate class discussion. It's also possible, especially in the less engaged classes, that the teachers were trying to keep things simple in an attempt to rein the classes back in.

I also expected to see far more popular culture reference usage in all the classes, regardless of grade or achievement level. I did not think this was an approach unique to my own classroom, but my observations show that three of the four teachers do not make use of references as much as I do. Teacher D used 97% of his pop culture references in his seminar classes, classes that also produced 94% of his complex student responses. This suggests that there may be a pattern between pop culture references and complex

thinking. This teacher also seemed to have the most engaged classes overall, again suggesting a possible connection between pop culture reference usage and engagement. On the contrary, however, Teacher B, who had the second largest percentage of pop culture reference usage had the least engaged classes as discussed in the results section. This suggests that it is possible that a teacher could incorporate a large number of pop culture references in a class with little to no effect. One interpretation is that the way a teacher uses the references directly affects their impact on students. Overall the extent a teacher uses pop culture references to connect with student experience may determine how much and what type of response they elicit.

No study is free from limitations. There is no way to demonstrate that my data is completely accurate. I only observed four teachers and their individual classes, therefore it is unclear what would have been observed had the sample been larger; it's possible a different group of students would have responded differently, thus creating different results. I also only observed 10 hours for each teacher and not consecutively, so it is difficult to determine solid patterns, and I was unable to observe all the teachers' classes due to scheduling conflicts. My results are understandably inconclusive.

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**Cooperation, Collaboration, and Classroom Climate: Small Group Learning and its Relationship to Student Participation and Involvement in the Classroom**

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## Introduction

Teachers use a number of different methods in the classroom to engage students in their content and encourage participation. The primary goal of many teachers is often the same: help their students become invested in the material so that they are better equipped to understand and apply it. An effective teacher is often successful simply because of his or her personality or particular skills as a person, but certain pedagogical methods still seem to be more effective than others. The purpose of this research study was to examine the use of small group learning in the secondary English classroom and investigate its relationship to student participation and involvement. Vygotsky (1978) proposes that learning necessitates "a specific social nature…children grow into the intellectual life of those around them" (Milner, 2003, p. 26). Teachers use a variety of methods to engage their students in discussion and involve them in the content and material; I am interested in understanding whether teachers who frequently use small groups or cooperative learning in their classroom tend to have more student involvement as well as having students who participate more in classroom discussion and are more involved and invested in the content and material.

## Review of Related Literature

Without interacting with others, according to Parker and Goodkin (1978), "there are no alternative view points to incorporate into our own thinking" and therefore there is "no intellectual development" (p.38). This need for alternative viewpoints is the basis for small-group and cooperative learning; however, extensive research has been done to determine if working with peers is the preferred method for both developing intellect and further engaging students in the classroom. Different types of studies have been done

regarding small group learning in the classroom, resulting in a variety of conclusions about the effectiveness or value of cooperative learning in a secondary classroom. Nystrand, Gamoran, and Heck (1993) initially determined that small group learning caused lower achievement, but further investigation suggested that more autonomous group work did in fact allow for higher achievement in the classroom. This particular study focused on literature instruction in the ninth grade, and concluded that teachers needed to provide students with a purpose and focus to make the group work effective and beneficial (Nystrand et al., 1993, p. 20). Perhaps this is because, as Cohen's (1994) review of research has determined, "advantages that can theoretically be obtained from cooperative learning can actually be obtained only under certain conditions" regarding the structure and types of interactions the students take part in (p. 2). Group work is varied, and as such can be implemented in a variety of ways in the classroom. Gillies (2006) focused on specific cooperative learning groups, small groups that engaged the teacher as a facilitator and small groups working over a four-six week unit in a high school. While Gillies (2006) specifically looked at verbal behavior, the results of her study are important for understanding how cooperative learning functions in the classroom; at the end of the study, "students demonstrated high levels of participation as they interacted in an environment that actively encouraged their contributions and validated their efforts" (Gillies, 2006, p. 284) in the cooperative-learning teacher-student engaged small groups. Group work and cooperative learning is different from paired student work, although paired work is still a form of group work. Krol, Janssen, Veenman, and van der Linden (2004) discovered that while completed a language task, students in paired work "were clearly dependent on one another and needed to reach joint agreement" to complete a task (p.231). Overall, their study was relatively inconclusive in determining the effectiveness of paired learning, which suggests a further need for investigation of this type of student-centered learning in the classroom (Krol et al., 2004, p. 234). Teachers themselves are divided on the method of small-group learning, and its place in the classroom. Beard and Danielson (1993) examined teacher opinions on using a student-centered approach to teaching, and its effectiveness for both teachers and students in the classroom. "Student-centered" teaching was not defined as a specific method, though teachers suggested that their classrooms "[became] organized much more

on directed group work…with the students directing the choice of discussion, exploring the world outside the classroom through literature" (p. 6). However, the teachers also expressed the desire and the importance they felt to share their own ideas with their students (Beard and Danielson, 1993, p. 5). The research on small group work is inconclusive and varied, but relatively similar in its trends; cooperative learning tends to increase participation and cooperation among students and facilitate dialogue between students and teachers when used for specific structures and purposes. However, further investigation is necessary to examine the relationship between the use of cooperative learning and student participation and involvement in the classroom.

**Methodology**

The study I conducted was a qualitative research study. The primary method of research for this study was descriptive observations. This study involved the observation of four high school English teachers and the students in their classes in East Forsyth High School, a public school of Winston-Salem/Forsyth County School District in North Carolina. I observed each teacher and their respective classes and students over the course of a ten week semester. Each teacher was observed for approximately ten hours.

Markers to indicate "small group learning" included student chosen or teacher assigned groups of cooperative learning or other groups in which students are working with one another rather than engaged in whole class discussion, teacher-centered lecture, or working individually. Groups had to be five or fewer students. Cooperative learning is considered group learning in which students are engaging in "multidirectional" dialogue or discussion that engages multiple students and the teacher rather than between just teacher and student or two students, etc (Gillies 2006). Markers to indicate "student involvement" included relevant unprompted or encouraged responses to the teacher or other students, extended answers, student questions about material, lack of teacher reprimands, lack of side conversations, and percentage of the class responding to teacher. These markers were observed and indicated through a tallied checklist for each class period, and compared for those classes in which small group learning was used frequently versus those classes in which it was not often used. The amount of time that discussion occurred during the class period was also noted through descriptive observations and research notes; if a class was testing or students were working individually, I indicated

this in my notes because it obviously minimized the chance that discussion would take place in the classroom during that time. If discussion only occurred for a portion of the class period, the time period for the responses marked was indicated for each session so that a fair comparison could be determined at the completion of the observations, although this was not a primary consideration for the study.

As a more qualitative study, analysis was restricted to descriptive observations and student marker checklists, at the discretion of the researcher. However, for the purpose of quantitative analysis, I observed and counted the markers, then analyzed them both separately and collectively to see how frequently they occurred in the classroom. I also observed each classroom to determine whether small-group, cooperative learning was used in the classroom; a frequency of use was not measured, though it was preferable if small-group, cooperative learning occurs as an intermittent but relatively common, aspect of classroom activity.

## Results and Conclusions

### *Quantitative Analysis*

At some point during the observation period, every teacher used some type of small-group learning in their classroom. All the teachers also had relatively high numbers of responses, both encouraged and unprompted. In order to best compare the teachers' use of small groups and their student involvement and participation, I compiled the total amount of group work used in the classes and the total amount of responses for each teacher.

**TABLE 1: TOTAL RESPONSES AND TIME IN GROUP-WORK**

| | **Teacher A** | **Teacher B** | **Teacher C** | **Teacher D** |
|---|---|---|---|---|
| Unprompted Responses | 219 | 94 | 231 | 82 |
| Encouraged Responses | 132 | 85 | 106 | 121 |
| Extended Responses | 125 | 53 | 120 | 46 |
| Content Questions | 78 | 61 | 61 | 54 |
| Time in Group-work | 33% | 22% | 11% | 11% |

My data showed that Teacher A utilized group work the most (33% of the time), and Teachers C and D utilized group work the least (11% of the time). However, when

comparing participation and involvement through responses, particularly Unprompted Responses (responses given by students without encouragement from the teacher), Teachers A and C only differed by 12 responses, while Teachers A and D differed by 137 responses. In the Extended Responses category (elaborative, in-depth responses), Teachers A and C differed by only 5 responses, while Teachers A and D differed by 79 responses. Interestingly, Teacher B, who fell in between Teacher A and Teachers C and D, was much closer to Teacher D in each category. These results suggest that there is no relationship between small group-work and student participation and involvement; however, each of these students did use group work in the classroom and each teacher did have a considerable amount of engagement in the classroom so it also indicates that small group learning does not adversely affect participation.

***Qualitative Analysis***

With this type of research, it is also important to take into account specific descriptive notes about the observations that have significant implications. For example, in one of Teacher C's classes, she conducted a "seminar" style class, in which students ran the class for the day and responded to one another about a given topic, rather than responding to the teacher. On this particular day, I recorded 91 Unprompted Responses. This kind of data invariably skews the data to some degree, and could account for why Teacher C has such a high number of Unprompted Responses. Conversely, I observed Teacher B on a day that she was giving a test, and the only responses I could record for the day were those given during a review before the exam. This type of qualitative data must be taken into account when analyzing the results of a descriptive research study.

Overall, I saw very little group work taking place in the classes I observed. I considered peer editing and students working together on individual assignments to be group work, even if they were not presented as group assignments, because they were collaborative efforts at completing tasks. However, my research did reveal one particular trend among the teachers I observed. While teachers may not have specifically used small group work, certain teachers more than others encouraged a different kind of cooperative learning; Teachers A and C encouraged more whole class discussion and collaborative work on a regular basis than did Teachers B and D. While Teachers B and D certainly encouraged students to participate and respond to their own instruction, these

teachers asked their students to respond to them, rather than each other. Teacher C specifically asked her students on more than one occasion to "speak to one another" and Teacher A often allowed her students to respond to one another's questions and answers before redirecting. Both of these teachers had the highest numbers in all three response categories. All the Teachers were relatively close in the number of Content Questions, though Teacher A had the highest number of Content Questions as well, and Teacher C had the same number as Teacher B, above that of Teacher D. In general, the data did not reveal a specific trend regarding small group learning and student participation and involvement; however, I also did not observe frequent group work in my observations, which may have contributed to the results. Overall, the teachers who used more group work (Teachers A and B) did not necessarily have more participation or involvement, but the teachers who encouraged students to speak to one another and cooperate with one another even during whole class activities (Teachers A and C) did have higher participation and involvement

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**Watch Your Tone: Teacher Tone of Voice during Student Redirection**

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Department of Education
December, 2007

## Introduction

It is commonly said that actions speak louder than words. Some research findings claim that as much as two-thirds of all communication is non-verbal (Miller, 2005). Non-verbal communication is defined as any kind of communication that is not words, including tone of voice, facial expressions, eye contact, and physical contact (Miller, 2005). This study will focus on one aspect of non-verbal communication: tone of voice. Because such a huge part of communication is *how* something is said rather than *what* is said, it is important to understand what impact the teacher's tone of voice may have on the student. Several studies have examined varying aspects of this relationship by focusing on very specific populations, such as special needs students and low-income African American students ( Lloyd, 1995; Tucker and Herman, 2002). Many of the studies have shown that students do interpret non-verbal communication in positive or negative ways, depending on the behavior, but few explore the connection between teachers' tone of voice when redirecting student misbehavior and the student's response to redirection (Assor and Kanat-Maymon, 2005; Lloyd, 1995; Miller 2005; Neill 1989; Skinner and Belmont, 1993; Tucker and Herman, 2002). This research study will explore just that: What is the effect of a teacher's tone of voice during redirection on student response?

## Review of Literature

Positive reinforcement is generally thought to be the best approach towards classroom management (McDaniel, 1987). However, the reality in the classroom is that certain student behaviors provoke negative responses from teachers. As Greenlee and Ogletree point out in their research report on "Teacher's Attitudes toward Student Discipline Problems and Classroom Management Strategies," teachers tend to "intervene

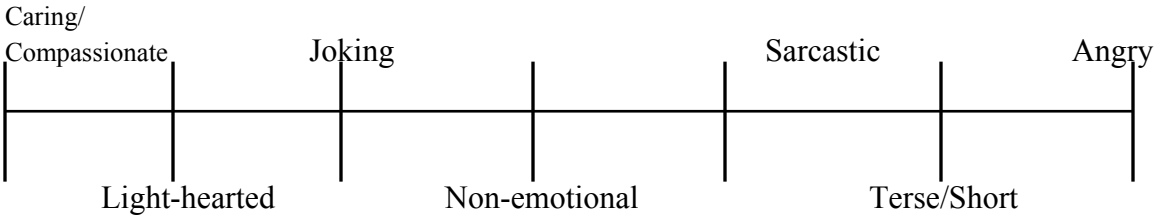
quickly to squelch misbehavior" (1993). As a result, teachers often respond with negative statements and commands. In a study comparing experienced with pre-service teachers, Kearney, Plax, Sorensen and Smith found that pro-social (or positive) redirection was more commonly used with passive misbehaviors (inattention and apathy), while anti-social (or negative) redirection was used more frequently with active misbehaviors (speaking out of turn or refusing to follow directions) (1988). Other research has shown that teachers who are encouraging and teachers who show frustration for slow production of work from students have a major impact on children's self-esteem as students and as people. Teacher's tone of voice and the level of interaction with students can be critical to a student with special needs' performance in a class (Lloyd, 1995).

Although it seems that positive reinforcement has been proven to work, there seems to be conflicting evidence suggesting negative redirection is still used with some frequency. It is clear that *how* a person says something can be just as important as, if not more essential than, *what* the person is actually saying when delivering a message. Considering this, it is important to conduct further research on *how* a teacher redirects student misbehavior. The tone of voice used by the teacher may be pro-social, while the words themselves could be anti-social. If this is the case, it is important to determine which has the larger effect on student behavior – the teacher's words or the teacher's tone.

**Methodology**

For this qualitative study, I observed four secondary English classrooms in Forsyth County, North Carolina. The classes ranged from ninth to twelfth grade and included varying ability levels. The subjects were both teachers and students in these classrooms, and all observations were non-participatory. To ensure confidentiality, the teachers are referred to as Teacher A, Teacher B, Teacher C, and Teacher D. I observed each teacher ten times, totally forty hours of observation.

I used a tone continuum to chart teachers' tone of voice during redirection. Redirection is any comment the teacher makes to a student exhibiting off-task or disruptive behavior. The continuum I used is displayed below:

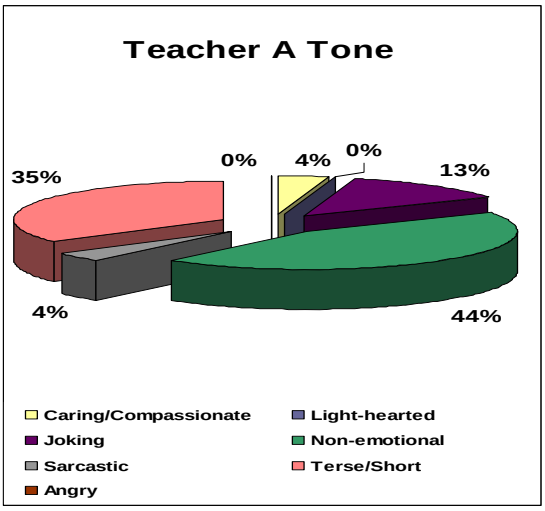


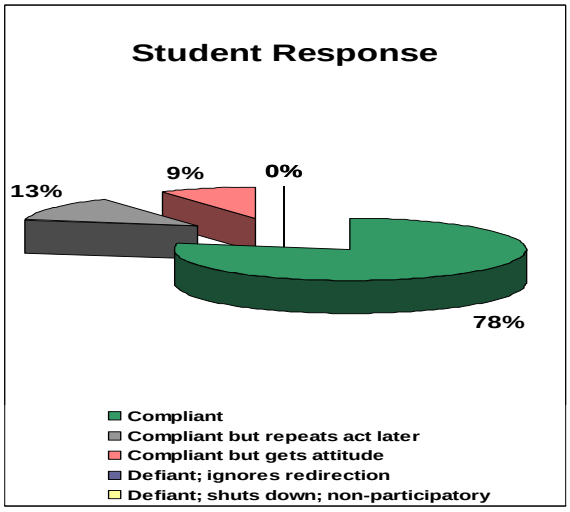

I took field notes to record student behaviors that need redirection. Students' responses to redirection were recorded in the observation checklist below:

| | **Student Responses** | | | | |
|---|---|---|---|---|---|
| **Circle gender** | **Compliant** | **Compliant but repeats act later** | **Compliant but gets an attitude** | **Defiant, ignores redirection** | **Defiant, shuts down, non-participatory** |
| Student 1 (M/F ) | | | | | |
| Student 2 (M/F ) | | | | | |
| Student 3 (M/F ) | | | | | |
| Student 4 (M/F ) | | | | | |
| Student 5 (M/F ) | | | | | |

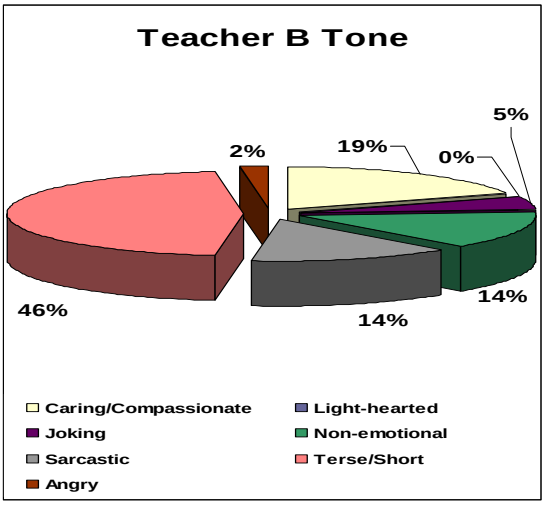
In a given class period, I recorded up to five instances of teacher redirection. This may have been five different students or a few students multiple times. I recorded how the teacher responded to these students if and when redirection proved necessary. I recorded the student's gender along with how they chose to respond to the teacher's tone. The results from the tone continuum were compared to the field notes and student response checklist to see if a relationship existed between teacher behaviors and student responses.

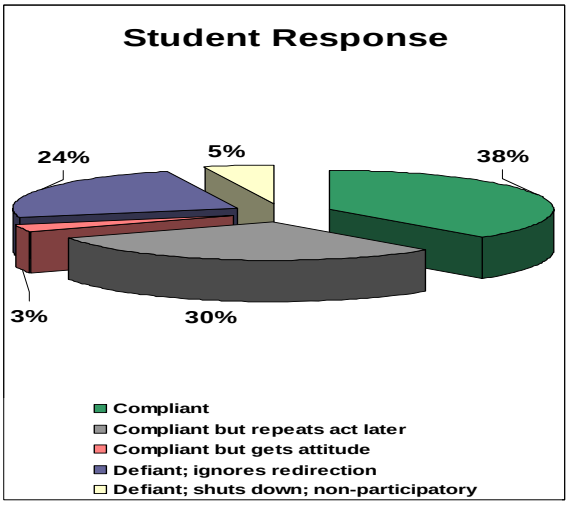
**Results and Conclusions**



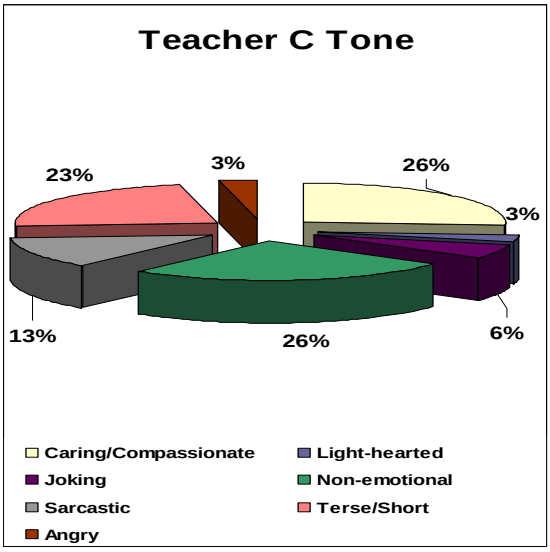



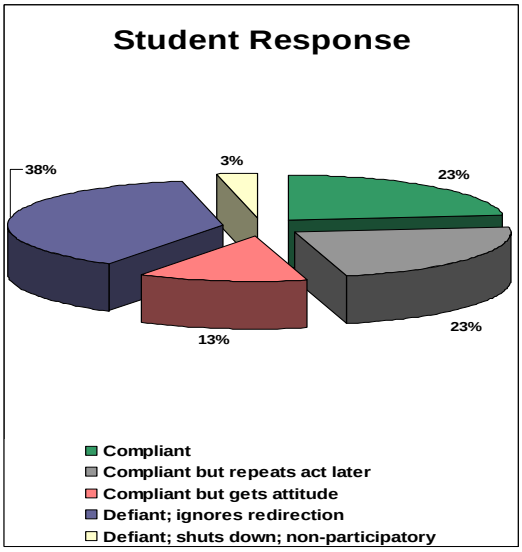
While no clear relationship could be established between teacher tone of voice and student response to redirection, there are some notable tendencies found in the data. Teacher A used only two tones of voice (non-emotional, terse/short) for more than 75% of redirection and had the second highest rate of student compliance. Teacher B used one tone of voice (terse/short) for almost half of redirection and used three other tones (sarcastic, non-emotional, caring/compassionate) for the other half of redirection. No one



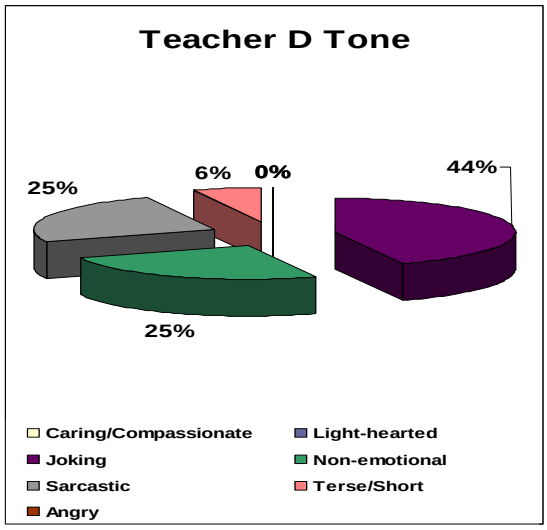

type of student response dominated. Teacher C used three tones of voice (terse/short, non-emotional, caring/compassionate) equally for 75% of the redirection and had the lowest rate of student compliance.

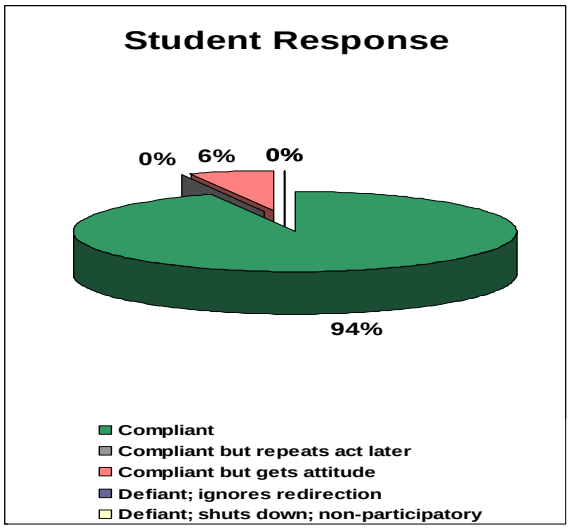



Teacher D used one tone of voice (joking) for almost half of all redirectionand two tones of voice (sarcastic, non-emotional) for the other half of redirection and had almost 100% of compliance. Teachers A and D, with 75% compliance or more, both used a non-

emotional tone of voice at least 25% of the time. Teacher A used a non-emotional tone for 44% of the time, with 70% student compliance to this tone of voice. Teacher D used a joking tone for 44% of the time, with 86% compliance to this tone.




So it would seem that if a teacher uses one tone consistently for about half of all redirections, the teacher will have a high compliance rate. However, Teacher B used a terse/short tone for 46% of the time, and only had a 30% compliance rate, so consistency with one tone for half of the time does not ensure student compliance. It is necessary to look at the tones used for the remaining 50% of the time. Teacher D was the only teacher to use a joking tone frequently, and Teacher D had the highest rate of compliance. Teachers B and C, with less than 40% student compliance, used a caring/compassionate tone an estimated 20% of the time, while Teachers A and D almost never used a caring/compassionate tone. Also, Teachers B and C were the only teachers to use an angry tone, even though it was less than 5% of the time for both. Teacher B and Teacher C each used an angry tone only once and both were at the end of a class period in which they had used a caring/compassionate tone for at least the first half of the period. Teacher B's student responded compliantly to the angry tone, while Teacher C's student was defiant and shut down in response to the angry tone. Students responded to Teacher B's caring/compassionate tone in defiance 70% of the time. Students did not have a consistent response to Teacher C's caring/compassionate tone, but they were only compliant 25% of the time when Teacher C used this tone. Teacher B had the highest compliance rate, 80%, with a non-emotional tone. Teacher C had the highest compliance

rate with the light-hearted tone, but the teacher only used this tone once. Teacher C's next best compliance rate, 42%, was in response to a terse/short tone.

It seems no one specific tone of voice proves to be the most effective. Three out of the four teachers have high compliance rates when they use a non-emotional tone. No teacher has used a caring/compassionate tone with much success. Those teachers who consistently used three tones of voice or less had a higher rate of compliance among students, than teachers who used more than three tones of voice. Overall, consistency in teacher tone encourages a more compliant student response to redirection.

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**Words in the Air: Do Read-Alouds Engage the High School English Classroom?**

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December, 2007

## Introduction

Read-alouds may cast words into the air, but are students responding to those words? Or is the read-aloud inevitably a derivative of the one-sided lecture? Rick Goulden (2002), a college ESL teacher, explains that despite his initial impression that read-alouds were too teacher-centered, he came to realize that they can in fact be a very complex and pedagogically appropriate method when conducted in a manner that encourages student engagement (p. 77-78). In an attempt to explore the uses of read-aloud beyond improving literacy, I conducted a study examining the capacity of read-alouds to engage the high school English classroom.

## Review of Literature

A survey of middle school teacher read-aloud practices found that the majority of teachers in all subject areas choose to read aloud to their students and follow up their read-alouds with whole class discussion (Ariail & Albright, 2006). Another study identified 7 "essential components" of an interactive read-aloud after observing 25 teachers who were recognized by their administrators as "experts" at reading aloud: strategic text selection, previewing and practicing, establishment of purpose, fluency, animation and expression, class discussion, and independent reading and writing (Fisher, Flood, Lapp, & Frey, 2004). But how often are ideal read-alouds truly enacted in the classroom? The same study observed the read aloud practices of 120 teachers in randomly selected classrooms and found that some of the essential components, such as fluent reading and independent literacy activities, were lacking in implementation

(Fisher, Flood, Lapp, & Frey, 2004). Another study determined that despite the prevalence of read-alouds in our schools, "the quality of the prevailing read-aloud experience is still open to question" (Hoffman, Roser, & Battle, 1993).

Much of the literature concerning read-alouds is concerned with their ability to influence literacy and reading achievement, and with some exceptions (Minichiello-Schmidt, 1998), these studies determine that well-conducted read-alouds are beneficial for the reading comprehension of students (Hicks & Wadlington, 1994; Lenihan, 2003). Yet, researchers are beginning to identify the intricacies of read-aloud pedagogy: it takes on many forms depending on the skill and the purpose of the teacher, and it can be implemented for a variety of reasons. When asked why they read aloud, most middle school teachers in a survey study stated that they did so "to promote a love of literature and/or reading," and other popular reasons included "building interest in a topic," "exposing students to texts they may not read otherwise," and "reinforcing/emphasizing content" (Ariail & Albright, 2006). It would seem, then, that read-alouds have a potential that extends beyond reading comprehension.

It is interesting to note that most of the aforementioned studies are concerned with the implementation of teacher read-alouds in the primary grades. There does, however, appear to be an increasing interest in the use of read-alouds with older students. This is partly due to the growing need for remedial reading instruction for teenagers, as recognized by the No Child Left Behind policy; several studies have noted the benefits of reading aloud to encourage and aid older students with their own reading (Hicks & Wadlington, 1994; Sanacore, 1992). There appears to be little to no discussion in research literature about the use of *student* read-alouds (where the student does the reading, rather than the teacher). Yet, as new uses of read-alouds are continually explored, high school teachers such as Greg Lenihan (2003) are recognizing their value as a precursor to lively and engaging class discussion.

**Methodology**

The subjects of this study are four English teachers and their students at East Forsyth High School in Winston-Salem/Forsyth County, North Carolina. All grades (9-12) and ability levels (regular, honors, seminar, advanced placement) are represented.

Class sizes vary slightly, but average around 24 students. Forty class periods were observed over the course of the study.

The template for recording data was separated into a section on read-aloud and a section on student engagement. To obtain data regarding read-alouds, I recorded the number of times a read-aloud occurred in the class session, differentiating between instances where the teacher read aloud and instances where a student read aloud. I then described the circumstances of the read-aloud: the type of text read, whether or not the teacher peppered through with questions and clarification (occasionally recording example questions), and, where applicable, the indicated purpose of the read-aloud. To obtain data regarding student engagement, I tallied the number of times students asked content questions, raised their hands, or provided a verbal response, differentiating between succinct, elaborative and choral responses. Succinct responses are brief and reflect low engagement, while elaborative responses are detailed and reflect higher engagement. Choral responses are instances where so many students respond to a question at once that I cannot distinguish between them.

To analyze data, I first identified which classes experienced the most read alouds and which experienced the least and examined the difference in their levels of student engagement. I then broke up the data categorically, discerning notable trends for the association of read-alouds with specific types of engagement, and also examining the specific trends for teacher and student read-alouds. Following this quantitative analysis of data, I proceeded to consider the results more qualitatively: noting trends in read-aloud practice for individual teachers, connecting these trends to the associations derived from numerical data, and drawing inferences about the effectiveness of various types of read-alouds in promoting student engagement. Both students and teachers will remain anonymous for this study; teachers will be referred to as Teacher A, B, C, and D.

**Results and Conclusions**

All of the observed teachers used read-alouds at some point in their classrooms. After combining all recorded tallies for read-alouds and engagement, I compiled the totals in the following table:

**Total Read-Alouds and Total Engagement**

| | Teacher A | Teacher B | Teacher C | Teacher D |
|---|---|---|---|---|
| total read-alouds | 32 | 15 | 23 | 32 |
| total engagement | 937 | 453 | 716 | 632 |

Teacher A and Teacher D appeared to use read-alouds most commonly, as they each have a total of thirty-two (32) over a 9-class period. However, they display notably different levels of engagement. This difference suggests that read-alouds in general are not inextricably associated with high engagement. Still, they do not necessarily prove a hindrance to engagement, as the teacher with the highest engagement (Teacher A) employed read-alouds more frequently than other teachers.

Examination of the association of read-alouds with specific types of engagement revealed few notable trends. There was, however, a very strong connection between read-alouds and choral responses; teachers who employed read-alouds more frequently always had higher numbers of choral responses than those who employed them less frequently. The trend with elaborative responses mirrored that of overall engagement; Teacher A generated a much higher number of elaborative responses than other teachers, though Teacher D employed the same number of read-alouds. Teacher A also employed a notably higher number of teacher read-alouds than the rest of the teachers, and generated a notably higher amount of student engagement. Conversely, student read-alouds do not appear to be particularly associated with student engagement, as Teacher D employed them very frequently and did not generate as much student engagement as some of the other teachers.

It is possible that the general inconclusiveness of the numerical data derives from the complexity of the teaching act of reading aloud. As my literature review revealed, read-alouds are conducted differently by different teachers, who design them to suit their own preferences and needs. For this reason, I examined the connection between read-alouds and engagement by looking more closely at the manner in which different teachers conducted their read-alouds. For purposes of confidentiality, I will refer to all teachers with feminine pronouns.

With the exception of Teacher B's case, it seems to come naturally for most teachers to accompany their read-alouds with questions. However, it appears that the

type of engagement generated depends greatly upon the type of questions the teacher chooses to ask. Teacher C and Teacher D chose to ask a great deal of "what" questions during their read-alouds – questions to provide clarification and check comprehension – and as a result, they generated fewer elaborative responses than Teacher A. Teacher D generated a greater amount of elaborative responses when she asked students to make predictions. Teacher A, who had the greatest amount of engagement in all of her classes, and particularly the greatest amount of *elaborative* responses, chose to ask a great deal of "why" questions in addition to "what" questions, prompting students to explain their reasoning. Close examination of the qualitative data corroborates the association between read-alouds and choral responses introduced by the numerical data; with the exception of Teacher B, all read-aloud instances appeared to feature a great deal of choral responses. This trend is perhaps due to the fact that the answers to read-aloud clarification questions are immediately evident to a large number of students, since teachers ask the questions right after the class has read the related passage. While question-enhanced read-alouds do not appear to naturally generate elaborative responses, the example of Teacher A indicates that they can generate elaborative responses when the teacher encourages such responses by asking students to expand upon their answers.

Examination of the qualitative data also explains the problem with heavy reliance on student read-alouds. Students do not show any particular eagerness to read aloud; they usually must be called upon to read, or else receive assurance of some type of reward. This tendency may partially explain the lower amount of engagement in Teacher D's classes, though she employed the same number of read-alouds as Teacher A. Rather than placing the read-aloud responsibility entirely on the students, Teachers A and C (who had the two highest amounts of engagement) tend to combine teacher and student read-alouds. One of Teacher A's most successful read-alouds, which was in fact conducted entirely by the teacher, exhibited the particular benefit of reading expressively, which students often failed to do.

Overall, the individual class sessions that featured extended read-alouds tended to generate higher levels of engagement than other class sessions. Though read-alouds on their own may not inherently generate engagement, the fact that most teachers naturally ask questions during extended read-alouds (even when they do not intend to) contributes

to their capacity to engage the high school English classroom. Thus, there is most likely some value to the ability of read-alouds to cast the words of a story into the air, allowing the entire class to experience that story's events at the same time and giving students immediate acquaintance with the story as they respond to the teachers' questions.

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**Comparing Selected 'Dynamics' Items from North Carolina's End-of-Course Test in Physics to a Separate Comprehensive Assessment of 'Dynamics'**

by
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with
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December, 2007

## Null Hypothesis

Several researchers have investigated the effects of high stakes testing, but none have directly measured the validity of high stakes testing. Therefore, this study will investigate the following null hypothesis: North Carolina's end-of-course test in physics is an accurate assessment of student knowledge of the topic of 'dynamics' as defined by performance on the Force Concept Inventory.

## Study Design

The collaborating teacher administered both the selected items from North Carolina's EOC test and selected items from the FCI. The two assessments were cross-referenced for overlapping concepts. Five concepts were shared between the two tests: relating acceleration due to gravity and mass, the nature of acceleration due to gravity, projectile motion, initial velocity opposing acceleration due to gravity, and relating acceleration, velocity, and displacement. Student scores were compared between the EOC and the FCI. The investigator then analyzed student responses from each topic of 'dynamics.' Students could correctly answer a question about one topic correctly on the FCI, but not the EOC and vice-versa. The investigator used the data to determine if the EOC was an accurate assessment of student knowledge of 'dynamics' (as defined by performance on the FCI).

## Methodology

Following is an item-by-item comparison of content and processes for each of the paired problems on the tests. For all questions, a starred answer (*) indicates the intended answer.

*Concept One: Relating mass and acceleration due to gravity*

*EOC #1.*

**A 2.0 kg book falls from a 1.5 m high shelf. What will be the velocity of the book as it hits the floor?**

***a) 5.4 m/s** **c) 20 m/s**
**b) 15 m/s** **d) 29 m/s**

Students are given extra information (the mass of the book) as a distracter, leaving the student to apply the correct formula and come up with the correct numeric result. Student errors can occur in reading the question incorrectly, choosing the incorrect formula, algebraic manipulation of the formula, or simple arithmetic errors.

*FCI #1.*

Two metal balls are the same size but one weighs twice as much as the other. The balls are dropped from the roof of a single story building at the same instant of time. The time it takes the balls to reach the ground below will be:

(A) about half as long for the heavier ball as for the lighter one.
(B) about half as long for the lighter ball as for the heavier one.
* (C) about the same for both balls.
(D) considerably less for the heavier ball, but not necessarily half as long.
(E) considerably less for the lighter ball, but not necessarily half as long.

Rather than give extra information about the object's mass, the student must decide if mass affects the rate of acceleration. Mistakes here will reveal a large misconception about gravity. Student error is a result of misconception or misreading the question. This question leaves little room for interpreting the source of student error.

*Concept Two: Nature of acceleration due to gravity*

*EOC #2.*

**A student throws a book vertically downward toward the river below with an initial velocity of 5.2 m/s. If the book hits the water after 1.5 s, what is the height of the bridge?**

**a) 11 m** ***c) 19 m**
**b) 15 m** **d) 62 m**

Students must choose the correct formula, one that includes distance and initial velocity. Once the correct formula is selected, students must use algebra to solve for the distance the book falls. Student errors may result from choosing incorrect formulae, confusion of initial conditions, arithmetic errors, or misreading of the problem.

*FCI #2.*

A stone dropped from the roof of a single story building to the surface of the earth:

(A) reaches a maximum speed quite soon after release and then falls at a constant speed thereafter.

(B) speeds up as it falls because the gravitational attraction gets considerably stronger as the stone gets closer to the earth.

(C) speeds up because of an almost constant force of gravity acting upon it.

(D) falls because of the natural tendency of all objects to rest on the surface of the earth.

*(E) falls because of the combined effects of the force of gravity pushing it downward and the force of the air pushing it downward.

Students are asked to choose the correct description of how an object's velocity is affected by constant acceleration (as is the case in Earth's gravitational field). No numbers or formulae are involved. Students may make errors as a result of misreading the problem, or misconceptions about gravity.

*Concept Three: Projectile Motion*

*EOC #3.*

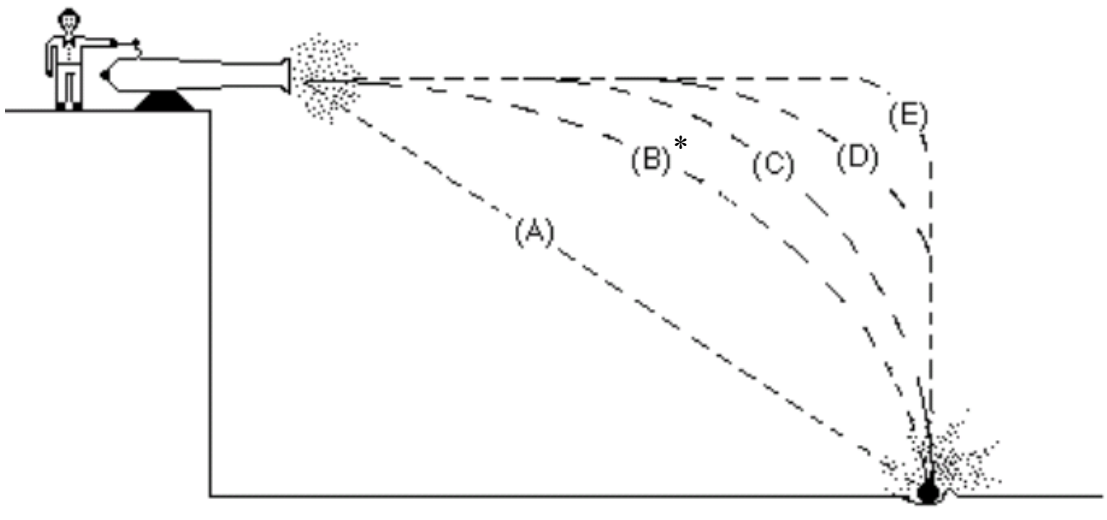
**A person throws a rock horizontally out of a window of a building with a speed of 10.0 m/s. The window is 30.0 m above the ground. How far from the building will the rock strike the ground?**

**a) 17.5 m** **c) 30.6 m**
***b) 24.7 m** **d) 61.2 m**

Students must algebraically manipulate two equations to find the numeric solution. The path of the projectile (the rock) is not important in this problem. The only factor that is valued in the above problem is the horizontal distance traveled by the projectile. Student errors could result from using the incorrect formulae, faulty algebraic techniques, misreading of the problem, or incorrect arithmetic.

*FCI #3.*

A ball is fired by a cannon from the top of a cliff as shown in the figure below. Which of the paths would the cannon ball most closely follow?



The above FCI question tests student understanding of projectile motion conceptually. Students are asked to identify the path of the projectile (cannonball). Note that each path lands the same horizontal distance from the cliff. An incorrect answer on this problem clearly indicates the source of misconception.

*Concept Four: Initial velocity opposing acceleration due to gravity*

*EOC #4.*

**An object is launched vertically upward with an initial velocity of 58.8 m/s. What is its velocity after 8.00 seconds?**
**a) -7.35 m/s c) 118 m/s**
***b) -19.6 m/s d) 470 m/s**

Students must use the correct formula and algebraically find the correct answer. The problem is short, so reading comprehension is not a large stumbling block. Student errors can come from a misunderstanding of initial conditions, use of the incorrect formula, algebraic miscues, or mathematical mistakes.

*FCI #4.*

A boy throws a steel ball straight up. Consider the motion of the ball only after it has left the boy's hand but before it touches the ground, and assume that forces exerted by the air are negligible. For these conditions, the force(s) acting on the ball is (are):

(A) a downward force of gravity along with a steadily decreasing upward force.

(B) a steadily decreasing upward force from the moment it leaves the boy's hand until it reaches its highest point; on the way down there is a steadily increasing downward force of gravity as the object gets closer to the earth.

(C) an almost constant downward force of gravity along with an upward force that steadily decreases until the ball reaches its highest point; on the way down there is only a constant downward force of gravity.

* (D) an almost constant downward force of gravity only.

(E) none of the above. The ball falls back to ground because of its natural tendency to rest on the surface of the earth.

The above FCI question asks students to identify which forces are acting on a projectile thrown in the air. Quite a bit of text is present in this problem, so reading comprehension could be a source of student errors. However, if students are able correctly read the problem their misconceptions become obvious.

*Concept Five: Relating acceleration, velocity, and displacement*

*EOC #5.*

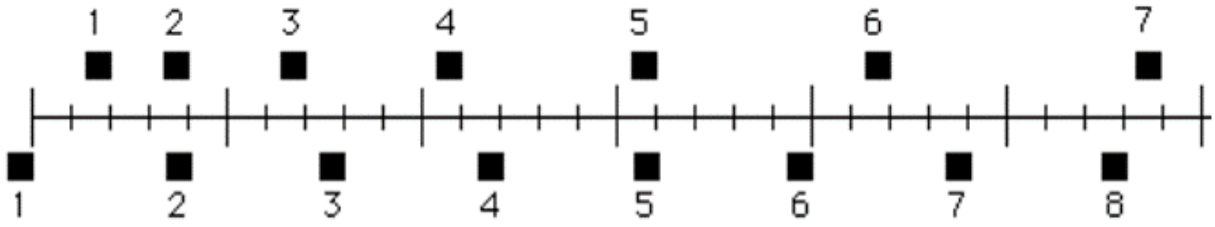
**A car traveling at 4.0 m/s accelerates uniformly for 5.0 s in order to pass another vehicle. It travels 120 m during the 5.0 s interval that it was accelerating. What was the car's speed at the end of the acceleration period?**

**a) 30 m/s** ***c) 44 m/s**
**b) 38 m/s** **d) 56 m/s**

Again, students must algebraically manipulate two formulae and solve for the correct numerical answer. Students may misread the problem, misunderstand initial conditions, make mistakes with algebra, or miscalculate values.

*FCI #5.*

The positions of two blocks at successive 0.20-second time intervals are represented by the numbered squares in the figure below. The blocks are moving toward the right.




Do the blocks ever have the same speed?

(A) No.
(B) Yes, at instant 2.
(C) Yes, at instant 5.
(D) Yes, at instants 2 and 5.
* (E) Yes, at some time during the interval 3 to 4.

The above FCI question asks students to relate displacement, velocity, and acceleration. Students are asked to interpret a graph of displacements of two different objects, only one of which is accelerating. Students must then decide at what instant the two objects have the same velocity. Students may misread the problem, misinterpret the graph, or have conceptual misunderstandings about acceleration, velocity, and displacement.

**Results**

Students responded to five items spanning five separate 'dynamics' topics. Each item consisted of two questions which were parallel in content: one algebraic question from the end-of-course (EOC) test and one conceptual question from the Force Concept

Inventory (FCI). Student answers to each item were then grouped into one of four categories: both responses correct, only the EOC response correct, only the FCI response correct, or both responses incorrect (Table 1).

Table 1: *Frequency of responses sorted by item (N=85 students)*

| | Item 1 | Item 2 | Item 3 | Item 4 | Item 5 | All Items |
|---|---|---|---|---|---|---|
| Both Correct | 49 | 36 | 29 | 8 | 19 | 141 |
| Only EOC Correct | 8 | 18 | 7 | 63 | 28 | 124 |
| Only FCI Correct | 22 | 17 | 41 | 1 | 13 | 94 |
| Both Incorrect | 6 | 14 | 8 | 13 | 25 | 66 |

Items 1 and 3 are alike in that many students were able to only correctly answer the FCI portion of the item. On Items 4 and 5 the opposite is true; most students were only able to answer the EOC portion of the item.

To see if numbers correct for paired questions were significantly different, student responses to the EOC portion and the FCI portion were compared using a paired samples t-test (Table 2).

Table 2: *Results of paired samples t-test (α: *=0.05, **=0.01, ***0.001)*

| | Item 1 | Item 2 | Item 3 | Item 4 | Item 5 | All Items |
|---|---|---|---|---|---|---|
| Class 1 | 0.536 | 0.645 | **0.000*** ** | **0.000*** ** | 0.354 | 0.164 |
| Class 2 | **0.006*** | 0.490 | **0.000*** ** | **0.000*** ** | 0.256 | 0.807 |
| Class 3 | **0.010**** | 0.746 | 0.134 | **0.000*** ** | **0.032*** | 0.063 |
| All Classes | **0.010**** | 0.867 | **0.000*** ** | **0.000*** ** | **0.018*** | **0.042*** |

**Conclusion**

Two of the four significantly different items (Item 1 and Item 3) resulted from lower scores on the EOC questions, while the remaining two items (Item 4 and Item 5) resulted from lower scores on the FCI questions. The EOC may give rise to both Type I and Type II errors. Type I errors may result from questions like Items 4 and 5, where students miss conceptual 'dynamics' questions but are able to correctly answer numeric EOC questions. Type II errors may result from questions like Items 1 and 2, where students are unable to algebraically demonstrate their understanding on the EOC, but correctly can correctly answer conceptual questions on the FCI.

**Relationships between Student Attitudes toward Laboratories and Quiz Scores**

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December, 2007

*Introduction*

Educational research has often shown that students exposed to laboratory activities in high school science classes have a more positive attitude toward science than do students who do not participate in labs (Ebenezer and Zoller, 1993; Freedman, 1997; McMillan and May, 1979; Ornstein, 2006). Previous studies have also concluded that relationships exist between student attitudes toward science and their performance on science achievement tests (Germann, 1988; Taraban, et al., 2007). But unanswered is whether or not there are relationships between students' attitudes toward a particular laboratory activity and their score on an assessment of the material covered in that lab. This study focuses on just that: student attitudes toward labs and whether or not there are relationships between these attitudes and quiz scores on the same material.

*Review of Literature*

Much research has been conducted on students' attitudes toward science. Ornstein (2006) states the importance of positive attitudes toward science to make students "scientifically literate adults" (p. 285). He designed his study to determine whether or not the frequency of laboratory exercises in the science classroom affected the students' attitudes toward science. He interviewed teachers on how often they used hands-on experimentation in the classroom and surveyed students with questions about their attitudes toward the material. Ornstein's (2006) results were quite clear, showing that students who were regularly exposed to "challenging, open-ended experimentation and inquiry" had more positive attitudes toward science than students from classrooms which did not frequently use these methods (p. 294). In addition, he emphasizes that hands-on laboratories need to be interesting and relevant in order to be effective in influencing students' attitudes in a positive manner.

In another science education study, Germann (1988) reports that a student's perception of science, overall teaching quality, classroom environment, and achievement are major influences on the student's attitude toward science. Based on these reports, Germann (1988) created a new instrument for measuring attitude that focuses more on how students feel about science as a subject in school. Students were given his attitude survey and their achievement in science was measured in several ways. They were given a test to measure cognitive development, a lab skills test, and scores on individual labs paired with semester grades. Germann (1988) found that a correlation existed between students' attitudes and their scores on the individual labs and semester grades. He suggests that students with more positive attitudes toward science pay better attention during lab activities and classroom instruction, which would explain the correlation he found.

*Methods*

The purpose of this study was to determine if a relationship existed between biology students' primary reasons for liking or disliking laboratory activities and their scores on weekly quizzes for those topics included in the laboratories. Forty-nine biology students from five classes all taught by the same teacher in a Piedmont-Triad high school were subjects in this study. For two consecutive weeks, students performed regularly scheduled laboratory activities in the lessons for two topics in the biology curriculum: diffusion and enzyme activity. After the laboratory activities were conducted, students were given an attitude survey, created by the researcher, to determine their general feelings about the lab and for what reasons they liked or disliked the activities. In addition, the students took a normally-given, teacher-made quiz to show their understanding of the material from the laboratory and classroom lessons. The students' responses to the attitude survey were analyzed with their quiz scores to see if any relationships existed between the two.

In the diffusion lab, students simply placed a baggie containing cornstarch and water into a cup filled with water and iodine and observed it 30 minutes later to determine whether the bag was permeable to either the cornstarch or the iodine. For the enzyme lab, students had to read procedures, place different substances into test tubes, observe reactions, and answer questions regarding what they saw about the properties of

enzymes. This lab was much more interactive for students than the diffusion one. The attitude survey consisted of four Likert-scale questions to measure students' overall attitude toward the labs and two circle-response questions asking specifically what students liked and disliked about them. The teacher-made quizzes contained eleven multiple-choice and two short-answer questions.

*Results and Conclusions*

The average quiz score for participating students was calculated for each week of the study and students were grouped based on their standard deviation away from the average. For both weeks of the study, almost every standard deviation group showed a convincing majority with a specific overall attitude within the group; whether this attitude was positive, negative, or neutral varied between groups. Week 2 (enzyme lab) showed more overall negative attitudes than the Week 1 diffusion lab (Figure 1). The more negative attitudes for Week 2 could be explained by the higher level of difficultly of the enzyme lab.

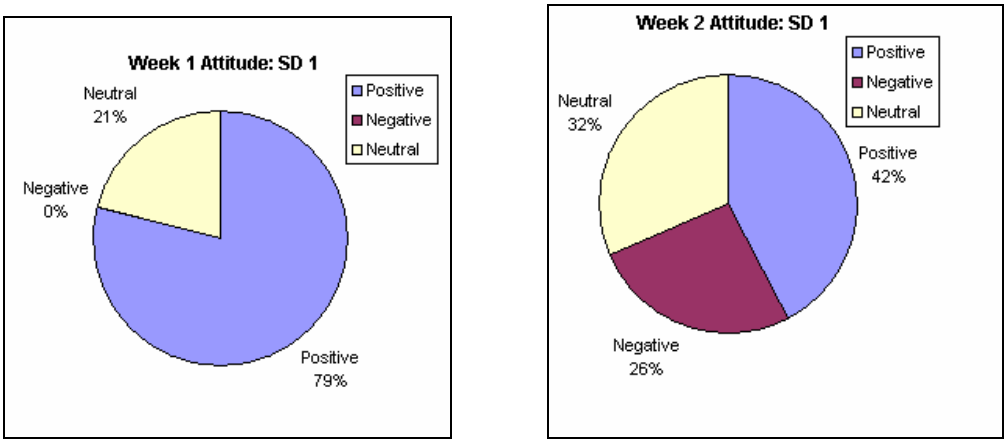


*Figure 1*. Sample graphs of overall attitude for Standard Deviation group 1 (N=19 for each week)

Every standard deviation group for both weeks shared at least one common response from the survey as to why students in that group liked or disliked the lab. Students who scored above-average on their quizzes tended to share more academic reasons for liking the labs, such as "it helped me learn more than reading the textbook" or "the material was valuable" (Figure 2).

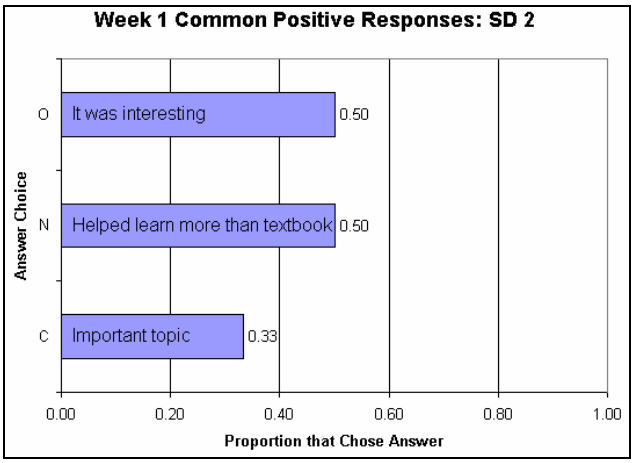


*Figure 2*. Sample common responses for liking the lab for Standard Deviation group 2 (N=6)

While those students who scored below-average on the quizzes also shared some academic reasons for liking the labs, they also chose the answer that the Week 2 enzyme lab was "confusing" as a reason they disliked it (Figure 3). Being confused during the lab could have affected their chances of learning all the material intended, which could relate to their lower scores on the quiz.

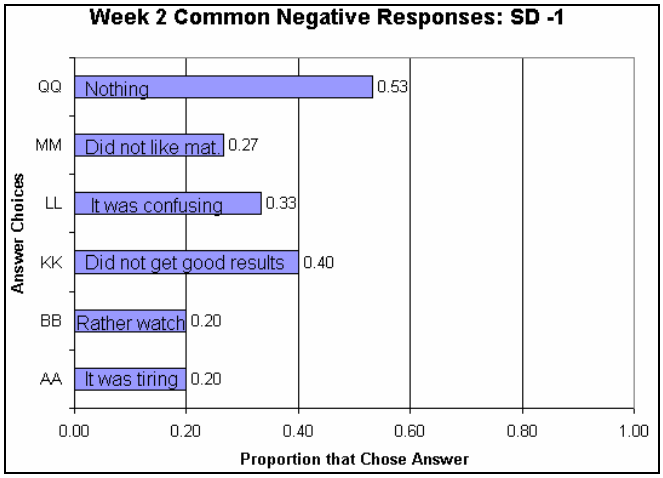


*Figure 3*. Sample common responses for disliking the lab for Standard Deviation group -1 (N=15)

An interesting result from the Week 2 data was that many students disliked the enzyme lab because they did not enjoy working with the materials provided. This lab consisted of working with different forms of liver (homogenate, boiled, etc.), which many of the students found to be disgusting. In addition, many students liked the enzyme lab because it was "hands-on." This data helps to confirm results from previous studies that

students like a cooperative, active-learning environment in science classrooms (Freedman, 1997; Okebukola, 1986; Taraban, et al, 2007).

Data were compared between the two weeks of the study to determine whether or not students had similar overall attitudes and quiz scores for each week. Most students did not have the same overall attitude or similar quiz scores each week (Figure 4). This could be explained by the very different nature of the two labs. Some students really like the active, hands-on activities such as those in the enzyme lab, while others prefer the more observational labs, like the diffusion lab.

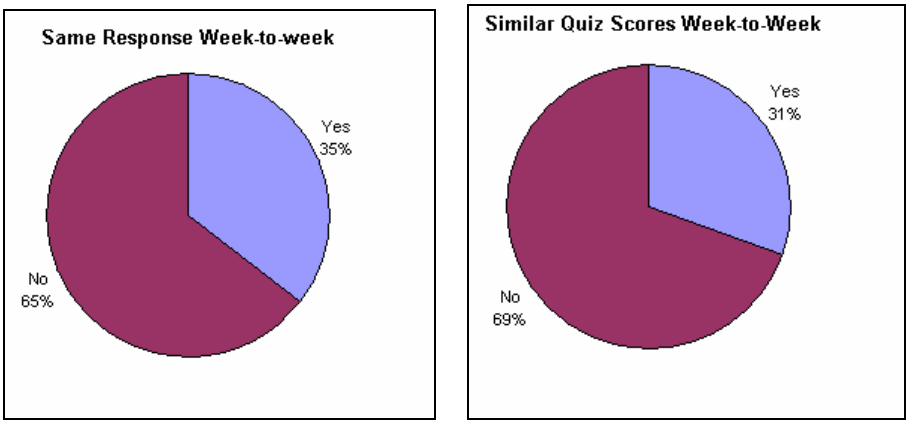


*Figure 4*. Comparisons between overall attitude and quiz scores for both weeks of the study (N=48)

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**Effects of Extra Critical Emphasis in Biology Classrooms**

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## Introduction

Critical thinking is extremely important in science as students are presented with data and results from experiments. Students need to be able to reason and think critically about the information presented and determine if the experimental design is valid, if the data supports the findings, and if the conclusions are valid. Thus, critical thinking in science can be defined as the analysis of scientific conclusions, which occurs by examining the experimental design, data, and findings.

Many science education researchers advocate a total change in classroom instruction in order to incorporate critical thinking into the science classroom (Reiss and Tunnicliffe, 2001). However with the increased political interest in educational improvement and the No Child Left Behind legislation, standardized testing has become a key focus in the science classroom. If research can demonstrate that extra critical thinking activities on topics covered by the biology end of course test improves students' critical thinking abilities, then there would be no need to change the entire instructional design. Since most research on critical thinking in biology has involved a complete change in teaching method, this study attempts to incorporate extra critical thinking emphasis into an already existing curriculum to determine the effects on students' abilities to reason about experimental controls, experimental findings, and experimental conclusions.

## Review of Literature

Many science education papers have been written to address the growing concern for how science is portrayed in the American educational system. Reiss and Tunnicliffe (2001) claim that "the message still presented in many school textbooks is that science provides a single way in which the world may both be understood and investigated" (p.125). The authors argue for a more dynamic view of science to be taught to students

through the history of science, the process of research, and the impact of research on society, which can be incorporated with critical thinking.

Case and Fry (1973) evaluated teaching critical thinking skills in a low socio-economic high school. Fifteen students from the same school were placed in the experimental group, while the control group was an intact class of students from that same school. The experimental group was taught critical thinking during a forty minute class for a semester, while the control group had regular classroom instruction. Both groups were administered pre-assessments, which showed the two groups to be initially at the same level (Case and Fry, 1973). After the experiment, a significant difference was found between the post-assessment scores of the two groups, with the experimental group being higher (Case and Fry, 1973). The highest control score was the same as the lowest experimental score on the post-assessment (Case and Fry, 1973); therefore, critical thinking skills can be taught to students.

Tyser and Cerbin (1991) supported the findings of Case and Fry (1973) when they investigated incorporating critical thinking skills into an introductory college biology course. They had students evaluate current science news for evidence and validity of the claim and then produce a logical line of reasoning for agreeing or disagreeing with the evidence in the article. A control group was taught the regular curriculum, while an experimental group was taught the regular curriculum and assigned the science news activity. A pre-assessment and post-assessment were given, and both assessments used a short science news article to read and a list of questions to answer. The experimental group significantly exceeded the results of the control group on both the objective and reasoning questions on the post-assessment (Tyser and Cerbin, 1991).

Including biological critical thinking (BCT) activities in the biology classroom was assessed by Zohar, Weinberger, and Tamir (1994). They had six hundred and seventy-eight seventh graders in ten classes at four different schools. Five classes were used for control groups, and five classes had the experimental design of incorporating the BCT activities into the year long curriculum. Both classes were taught from the same textbook. A pre-assessment and post-assessment were given for measurement of general critical thinking skills, biology critical thinking skills, and content knowledge. The two groups did not differ in their initial score of general critical thinking skills; however, a

significant gain was observed in the experimental group (Zohar et. al, 1994). The experimental group also improved significantly on the biological skills post-assessment compared to the control group (Zohar et. al, 1994). The experimental group again scored significantly higher on the content post-assessment than the control group (Zohar et. al, 1994). Thus, increasing critical thinking activities in biology not only increases scientific reasoning but also increases general critical thinking and content mastery.

Most of the research reviewed has involved or suggested an entire change of teaching method. Therefore, this study proposes to incorporate critical thinking into the classroom on a daily basis without changing the structure of the class. It will seek to measure the reasoning ability of students who have had extra critical thinking emphasis incorporated into their classroom discussion and compare it to those with regular instruction. Therefore, this study will investigate the following null hypotheses:

1. There is no difference between pre-assessment and post-assessment scores between students who have been taught using extra critical thinking emphasis and those who have not.
2. There is no difference in reasoning about experimental controls between students who have been taught using extra critical thinking emphasis and those who have not.
3. There is no difference in reasoning about experimental findings between students who have been taught using extra critical thinking emphasis and those who have not.
4. There is no difference in reasoning about experimental conclusions between students who have been taught using extra critical thinking emphasis and those who have not.

## Methodology

*Participants*

Six intact biology classes from a high school in the Piedmont area of North Carolina were selected to participate in the study. The classes were selected by convenience sampling due to time constraints. The sample was composed of two regular biology classes and four honors classes. Each class comprised a research group of 17-25

students, for a total of 132 students. The high school is on a seven-period class schedule and is located in a district comprised of 48% white, 37% black, 14% Hispanic, and 2% Asian/Pacific Islander**.** One teacher was involved in this study and taught all six classes. The teacher assigned each student a number, so the student identities were only known to the teacher, not to the investigators.

*Approval Process*.

A proposal was approved by the Institutional Review Board (IRB) at Wake Forest University to obtain permission to conduct research with human subjects. Approval was also obtained from the school district, school principal, and the teacher.

*Study Design*.

The six biology classes were randomly divided into groups, and each was selected as either a control group or an experimental group. To ensure there was a standard class for both the experimental and control groups, the two standard classes were selected separately.

Before the study was conducted, each student was given a teacher-made pre-assessment of ten questions that addressed one critical thinking skill in each question. For three days, the control classes received the typical instruction, while the experimental groups had a ten minute class discussion concerning a scenario presented on the overhead then proceeded with the typical instruction. After the experimental classes read the scenario presented, the teacher facilitated a discussion with questions provided by the researchers. At the end of the study, the same teacher-made assessment was administered as a post-assessment.

*Analysis*

The pretest and posttest had a maximum score of 10 points. Each question was worth one point. The scores were separated into a control group and an experimental group. A paired sample t-test was performed to determine if there was a significant difference between the scores on the pre-assessment and the post-assessment for the experimental group and the control group. The number of correct answers for each question was also compared between the pre-assessment and the post-assessment by a paired sample t-test for the experimental group and the control group.

## Results

The pre-assessment and post-assessment scores were combined and compared for the control groups versus the experimental groups using the paired sample t-test. Only the experimental group was found to have a significant difference (Table 1) between the pre-assessment and post-assessment scores.

Table 1

*Comparison of mean scores from pre-assessment to post-assessment by research group*

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | Mean | Std. Deviation | Std. Error Mean |
| Group | Lower | Upper | Lower | Upper | Lower | Upper | Lower | Upper |
| Experimental | -5.600 | 2.54733 | .80554 | -7.42225 | -3.77775 | -6.952 | 9 | .000*** |
| Control | -1.600 | 2.31900 | .73333 | -3.25892 | .05892 | -2.182 | 9 | .057 |

* $\alpha<0.05$, ** $\alpha<0.01$, *** $\alpha<0.001$

The pre-assessment versus the post-assessment for the experimental groups and the control groups was also compared with a paired sample t-test for the number of correct answers from pre-assessment to post-assessment. It was found that the experimental groups improved significantly on the number of questions answered correctly (Table 2).

Table 2

*Comparison of number of questions answered correctly by research groups from pre-assessment to post-assessment*

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | Mean | Std. Deviation | Std. Error Mean |
| Group | Lower | Upper | Lower | Upper | Lower | Upper | Lower | Upper |
| Experimental | -1.13333 | 2.64554 | .34154 | -1.81675 | -.44992 | -3.318 | 59 | .002** |
| Control | -.15517 | 1.79475 | .23566 | -.62708 | .31673 | -.658 | 57 | .513 |

* $\alpha<0.05$, ** $\alpha<0.01$, *** $\alpha<0.001$

## Discussion

The results showed that there was an improvement in the post-assessment scores of the experimental groups. When the three experimental classes were combined and compared to the combined control classes, there was a significant increase for the experimental group and not for the control group (Table 1), which rejected null

hypothesis 1. There was a significant increase in the between pre-assessment and post-assessment scores between students who have been taught using extra critical thinking emphasis and those who have not. In looking at the number of questions answered correctly by the experimental groups versus the control groups, null hypotheses 2, 3, and 4 were rejected. There was a significant increase found in the ability of students to reason about experimental controls, experimental findings, and experimental conclusions (Table 2).

This study supports the results from previous studies that found critical thinking skills can be improved when extra critical thinking is implemented into the classroom curriculum (Case and Fry, 1973, Chapman, 2001, Sungar and Tekkaya, 2006, Walker et. al., 2000). It would be advantageous to conduct this study with more participants and over a longer period of time. This study was conducted in one high school using only one teacher's class due to time constraints. Conducting this study in a larger context would help to determine if significance could be observed for each experimental group. However for the purposes of this study, the results confirmed that including extra critical thinking emphasis in the biology classroom appears to increase students' abilities to reason scientifically about experimental controls, findings, and conclusions.

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**A Study of Teachers' Perceptions of the Importance of Homework in High School Mathematics**

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December 2007

Homework has been a staple in math education for many years. The hope is that repeated practice of the material will help students learn. It has recently become a hot-button issue in contemporary educational circles because there is great diversity in math classrooms in the amount of homework assigned and the importance placed on that homework. Keith, Diamond and Fine (2004) found that homework had a substantial effect on academic performance. Farrow, Tymms and Henderson (1999) suggest that lack of consensus among the research results proves that homework should be eliminated; they argue that homework can negatively impact family life.

There are now recommendations to reduce not only the amount of homework assigned but also the degree in which it affects a student's grade. There is also debate among researchers as to what matters most: amount of homework, frequency of homework, time it takes to complete homework, or how homework is graded.

**Review of Literature**

The research findings on homework vary between two extremes – either completely supporting its consistent use or denying its usefulness. Keith et al. (2004) studied the results of surveys completed by 16,000 students in grades eight through twelve using data from the National Educational Longitudinal Study (NELS). They concluded that out-of-school homework had strong positive effects on learning. The study revealed that homework completed out of school had a positive impact on GPA. In–school homework completion showed no positive gains. Their results also showed that motivation and initiative were higher when homework was completed outside of school. Keith's prior study (1982) of high school students revealed that homework was important in determining student grades, and he recommended more frequent and

rigorous homework assignments to increase achievement and confidence levels. He found that homework and grades had a positive linear relationship for all abilities and races. House (2004) affirmed Keith's assertion that more frequent homework assignments were necessary. His study revealed that the students who reported completing homework more frequently had higher achievement scores. However, he also found that doing homework in school had a negative impact on achievement, concurring with Keith et. al's study (2004). The use of class time to go over homework or check homework answers on the board was associated with lower achievement scores. His study stressed the importance of making homework assignments relevant to real-life situations. He stated that when the math had a clear connection to something tangible or relevant to the students' lives, they became more motivated to complete homework.

The research shows that the length of homework assignments is a matter of popular debate. Two studies concluded that homework should be assigned frequently, but the assignments themselves should be short in length (Cooper, Lindsay, Greathouse & Nye, 1998; Trautwein, 2007). Trautwein studied approximately 25,000 German students divided into three ability tracks – low, middle and high. Cooper et al. surveyed the students of 103 American teachers in grades 2-12. The amount of time spent on a particular homework assignment was not associated with positive achievement gains in either study. Trautwein argued (p. 82) – long homework assignments signified inefficient, unmotivated effort from students, especially struggling students. Cooper et al. asserted that long homework assignments led to mental fatigue and made the students uninterested in the covered material. Both studies recommended that teachers should do all they can to get parents involved in the homework discussion.

There is less research that reports homework as completely negative, but nonetheless Farrow et al. (1999) claimed that homework was ineffective and served mostly as a drain on family time and the students' other after-school activities. Their sample included 20,000 sixth grade students from 492 primary schools in England, and examined the relationship between homework and achievement. The study found that although there was a very small indication that frequent homework assignments may foster knowledge in math and science, there was no support for the "more is better" view

of homework (Farrow et al., 1999). The researchers concluded that homework was given too much credibility and taxed children with more work than was necessary.

Struyk (1995) surveyed teachers to ask about their beliefs about best homework practices. Surveying nearly 400 teachers using a scale from 1 (not helpful at all) to 4 (very helpful), the study found that about eighty percent of the teachers assigned homework at least 2 nights a week. Of the teachers who assigned homework, fifty-seven percent assigned 30 minutes or less per night while forty-one percent assigned 30 minutes to an hour. Teachers viewed using a homework assignment sheet and a notebook check as the most effective ways to approach homework.

Since there are such opposing and conflicting outlooks on homework's importance, there is a need for more research. This study sets out to explore the perspectives of what teachers think works best in regards to homework.

**Methodology**

A survey entitled *Homework: Is it important?* was constructed and posted on the *Survey Monkey* website – a free web tool for creating and administering surveys. To get a more holistic view of homework philosophies, the researcher collected the raw surveys and separated the data into different groups based on the survey responses.

A list of all high school mathematics teachers in Forsyth County, North Carolina was generated from the websites of each of the ten high schools in the county. All 120 teachers on the list were contacted by email and invited to complete the survey. They had three choices of completing the survey: (1) Web. They could follow a link to the survey on *Survey Monkey*. (2) Email. They could complete the attached *Word* version of the survey to return by email. (3) Mail. They could print the attached *Word* version to return by mail. All those who agreed to participate chose to complete the web survey. Out of 120 invited teachers, 45 completed the survey.

**Results and Conclusions**

After collecting all of the survey results, the researcher separated the data into four categories, one for each response to the question "How many years of teaching experience do you have?" The data was sorted in the context of teaching experience – 0 – 4 years (blue), 5 – 9 years (maroon), 10 – 19 years (yellow), or 20 or more years (pale green). The multiple choice question data was translated into graphs that compared the

responses of all four groups of teachers. The researcher examined the data for common trends and / or stark contradictions in the data. The data showed that although there were small differences in teacher beliefs on homework as the years of experience increased, the opinions of teachers were similar.

As seen in Table 1, 35 of the 45 teachers assigned homework 4 or 5 times a week, implying that most of the sampled teachers judge homework as important to student achievement. The 10 – 19 years experience range had the highest percentage of teachers assigning homework 4 or 5 times a week (87%). Next, 86% of teachers with 5 to 9 years of experience assigned homework 4 or 5 times a week. Novice teachers, with 4 or less years of teaching, assigned homework the least frequently, with 4 out of the 11 teachers in the subgroup assigning homework 3 days or less. Overall, teachers consistently assigned homework most every night.

When asked how much time was appropriate for students to complete homework in their classes each night, teachers had a bit more diversity in their responses. For every subgroup, roughly half of the teachers said that less than thirty minutes was appropriate, while the other half thought that between thirty minutes and an hour was appropriate. It should be noted that the oldest group
(in terms of experience) corresponded to the highest percentage of teachers stating that less than thirty minutes is an appropriate amount of homework (58%).

The question "Do you grade homework?" also produced fairly consistent results across the subgroups. Most teachers fell into one of three categories – checks homework for completion, checks homework for accuracy, or gives a homework quiz to make sure students are completing homework. Most (60 percent) teachers noted that they checked homework for completion. This is in large part due to the amount of time it would take to grade all homework for accuracy, but one teacher offered a different perspective on this policy: "Accuracy should not be measured on homework as this is the time I WANT them to make their mistakes." Exactly two teachers from each subgroup said that they checked homework for accuracy, while a more common policy was giving a homework quiz each week. It should be noted that none of the 5-9 years of experience teachers used a homework quiz.

Teachers were also asked to explain how homework factored into the semester grades their students received. It was interesting that 73% of the surveyed teachers counted homework somewhere between ten and twenty percent of the final grade. The next most popular category, with ten responses, was twenty to thirty percent. One teacher described that a homework policy should be set up so that it accomplishes the following: does not punish students (as far as grades are concerned) that score highly on tests and quizzes but do not complete homework, but if a student does not complete homework and is scoring poorly on tests, homework apathy provides an explanation to parents for a student's poor performance in class.

Teachers were asked to describe what types of homework problems they typically assign. Three choices were provided – questions that practice a particular method learned in class, problems that extend what was learned in class, or problems that introduce a new topic. The most frequent response was questions that practice a particular method learned in class, with 35 responses; however, 26 of those 35 teachers also responded that they assign questions that extend what was learned in class that day. The only inconsistency in the data for this question was that teachers with 5-9 years of teaching experience were the only subgroup to select extension questions more frequently than questions that practice particular skills.

After analyzing the survey data, it is clear that the majority of teachers in this study have homework philosophies close to the following: homework should be assigned mostly every night (except for the day of a test or quiz), should take around 30 minutes to complete, should be checked for completion the next day in class, should count somewhere between 10 and 20 percent of the students' final grade, and should practice skills or extend concepts from the day's class. This study's results were surprisingly homogenous, unlike the breadth of research that portrays homework as a difficult topic that warrants little consistency of opinion. Many teachers suggested that they assign longer and harder homework assignments for their honors classes. Is this fair? Is it appropriate to punish honors students with longer and harder assignments just because of their record of high performance? Several teachers contradicted this idea, saying that less emphasis should be placed on homework in honors classes because the students need less practice. Also, many teachers believe that these students will complete the homework for

intrinsic reasons, so lauding homework as important is unnecessary in these classes. Teachers did, however, consistently respond that "regular" classes should be assigned more skill-based problems. One teacher stated, "Learning by repetition is an approved method. Homework provides this." Many teachers held this view, believing that "regular" classes needed problems that practiced skills, because there simply wasn't enough time in class to master the material. Yet many of these same teachers stated that it was very difficult to get students to complete homework.

One teacher stated, "Low level students will not do [homework]. It only makes their grades worse." This type of frustration suggests that maybe a new homework policy is appropriate. However, there is no doubt that most of these teachers viewed homework as necessary for reaching high achievement. This study provides evidence that although these teachers were overall consistent in their responses, they may not have reached satisfaction with the homework issue.

These results cannot be considered conclusive because all of the participating teachers were located in the same county and they were volunteer participants. To gain truly representative conclusions, the study would need to be carried out with a much larger sample from diverse regions.

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**Teachers' Use of Small Group Instruction in the Social Studies Classroom**

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In a National Council for the Social Studies publication, Stahl (1992) argues that research, "strongly indicates that appropriate cooperative learning groups can result in large numbers of students achieving our expectations for them both inside and beyond the social studies classroom" (p. 8). This study will analyze how a group of high school social studies teachers views small groups, fits small group instruction into their teaching philosophy, and implements these techniques in their classroom.

## Review of Literature

When small group instruction is utilized in the classroom, teachers are able to prepare students for cooperation rather than individual competition. Small groups can achieve a whole new set of skills that individual instruction cannot (Berkovitz 1975, Leming, 1985). Nonetheless, the quality of small group interaction is more important than the frequency in determining the extent of these positive effects (Battistich, Solomon, & Delucchi,1993; Shachar & Sharan, 1994; Jacob, 1999).

Much like the broader idea of small-group instruction, cooperative learning allows students to engage with the material and with other students to process the content on a deeper level. Beyond working with others, cooperative learning pushes students to value and invest in the success of their classmates, create more genuine interethnic cooperation (Shachar & Sharan, 1994), improve general academic achievement (Shachar & Sharan, 1994; Klingner, Vaughn, Schumm, 1998; Jacob, 1999), bolster student motivation (Garibaldi, 1979), increase time on task (Cohen & Benton, 1988), and lift student self-esteem (Johnson & Johnson, 1989).

Cooperative learning has been repeatedly supported by research, but no matter the benefits advanced by cooperative learning, the role and the decisions of the teacher determines the use, context, and effectiveness of cooperative group learning (Battisch, Solomon, & Delucchi, 1993; Mennecke, Bradley, & McLeod, 1998; Maloch, 1999;). In a

survey of social studies teachers, one study found that teachers often overlook small group instruction (Hacker & Carter, 1987). Adding to the time needed to make small groups work, students need training to complete the interactional aspects of the small-group activity because they do not usually cooperate in this manner (Maloch, 1999). In the end, the teacher's goals for students largely determine whether they use cooperative learning or not (Jacob, 1999).

Cooperative learning has been proven as an innovative concept that has the ability to reshape classrooms. This study seeks to find out what objectives a group of social studies teachers cite for using small group instruction, how often they use small group instruction, and how they implement these techniques. The purpose of this research is to understand the reality of cooperative learning in social studies by observing and analyzing the opinions, beliefs, and actions of a diverse focus group.

**Methodology**

An initial survey was sent to all high school social studies teachers in an urban school district in the Piedmont Triad region of North Carolina, and it collected demographic information, frequency of small group instruction in their classroom, and activities conducted in these small groups. Responses from fifteen teachers were collected and analyzed using basic statistical measures. Drawing upon respondents to the initial questionnaire, six teachers were selected for more in-depth observation and interviews based on their responses to small group frequency, creating a stratified sample. For the interview, construction of questions was directed by Patton's (1990) interview guide. One interview was conducted with each subject, and the questions asked teachers to expound upon their survey answers. Responses were analyzed to create common categories between the participants' answers (Strauss & Corbin, 1998). To triangulate the conclusions of surveys and interviews, classroom observations were conducted of teachers (C, D, E, & F) who used a small group activity during the research period (Spradley, 1980; Miles & Huberman, 1984).

**Results**

Among the fifteen respondents that completed a questionnaire, all reported using small group instruction. Three respondents reported using it one to six times per year, ten

used it one to four times per unit, and one respondent uses small group instruction everyday. When ranking their major goals for their students, thirteen of the fifteen respondents listed content knowledge or thinking skills as their top goals, with only one respondent ranking healthier student interaction as their major goal. Eleven of the fifteen respondents ranked healthier student interaction in their bottom two goals while four respondents ranked it in their top two.

Moving to the second level of research, the six participants chosen had very different approaches to small-group instruction. There were two basic groups of respondents. The first group of three participants (A, B, & C) recognized the benefits but used small groups one to six times within the last year. The second group of three participants (D, E, & F) supported small groups and used them one to six times per unit. Despite the varied sample, both groups of teachers recognize the unique opportunity small groups provide for meaningful discussion. Furthermore, when participants explained the skills necessary for students to succeed in small groups, they all quickly brought up background knowledge or content-related skills. After content, the teachers usually mentioned that students needed to know how to work together. However, when asked how students acquire these skills, four of the teachers said they did nothing beyond enforcing rules. In contrast, teachers B and E acknowledged a need for training, but they did not know how they would train students.

Although there are similarities between the two groups, Participants A, B, and C do not use small group instruction as frequently as the other participants do. Regardless of different teaching environments and experience levels, all three assert that group work cannot transmit new information. Teacher A explains that it is difficult to keep students on task and engaged with the material. Though Teacher A says that it is ridiculous to think that students will spend all class talking about the content, the interaction between text, student, and student is not as efficient as the interaction between text and student. Agreeing on the inability of small group instruction to engage every student, Teacher C argues that some students are simply unable to work in groups. Whether they lack the maturity or the initiative to work well in groups, this participant says that the free-loader effect and intra-group conflicts are enough of a problem that teachers should avoid certain forms of group work. In contrast, Teacher B recognized the positive influence

small group instruction could have on students' conflict resolution skills and their ability to synthesize information with others, but with literacy as the major goal, this participant cautioned against using groups for the sake of using groups.

The second group stands out as the most supportive of small-group instruction. All of these individuals use small-group instruction regularly in their classroom and see its benefits. Though the second group shared many of the same goals as those in the first group, including mastery of content, this group was more likely to highlight increased social and group skills as major goals for their students. Teacher E achieves this goal by selectively placing the students into groups depending on the assignment and says that the goals that teachers have for their students largely determines how they use small group instruction. Because Teachers D, E, and F hold better student interaction at a similar level to academic achievement, they use groups more and do it differently than those that do not see it as important. Besides the focus on social skills, this cohort argues that groups can also be a way to engage new content.

Either from their explanations in our interview or from my observations, Teachers D, E, and F create activities where there is positive interdependence, face-to-face interaction, and individual accountability. However, Teacher E is the only teacher to process through group work as a class. In class, students openly volunteered stories of group experiences. Combined with Teacher E's selective pairing of students, cooperation seemed to be more organized because students understood their roles and how to avoid bad group experiences.

**Conclusions**

From the data in this study, it is clear that teachers recognize how small group instruction can increase engagement, and vary instruction. However, some teachers worry about leaving some students behind or fear that some students cannot work with people in groups. To increase use of groups among these teachers, they need techniques that assess students individually during group projects and train students to work effectively in a group.

Though these new methods could improve small group instruction, my interaction with these teachers underscores the fact that the goals teachers lay out for their students is one of the best factors in determining what type of instruction they will use. In the initial

survey, teacher experience and level of teacher education did not predict the frequency of small group instruction. Instead the most successful predictor of small group instruction was where the individual ranked healthier social interaction in their list of goals for their students. If Leming's (1985) call for a more cooperative school environment to match a cooperative professional environment is going to work, researchers, administrators, and teaching instructors need to inspire teachers to advance the goals of cooperation and positive interaction and explain how small groups can help them reach their goals.

Although teachers D, E, and F all spoke about small group instruction as a valuable and necessary method of achieving their goals for their students, their actual practices of using small group instruction varied greatly. Similar to the choice of whether to use small group instruction or not, teachers make decisions on how to implement small group instruction based on their goals for their students. For example, student-teacher interaction is a necessary component of small group instruction. When teachers had to focus on finishing paperwork or other distractions, groups were less focused. The data suggests continued training is necessary to ensure that teachers are using groups in the most effective manner.

Though three of the teachers used small group instruction as a large part of their instruction, only one teacher, Participant E, uses cooperative learning as it is defined in the literature. There are five different categories that are essential for cooperative learning: positive interdependence, face-to-face interaction, individual accountability, social skills, and group processing (Klingner, Vaughn, & Schumm, 1998). As mentioned in the results, Teachers D and F meet the first three objective as they design and implement small group instruction in their classroom. In the sample, there was no mention of developing social skills or of group processing, except for Teacher E. By paying close attention to the grouping of students and discussing the positives and negatives of group work with students, Teacher E is creating a place where students can effectively work together.

More extensive research is needed to determine the consistency of cooperative learning in the classroom and the effect that it has on academic and cooperative success. This study was not geared to measure the outcomes of the action but rather teachers' perceptions of small group instruction. The data suggests that teachers recognize the

value of small group instruction, but more needs to be done to connect the benefits identified in the research with the teachers' goals. As teachers face pressures for producing academic progress or promoting skills such as literacy, the data in this study show that teachers need ways to accomplish the academic goals while helping students work better in groups. If we want to prepare students for a dynamic and collaborative world, there is really no other option.

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**Objectively Stated: The Role of Explicit Learning Objectives in Creating a Constructive Class Environment**

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## Introduction:

The No Child Left Behind Act of 2001 stresses distinct objectives in order to define the starting and the ending points of modern American education. As American education moves toward NCLB's explicitly stated objective—one hundred percent proficiency by 2014—it is appropriate to examine the impact of explicit objectives on a smaller scale. Narrowing the scope of explicit objectives from several years to a unit or even a class period helps to evaluate Robert Gagne's insistence on learning objectives. Gagne (1992) contends teaching should progress according to a series of nine "events of instruction" which he says are vital to profound education (p. 11). The second of Gagne's events, "informing learners of the learning objective," illustrates a central tenet in both Gagne's theory and the modern era of accountability (1992, p. 11). To Gagne and the current American educational philosophy, learning should be predictable, quantifiable, and therefore, accountable. This study evaluates Gagne's insistence on explicit learning by examining the role of clearly delineated learning objectives in promoting student engagement and in creating a constructive class environment.

## Review of Related Literature:

Robert Gagne (1992) outlines his version of effective teaching in the *Principles of Instructional Design.* Objectives, central to good instruction, must be "clearly and unambiguously stated" (Gagne, 1992, p. 125). This allows educators to quantify outcomes of instruction to various parties such as students, teachers, parents, administrators, and policy-makers (Gagne, 1992, p. 126). Without such precision,

students are less likely to pursue and accomplish teachers' desired instructional goals (Gagne, 1992, p. 126).

Matthew W. Kirkhart's study (2002) echoes Gagne's principles. He claims that only learners engaged in "explicit learning demonstrated significant knowledge acquisition" whereas "implicit learning procedures appeared to have little impact on performance or knowledge acquisitions" (Kirkhart, 2002, p. 40). In other words, Kirkhart believes that the active process of explicit learning leads to knowledge acquisition and that implicit, passive pedagogy had little observable outcome on student learning.

David P. Ausubel (1963) presents the idea of advance organizers and "didactic exposition" (p.81). While his conception has been criticized for its vagueness, it strongly suggests the use of explicit learning objectives. Ausubel describes advance organizers as being "presented at a higher level of abstraction, generality, and inclusiveness" prior to the lesson (p. 81). The organizer is crucial because of its "suitability for explaining, integrating, and interrelating the material" (Ausubel, 1963, p. 81). Ausubel's organizer is distinct from a summary because of its focus on integrating new information with existing schemas. Due to its educational relevance, Ausubel contends that an organizer such as a learning objective should be used in advance of a lesson or series of lessons.

Yet research concerning learning objectives is inconclusive. Some theorists contend that explicit learning objectives do not generate powerful learning and higher-order thinking. For instance, David Shanks, Theresa Johnstone, and Annette Kinder differentiate between the procedural, abstract knowledge inherent to implicit learning and the specific, declarative knowledge inherent to explicit learning (French, 2002, xxi). These theorists believe potent content knowledge and practical understanding comes from implicit learning and that learning objectives are superfluous.

Much of the related literature seems to support Gagne's fixation on learning objectives, but it is still unclear whether explicit learning objectives lead to a constructive, potent learning environment capable of fostering true learning. Therefore, more extensive research is appropriate.

**Methodology:**

This qualitative study examined four English teachers (A, B, C, and D) and their

students at a secondary school of approximately 1750 students in Winston-Salem/Forsyth County, North Carolina. Subjects for this non-participant, observational study came from a stratified sample to get a population of diverse abilities from grades 9-12. Class designations included remedial, standard, honors, seminar, and advanced placement. Efforts were made to observe multiple ability levels for each teacher to increase validity and reliability of results. Class sizes varied from 7 students to 30 students. The observed population did not exclude students based on gender, race, or ethnicity; it appeared that the sample population included a representative sampling from multiple racial and ethnic sub-groups.

Ten class periods of each of the four English teachers were observed for a total of forty observation periods. To make the procedure less subjective and to increase validity, detailed field notes were recorded as soon as possible. The following evaluation rubrics were used to observe teacher and student markers:

## Rubric One

| Teacher | Expressed Learning Objective? | Objective Referenced in Instruction? |
|---|---|---|
| A,B,C,D | Yes or No | Yes or No |

## Rubric Two

| STUDENT MARKER | PRESENT? (Y/N) | DEGREE (WEAK, MODERATE, STRONG) |
|---|---|---|
| Targeted/relevant questions | | |
| Extended responses | | |
| Enthusiastic/positive attitude | | |
| ***Side conversations*** | | |
| ***Distractions (notes, cell phones)*** | | |
| ***Teacher reprimands*** | | |

The teaching act was recorded using rubric one which indicates the presence of learning objectives and the explicit incorporation of objectives into instruction. If a learning objective was written or verbalized in the first few minutes of the class, then there was a positive presence of an expressed learning objective. If learning objectives were present, then the integration of learning objectives into instruction was noted. Conversely, if the lesson did not begin with a written or stated learning objective, the presence of a clearly delineate learning objective was recorded as "no."

Markers to assess student response to the teaching act (a clearly expressed learning objective) were also recorded from observation throughout each class period. Rubric two, seen above, served as a baseline for observations. Constructive student markers included targeted and relevant questions, extended student responses, and enthusiastic and positive attitudes. Destructive student markers included side conversations; distractions such as notes, cell phones, and class work for other classes; and teacher reprimands. Teacher reprimands, while a teaching act, served as an observable outcome that signified inappropriate student behavior. For each class, the presence and relative frequency of both destructive and constructive student markers were recorded. For instance, if a class appeared to have targeted and relevant questions, it would be recorded as a positive presence of targeted and relevant questions; if these potent questions occurred frequently, the degree would be recorded as strong. Observations were founded on the rubric, but generalities such as classroom tone and mood were also recorded for better insight and to help corroborate data during analysis.

Analysis of the teaching act and student markers began by transferring recorded notes to a password protected computer. From here, field notes were compared to determine the prevalence of explicit learning objectives for each teacher, the incorporation of learning objectives into instruction, and the presence and degree of student markers for each teacher. Results from this analysis were compared among teachers to detect trends in the use of learning objectives. Analysis and results suggest whether Gagne's second event is, in fact, vital to creating a constructive learning environment. From this analysis, suggestions are made about the employment of explicit learning objectives in future classes.

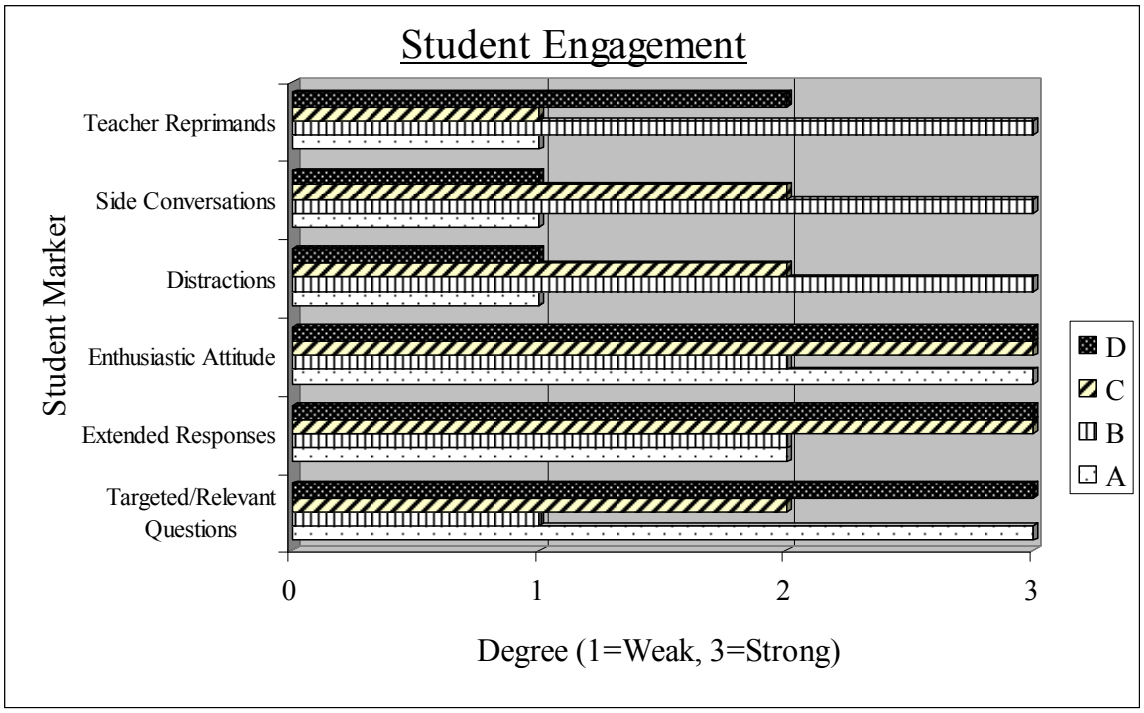
**Results and Implications:**

There was substantial variation among the observed teachers' use of explicit learning objectives and their incorporation of learning objectives into their instruction. Below is a table illustrating this variance:

| Teacher | Expressed Learning Objective? | Objective Referenced in Instruction? |
|---|---|---|
| *A* | Yes | Yes |
| *B* | Yes | No |
| *C* | No | N/A |
| *D* | No | N/A |

Two teachers used written learning objectives (A and B) and two teachers did not use learning objectives (C and D). Of the two teachers that used learning objectives, only one referenced them during instruction (A). Teacher B utilized learning objectives daily but failed to consistently and clearly reference objectives during instruction.

Student engagement markers for each of the teachers have several interesting implications. Below is a graphic representation of student engagement for all of the teachers:




Teacher A had a weak overall presence of destructive markers and a strong overall presence of constructive student markers. Teacher D also had a low presence of

destructive markers and very strong constructive markers. Teacher C had strong constructive markers and moderate destructive markers. Teacher B had strong destructive markers and moderate constructive markers. Results suggest the two most constructive learning environments were those of Teacher A and Teacher D. Teacher C had a moderately constructive learning environment, while Teacher B had the least constructive learning environment.

These results are interesting because one of the two teachers with constructive learning environments used learning objectives while one did not. The teacher with the least constructive learning environment used learning objectives but failed to reference them during instruction. This implies that learning objectives are not necessarily indicative of great teaching. Rather, data suggests that learning objectives are only effective facets of instructional design when deliberately and seamlessly incorporated into instruction. Otherwise, it is better to abstain from using learning objectives altogether.

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# The Problem with Word Problems

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## Introduction

In *Principles and Standards for School Mathematics*, The National Council of Teachers of Mathematics (NCTM) outlines sixteen principles and standard that should be used to shape a quality mathematics education (2000). Of these, the problem solving standard suggests that students should be able to apply what they learned to solve problems, using a variety of appropriate strategies. With this notion in mind, it becomes apparent that students of mathematics should be able to do more than solve direct computational exercises, but should be able to apply an array of strategies to solve problems presented in a variety of ways; more specifically, they should be as comfortable with mathematics word problems as they are with more direct computations. If word problems do indeed require the same amount of mathematical "know-how" as more straightforward computations, then the inability of students to adequately interpret and solve word problems should be examined to determine what factors inhibit them from doing so.

## Review of Related Literature

Research points to several factors that contribute to students' difficulty in solving word problems. Studies have sought to identify a single factor in student cognition and specific structural elements that lend themselves to an increased ability to solve such problems, but there are conflicting results

One element of student cognition, examined in a study by Nasser and Carifio (1993), includes, among other things, how field dependence or field independence affects ability to solve word problems. Field dependence/independence pertains to the extent to which a student is influenced by "the field", which can be perceptual or abstract, from which the task is to perceive specific subsets. In the study, it was shown that field independent learners consistently scored significantly higher on world problems than did

field dependent learners. Field dependence/independence has also been examined in relation to gender and ethnic group. According to Robert Fritz (1992) and B. Hudgnes (1993) male nonminority students are generally more field independent than females and members of minority groups. This cognitive predisposition may be one of several factors to the stark gap in mathematics achievement between genders and ethnic groups.

The concept of field dependence/independence is, however, but one approach to student styles of cognition. Gregorc (1979) presents a model of learning style based on the means by which the brain perceives information, either abstractly or concretely, and then orders that information, either sequentially or randomly. Solving word problems, by nature of having to logically remove relevant information from a larger context, and then operate systematically to solve the underlying problem, is better suited to abstract sequential learners. In a 2001 study of university students, Ross, Drysdale, and Schultz (2001) found a significant correlation between learning style (as found by the Gregorc Style Delineator) and the overall performance of postsecondary students in their mathematics and computer science courses. Results indicated that students identified as abstract-random learners preformed most poorly, and abstract sequential learners did indeed perform at the best, although there was no significant difference in performance between abstract sequential students and their concrete-sequential counterparts.

A third factor in student achievement is linked to whether or not students believe that they are themselves able to perform well (Dweck, 1999). Students that believe they are able to perform, often achieve higher than their ability levels might indicate, whereas students that do not hold this believe, tend to achieve lower than their ability levels might indicate.

Research has been done to investigate whether the context in which the problem is set makes a significant difference on student performance. NCTM, in *The Curriculum and Evaluation Standards for School Mathematics* (2000) makes specific recommendations for modifying instruction, including increased attention to extended problem-solving and connecting mathematics to the world outside of the classroom, decreasing attention to routine and developing mathematic rules out of context. In a study on the influence of problem context on mathematics performance, Webb and Yasui (1992) sought to determine whether working with more realistic (and lengthier) problems

during instruction and assessment would make students better able to solve story problems. Results indicated that there was no significant difference in computational abilities in the two groups.

It is clear that the difficulties that students have with word problems, rise from both the differences in student cognition as well as with the structure and context of the word problems themselves. The two factors are interwoven, perhaps in such a way that purely empirical data, coding student and/or problem types and then calculating scores after the test instruments are completed purely in terms of right in wrong, will not be able shed any true insight. It is the aim of this research to more carefully examine the relationship between student cognition and the wording and structure of word problems, during the solving process, to better identify the source(s) of problem-solving difficulty.

**Methodology**

Participants in this study were ten teacher-identified Algebra 2 students from two North Carolina high schools. Each participant was given twenty minutes to complete a set of five word-problems, during which they were asked to talk aloud about their problem-solving process. After the problem set was completed, participants were interviewed about their general difficulties in problem solving. Sessions were audio taped.

**Results and Implications**

Tests were scored at the end of each interview. Each participant's test was then cross referenced with sessions as well as investigator notes and the recorded audio sessions. Incorrect responses could be linked to an error in one of three places along the problem solving process: an incorrect interpretation of or inability to understand the problem, flaws in the setup of the problem, and/or errors in computation. Further review of the tests led to a fourth point of error, whether or not student responses were relevant to the question that had been asked. These error types gave rise to two thematic difficulties students had with solving word problems: improper interpretation of the problem, and willingness to provide contextually irrelevant responses. Review of investigator notes and student interviews gave rise to two additional themes: text anxiety and expectation of having difficulty, and inability to discard information irrelevant to the problem.

Five students identified themselves as generally having difficulty in solving word problems prior to being given the test instrument. Of the five, three did not a make an attempt at the first problem, surmising that it would prove to be too difficult, without reading the problem in its entirety. These expectations fluctuated during the course of the test as well, due to performance on each individual question as time progressed. Students perceived the test would become increasingly difficult as it progressed, and so were generally less motivated to continue when they were unable to produce a solution they considered satisfactory. Conversely, students that read the test instrument in its entirety before beginning were able to identify and mark one or more problems they felt could be solved easily. In general, these students were conscientious about rereading the problem(s) they had marked, and making an earnest attempt to solve them before moving on to the next, if necessary.

In several instances, participants were not able to correctly identify what the problem was asking, such was the case for two participants on question one, three on question three, two on question four, and again three on question five. There were no commonalities in the comments made concerning questions four and five; however, each of the students had similar problems with understanding the first two. This inability in large part, seemed to result from their inability to pull out important information from the problem, and then discard the rest. Of the five participants that understood what was being asked in all of the problems, four of them meticulously examined each problem, underlining important phrases and numbers in the problem. While this did not guarantee that these four set up each of the problems correctly, these students were better able to articulate information that they felt was needed or steps that they admitted to having forgotten that would be necessary to going further in the problem.

It is clear that a student's understanding the problem did not always indicate that he or she would move on to setting up the problem correctly. However, they were able to make at least reasonable guesses that could be checked and then modified until a final answer was decided upon. In most cases, students that did not understand what the problem was asking were unable to properly set up the problem in a way that could provide a meaningful answer. In these instances, students were less willing to hazard

even a guess, and those that did, were less likely to provide an answer that was in proper context to the question asked.

In several instances, students' decisions to give responses that were not relevant to the problem, were due in large part to their willingness to blindly trust the calculator for correct responses. In problem one for example, students who chose to solve the problem by graphing the given lines in the system were all first inclined to answer incorrectly, based on how the system appeared in the standard viewing window. In other problems, small errors in calculator input resulted in incorrect answers, many of which puzzled the participants, but were not correct.

Students' expectations are steeped in previous performance. Continuing to perform poorly only increases their expectation to continue to perform poorly, which in turn increases the chance that they will indeed be unsuccessful in solving word problems. While this general belief may not be malleable within the context of one math course (as students may have become increasingly less confident in their abilities to perform over the course of their entire school careers), it may be possible to keep motivation high throughout the test. By varying the type and difficulty of problems throughout a given assessment (as opposed to placing all word problems and problems of highest difficulty in one area of the test) students have opportunities to be successful throughout the entire assessment, instead of reaching a "cutoff point" and then being faced with problems they will not be able to solve. Furthermore, it cannot be assumed that the ability to solve problems will stem naturally from learning the mathematics necessary to solve it.

To begin, the marked decrease between the percentages of students that understood what the given problem was asking and those that could properly set up the necessary equations to solve the problem implies that students struggle with translating the story of the problem into the symbolic language of mathematics. Specific instruction is needed in the areas of reading problems thoroughly and carefully as well as *how* to determine what is relevant to the problem.

Finally, students should be taught the value of careful reflection over the problems, in a way that extends beyond the mantra of "check your work." In this way, students often check over calculations that do not relate to the problem and whose correct answers, are not the answer the given problem. A student who carefully reflects on the

problem statement, the type of answer he or she is looking for (a date, a dollar amount, etc), and what a reasonable answer might be, is less likely to accept glaringly incorrect answers that may have risen from careless mistakes or calculator error.

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# Talkin' Shop: The Use of Slang in the Secondary English Classroom

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## INTRODUCTION

Edwin Battistella (2005) reveals in *Bad Language* that a certain contradiction, though "perhaps socially justified" (v.), undermines the entire teaching enterprise. He confesses "that many traditional rules of grammar and exposition are essentially arbitrary, [yet he continues] to teach them because they are expected" (v.). Battistella is somewhere in the middle of the long-standing debate between descriptive and prescriptive linguists. In *Bridging English*, Milner and Milner (2008) define both sides of the argument. They explain how descriptive linguists "make some judgments about the efficacy and aesthetics of language, but largely . . . are permissive about what is brought into common discourse" (p. 68). On the other hand, prescriptive linguists are protective of "correct English [and oppose] colloquial styles of speech in favor of more formal ones" (from the preface to Samuel Johnson's *Dictionary* as quoted in Milner, 2008, p. 68).

In order to develop associations between teachers' stances on language and heightened communication in the classroom, I investigated where four Master Teachers stood in the descriptive versus prescriptive debate over oral language, while simultaneously observing student engagement in their classrooms.

## REVIEW OF LITERATURE

Robert Pooley (1995) suggests a "satisfactory synthesis" (p. 83) of the two linguistic viewpoints. He notes that among grammarians and teachers, the dominant stance on language "ever since the eighteenth century has been almost exclusively on the side of restraint and fixation" (p. 83). In his 1933 article (re-printed in 1995), "Correct English for Modern Needs," Pooley discusses the Leonard monograph, which compiled research on the attitude and method of approach to English usage problems in America.

Among the pioneer studies of modern language, the monograph demonstrated how one can "arrive at a standard of good current English by the objective study of specific language forms" in our culture (p. 83). Although the National Council of Teachers of English did not accept responsibility for the content, it endorsed the monograph as "intelligent and noteworthy research" (p. 83). The Council's stance created a buzz in the media, as critics suggested that teachers sought to lower standards and create "a middle-class English" (p. 83). Proponents of the monograph, like Pooley, a career-long professor of English at the University of Wisconsin, say it stands "as a monument" (p. 83) and call for more studies to better understand the ever-changing forms of the English language.

Teacher-research is a primary source of valuable data and observation on language, as the descriptive versus prescriptive debate rages on today. In her high school English class, Christensen (1990) discovered a student who "wrote to avoid errors instead of writing to communicate or think on paper" (p. 37). As a result, she challenges the prescriptive linguist's dependence on rules because "more attention is paid to the way something is written or said than to what is said" (p. 37). Furthering the descriptive side of the debate, Whitfield (1993) reports that his "students experienced the intrinsic rewards of learning" (p. 40), when they compiled a dictionary of slang words. On the other side of the debate, in her crusade against the word 'like,' Wanket (2006) uses "old-fashioned activities [such] as memorization of Shakespeare, public speaking, and putting on plays" to help students develop their voices and avoid "annoying and extraneous fillers." (p. 18). Larson (1996), however, aims to rid his classroom from the feeling "that errors in usage are cause for alarm and shame" (p. 95). He references Lisa Delpit (1995), who builds a bridge between rules and free expression in the classroom by recommending that teachers "support the language that students bring to school, provide them with input from an additional code, and give them opportunities to use the new code in a non-threatening, real communicative context" (as quoted in Larson, p. 93).

**METHODOLOGY**

The participants for my study were four English teachers and their students at East Forsyth High School in Winston-Salem, North Carolina. All grades (9-12) and ability levels (regular, honors, seminar, advanced placement) were represented. Class size varied from 15-30 students and averaged about 24 students. I collected data from 10

hours of observation of each teacher for a total of 40 hours of observation. All of the subjects in my study were kept anonymous. Each teacher was assigned a hidden identity marked by a variable (i.e., Teacher A, B, C, and D), and the pronoun, 'she,' is used to refer to each teacher, despite his or her actual gender, in this report.

I tallied the instances of student- and teacher-uttered slang and examined the teachers' responses to student-uttered slang, classifying them as *receptive*, *passive*, or *resistant*. *Receptive* responses occurred when the slang usage was treated as if it was Standard English and discourse related to the classroom topic ensued between teacher and student. *Passive* responses occurred when the slang usage was disregarded and the student's comment (or at least the part of it that included slang) was ignored by the teacher. *Resistant* responses occurred when the slang usage was identified and corrected by the teacher. Observational field notes were taken on the types of slang that occurred in the classrooms and the strategies used to either encourage or rectify the incidence of slang. I determined language as slang if it fit into the following categories: pop-culture expressions (e.g., "true dat," "chillin' out," "that's whack"), extraneous fillers (e.g., "whatever," "like," kind of"), 'lazy' words (e.g., "yeah," "hah," "yay"), curse words (e.g., "dammit," "freggin," "crap"), and other not-so-pop expressions (e.g., "okey dokey").

My first objective was to identify where the 4 Master Teachers stood in the prescriptive vs. descriptive debate. I examined the total number of instances of teacher-uttered slang and the total number of instances of student-uttered slang in each of the four classrooms. Then, in order to gain a more complete representation of the teachers' viewpoints on language, I determined the percentages for *receptive*, *resistant*, and *passive* teacher responses to student-uttered slang. In addition, I reviewed observational notes about specific classroom interactions and compared them with the numerical findings in order to make a final assessment.

I also measured student engagement over the course of the 40 hours of observation in each of the classes. I quantified engagement by tallying cues of active participation categorized as such: individual responses (succinct, elaborative, and disclosive), group shout-outs (more than one student answers), and student-centered discussions, and questions. The results were compared and contrasted to reveal trends in

data that suggest what effect a teacher's stance in the debate on language has on promoting heightened communication in the classroom.

**RESULTS AND CONCLUSION**

All of the observed teachers uttered slang and had students that uttered slang in their classrooms. However, the number of instances of each varied:

**Table 1: Total Instances of Teacher-uttered and Student-uttered Slang**

| | Classroom A | Classroom B | Classroom C | Classroom D |
|---|---|---|---|---|
| Teacher-uttered | 87 | 4 | 63 | 5 |
| Student-uttered | 10 | 17 | 39 | 62 |
| Total | 97 | 21 | 102 | 67 |

Teacher A used the highest amount of slang, Teacher C used the second highest, Teacher D used the third highest, and Teacher B used the least amount of slang in her classroom. With 87 and 63 instances of teacher-uttered slang, respectively, Teachers A and C demonstrated similar propensities for using slang in the classroom. Therefore, they each displayed a fitting characteristic of a descriptive stance on language. With 4 and 5 instances of teacher-uttered slang, respectively, Teachers B and D were alike in their limited use of slang in the classroom. Therefore, they each displayed a fitting characteristic of a prescriptive stance. By having the lowest number of instances of student-uttered slang occurring in her class, Teacher B further demonstrated a prescriptive stance, whereas Teacher C, who had the second highest occurrence of student-uttered slang occur in her classroom, further demonstrated a descriptive stance. By having the lowest and the highest numbers of instances of student-centered slang in their classrooms, Teachers A and D, respectively, demonstrated incongruent attitudes to language from the first set of observed data (teacher-uttered slang). A breakdown of their responses to student-uttered slang, however, provided clarification to this anomaly:

**Table 2: Percentages for teacher responses**

| | Teacher A | Teacher B | Teacher C | Teacher D |
|---|---|---|---|---|
| Receptive | 40% | 6% | 49% | 11% |
| Passive | 40% | 53% | 36% | 84% |
| Resistant | 20% | 41% | 15% | 5% |

Although she experienced the lowest amount of student-uttered slang in her classroom, Teacher A demonstrated the second highest percentage of receptive responses to student slang (40%) and the second lowest percentage of resistant responses (20%), thus re-affirming her descriptive stance on language. While Teacher D experienced the highest amount of student-uttered slang in her classroom, she also demonstrated an overwhelmingly high percentage of passive responses to such language (84%). In addition, only 11% of her responses were resistant. Since passive responses suggest no real indication of prescriptive or descriptive beliefs, Teacher D's infrequent use of slang remained as the most suggestive indicator of her stance on language.

**Table 3: Student engagement**

| | Succinct Responses | Elaborative Responses | Disclosive Responses | Group shout-out | Student-centered Discussions | Questions | Totals |
|---|---|---|---|---|---|---|---|
| A | 56 | 19 | 2 | 22 | 1 | 17 | 117 |
| B | 136 | 57 | 6 | 45 | 2 | 27 | 273 |
| C | 107 | 9 | 3 | 20 | 1 | 22 | 162 |
| D | 103 | 87 | 16 | 24 | 4 | 28 | 262 |

According to my data, Teachers A and C, who demonstrated the strongest observed characteristics of descriptivism, yielded the lowest amounts of student engagement in their classrooms (117 and 162 instances, respectively). On the other side of the debate, Teachers B and D, who demonstrated the strongest observed characteristics of prescriptivism, yielded the highest amounts of student engagement in their classrooms (273 and 262, respectively). In addition, Teacher D experienced the highest number of instances of the most telling indicators of enhanced student engagement (elaborative response, disclosive response, student-centered discussions, and questions) in her classroom, as students discussed topics in greater depth, conversed more among their peers about class-topics, incorporated more personal experiences into their responses, and asked more questions about the information that they encountered. The data, therefore, suggest that Teacher D's prescriptive stance on language (marked by low personal-use of

slang and highly-passive response to student-uttered slang) contributed to a higher level of engagement than the alternative stances, which I observed in this study. Hence, according to my research, low occurrences of teacher-uttered slang and a high number of passive or resistant responses to student-uttered slang are associated with higher levels of student engagement than high occurrences of teacher-uttered slang and a high number of receptive responses to student-uttered slang.

In the small world that was my research field, I was surprised to find such varying stances in the prescriptive versus descriptive debate over standard language. Still, I am reluctant to suggest that the use of slang in the classroom has a direct effect on student engagement without more extensive study, which takes into account other factors, like teaching styles (i.e., lecture-based, whole-class discussion, types of questions asked, etc.), ability level (i.e., standard, honors, and AP), grade level, English as a Second Language considerations, etc. Before heading into this study, I thought that teacher use of slang and receptive responses to student-uttered (within reason) would create an environment where students felt more comfortable to express themselves. My findings, however, suggest that a more disciplined treatment of language in the classroom can act as a proponent for heightened student communication, as well. I urge teachers, as I urge myself, to consider these findings and embark on further research to find the best way to treat oral language in the classroom and help students express themselves both appropriately and powerfully in today's world.

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**Primary Source Documents and Standardized Tests: Is There a Relationship?**

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## Introduction

Studies involving high school students suggest that they start to utilize primary source documents in more sophisticated ways as they become more comfortable with them (Young & Leinhardt, 1998). Britt and Aglinskas (2002) found that, although high school students performed poorly at first, once they were given a tutorial on how to source primary documents students showed significant progress in their abilities to use these documents and construct history. In their study, Tally and Goldenburg (2005) found that students were quite capable of using primary source documents to shape their understanding of history and that the use of these documents generally enhanced their classroom experience. Yeager, Foster, Maley, Anderson, and Morris (1998) found that students who use primary source documents show more empathy for historical figures. This allows them to view history more objectively and therefore allows students to act more like trained historians when constructing history (Yeager, et al., 1998). The underlying trend for most of these studies was that student performance was enhanced with greater exposure to primary source documents.

For better or for worse, the use of standardized tests has become a reality in American high schools. In light of this, many teachers have begun shying away from using primary source documents in their classrooms. Their feeling is that these documents will not help their students on multiple choice tests, and there simply is no time to waste on superfluous classroom activities (Friedman, 2006; VanSledright, 2002).

Drake (1986) found that high school students do score better on tests that measure historical thinking skills when they have had prior access to primary source documents. Even on some standardized assessments such as the National Assessment of Educational Progress (NAEP) tests which utilize primary source documents, students have been found to perform well on questions that deal with superficial aspects of these documents

(Hawkins, Stancavage, Mitchell, Goodman, & Lazer, 1998). But for the most part these studies have neglected the effect of primary document usage on multiple choice standardized test scores. Thus, I will tackle the following question: what is the relationship between the use of primary source documents in the classroom and student performance on standardized tests in United States history.

**Methodology**

This study was conducted in a large, semi-urban school district in the southeastern United States. A questionnaire was sent to all of the American history teachers in this school district. This questionnaire requested information regarding the number of American history classes taught, the number of primary source documents used, the types of primary source documents used, and whether or not any instruction was given on how to access primary source documents. Additionally, each teacher was asked if they would permit me to give their students a short, take-home assignment.

Students were asked to complete a three part assignment. First, they were asked to answer ten multiple choice questions about American history. These questions were all taken from a standardized test bank. Second, students were asked to read three documents that dealt with the beginnings of the American Revolution. After reading these documents, students were asked to write one paragraph in which they were to describe what they thought happened based on their reading of the three documents. These documents were pulled from Wineburg (1991). Finally, in the third part of this task students were asked to rank these documents according to their trustworthiness.

The quiz scores and the document rankings were compiled and averaged in an Excel spreadsheet. Students were grouped according to their instructor. The writing task was scored for use of primary source documents using a similar coding scheme as Wineburg (1991). These scores were then averaged and added to the same spreadsheet.

To analyze this data, I ran t-tests comparing the means for quiz scores and writing assessment scores for each teacher's students. Analyses of Variance were then run to check for a significant relationship between primary source exposure (denoted by the number of times a teacher used these documents with their students) and quiz score, and writing assessment score and quiz score.

**Results**

In the end three teachers agreed to fully participate in my study. This meant that they not only answered my questionnaire, but they also permitted me to administer my standardized quiz and assessment of primary source document usage writing task to their students. This gave me access to seventeen United States history classrooms. Of all of the students in these classrooms (approximately 425 high school juniors), 161 completed the tasks asked of them.

Teacher X teaches United States history at a moderately sized high school in a large, semi-urban school district in the southeastern United States. She teaches a mix of students from a variety of diverse backgrounds. The one commonality among all of her classes is that the students in them are generally of average academic ability. Teacher X used zero primary source documents in her classroom.

The students from Teacher X's classes who participated in this study met with varying levels of success. Two students only answered one question correctly while three were able to score a perfect ten. The mean quiz score for Teacher X's students was 6.28. This was somewhat below the average for all study participants. In the understanding of primary documents writing assessment, Teacher X's students received a mean score of 2.36. None of the students in these classes attained a "good" rating.

Teacher Y also teaches United States history in a moderately sized high school in the same large, semi-urban school district in the southeast. Teacher Y's students also have diverse backgrounds. Again, the students in Teacher Y's classes are generally of fairly average academic ability. Teacher Y used 13 documents in her classroom.

Interestingly enough Teacher Y's students tended to score better on the U.S. history quiz than Teacher X's students, yet they were still below the overall average. Teacher Y's students had a mean score of 6.61 on the U.S. history quiz. Teacher Y's students also performed slightly better on the understanding of primary source documents writing task. The mean score for Teacher Y's students was 2.58, and two students were able to achieve a "good" rating.

Teacher Z teaches United States history in the same large, semi-urban school district in the southeastern United States as Teachers X and Y. She, however, teaches in a relatively small high school. Her students do not share the same level of diversity as either of the other teachers' students in this study. They tend to be more affluent, and

most of them are of European descent. Finally, Teacher Z's students would generally be categorized as above average in respect to their academic abilities. Teacher Z used 42 documents in her classroom.

Teacher Z's students outperformed their peers on the U.S. history quiz. The mean score for Teacher Z's students was 8.27. The students in Teacher Z's classes also tended to score better than their peers on the understanding of primary source documents writing task. The mean for these students was 2.90. Eleven students attained the highest possible rating.

**Analysis**

The comparisons of the different statistical data compiled in this study must be viewed with a critical eye. There was one underlying factor that I was not able to completely control in this study due to time constraints and the teachers who agreed to participate. This factor was student ability. Of the three teachers who agreed to participate, X and Y taught students who were generally of average academic ability, but Teacher Z's students were primarily of above average ability. This fact must be remembered as one looks at the statistics in this study.

T-tests assuming equal variance were run comparing group X to Y, X to Z, Y to Z, and X and Y together (X,Y) to Z. These t-tests showed that there was no significant difference between the quiz scores of group X and group Y ($P = 0.60$). There was, however, a statistically significant difference between group X and Z ($P = 6.32*10^{-8}$) and group Y and Z ($P = 1.42*10^{-5}$). There was also a significant difference in quiz scores when I combined group X and Y and compared their results to Z ($P = 3.49*10^{-8}$). These results suggest that Teacher Z's students were statistically likely to score better on the U.S. history quiz than students in group X and Y.

The analysis of the writing scores was somewhat similar. Again there was no significant difference between the scores of Teacher X's students and Teacher Y's students ($P = 0.40$). This time, however, Teacher Z's students did not perform significantly better Teacher Y's ($P = 0.17$). Yet Teacher Z's students did outperform Teacher X's ($P = 0.015$). There was also a statistical significance between the performance of Teacher Z's students and that of X and Y combined ($P = 0.016$).

The analyses of variance that were performed on this data are also interesting. The ANOVA that looked at the relationship between primary document exposure and quiz score found that there was a statistically significant positive relationship between the two sets of data for all students (significance = $2.22*10^{-8}$). There was also a significant positive relationship between a student's score on the writing assessment and his or her quiz score (significance = $5.15*10^{-7}$).

I feel that these statistics are misleading. They seem to suggest that exposure to primary source documents and the ability to use those documents will positively affect standardize test scores. Nevertheless, I feel that the real culprit is pre-existing student ability. Students who are of higher academic ability are more likely to be in classes where they are exposed to primary source documents, and they are more likely to be able to use these documents. Finally these same students are generally more likely to perform well on standardized tests. Yes, the data suggest that there is a significant relationship between primary source document usage and standardized test scores, but what they are really showing is the relationship between academic ability and primary source usage and academic ability and standardized test scores.

This assertion coincides with the results I found when I isolated groups X and Y. These groups did not show a significant statistical difference in either their quiz scores or their writing scores. This time, the ANOVAs that I ran on this segment of the data showed that there was not a significant relationship between primary source document exposure and quiz score (significance = 0.57). Furthermore, there was no significant relationship between primary source document exposure and writing score (significance = 0.37). There was, however, still a significant relationship between the writing scores and the quiz scores of these students (significance = $6.15*10^{-5}$). These groups of students were all of similar academic ability.

Thus, at the moment, it cannot be said that the use of primary source documents will lead to increases in student performance on standardized tests. The evidence suggests that the statistical differences in my study were most likely caused by pre-existing differences in student ability. If anything it shows that students who are cognitively capable of using primary source documents are the same students who are likely to perform well on standardized tests.

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**What's in a Name?**

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"The sweetest and most important sound in any language is a person's name." Dale Carnegie, an entrepreneur and author of *How to Win Friends and Influence People*, is one of the professionals accredited with this advice:

> We should be aware of the magic contained in a name and realize that this single item is wholly and completely owned by the person with whom we are dealing . . . and nobody else (Carnegie, 1981, p. 83).

Everyone wants to be recognized for something positive and unique to them, and Carnegie claims that this appreciation is achievable through a simple habit of recognizing people by their name. When we transfer this knowledge from the business world of networking into the concentrated environment of the classroom, do Carnegie's words ring true? It can be assumed that teachers and students have a special relationship, in that teachers are among the most influential people, besides parents, in shaping and molding who the students are and will be. Even in a presidential debate this year, the candidates were asked to name the most influential teacher in their lives. Still, do teachers embrace this "magic contained in a name" as Carnegie alludes, or do they find this method of capturing influence dated and unnecessary?

The question follows, is there a connection between the teaching act of using the names of students and the student engagement. Learning the names of the students is a typical first-week-of-school ritual, but do teachers use student names (and the "magic" inherent in them) to increase their rapport and build relationships with their students? Or do they use the names only for menial tasks and to reprimand or scold their students? Finally, do their habits of using names positively effect the engagement of their students? The overarching question between the lines reads: Do teacher efforts towards a positive teacher-student relationship increase student engagement?

## Review of Literature

"I suppose you've just gotta know yer cows," comments Scott Roper's grandfather, a cow herder (p. 1, 2007). If herders see the need to know how to differentiate between their cows based on markings of their skin, how much more important is it for teachers to recognize and know their students? Scott Roper is a teacher who learned that the first way to demonstrate you care is by knowing a student's name.

Feeling comfortable or as part of the classroom is especially crucial to minority students and students in lower socio economic class or poverty in order to build a relationship or rapport between students and teachers. Herlinda Garza Flores discusses in her article "Please Do Bother Them" about the need to know names specifically with Hispanic students because they tend to "sit passively or shyly by in their classroom" (1991). She states that four out of ten Hispanic students will drop out and that one of the ways teachers may help prevent their isolation and quitting high school quite simply is to "respect their names" (p. 60). Likewise, J. F. Gardenhire says that close attention to the techniques of remembering and respecting student names may also be used to enhance the achievement and attention of black male students in the classroom. Everyone likes to feel special, but the achievement gaps which are all too apparent in today's hot topics of education prove the need to concentrate on "at-risk" students. The first technique Gerdenhire advocates is to learn names because "issues of self-worth, specialness, and identity" are easily addressed by this simple technique (p. 77, 1993). The general idea follows that if teachers know and respect their student's name, there is a greater possibility for a relationship to form between the teacher and student, which makes it less likely for the student to disappear literally or figuratively from the classroom.

Knowing students names might seem like a minor detail necessary only for the minutia of day to day tasks, but many studies have shown it may be a powerful detail, which should not be overlooked especially with at-risk youth. Research suggests that knowing students' names is important not only as identifiers for roll call, but also as the first step in building a foundation for a strong and meaningful teacher-student relationships, which studies show lead next to student engagement.

## Methodology

The subjects for this study incorporated four Master Teachers of English from East Forsyth High School in Forsyth County, North Carolina. Each teacher was given a letter (i.e. A, B, C and D) as an alias to protect their anonymity. This non-participant observational study included forty hours of observation in each teacher's classroom. Each class varied from 7-30 students and included all four grades of high school, all genders, a diverse assortment of races/ethnicities, and varying ability levels.

The measures for this study included field notes from each observation in which a tallying of the frequency and manner of each teacher's use of student names was recorded. Differing methods for using the names include: to call all on the students for a *question*; to *encourage* or compliment them; to discuss *personal* or side topics; to *reprimand* them; and to get their *attention*. Each time the teacher's use of a student name fell outside one of these four categories it was duly noted.

The student/class engagement was the second factor measured. Levels of engagement were calculated by quantifying the students' participation, attitude, and energy in the following manner: energy or the enthusiasm of the students with their work or in discussion was measured either low/med/high; positive attitude or overall demeanor of the class was measured low/med/high; hand raising and frequency of interjections were measured low/med/high; tone of voice of student responses was measured negative/neutral/positive; and smiles/laughter were measured low/med/high.

**Analysis/Results**

After completing the observations, all the notes and tallies were organized and totaled. The total frequency tally for teacher use of student names ranged from 3 total uses to 69 total uses. The score for student engagement ranged from the lowest possible score of 5 to the highest possible score of 15. The following graph shows the final scores.

| | Teacher A | Teacher B | Teacher C | Teacher D |
|---|---|---|---|---|
| Act | 18.8 | 37.75 | 13.91 | 13.18 |
| Student | 13.5 | 9.91 | 12.18 | 12.73 |

A clear relationship between teacher use of student names and student engagement could not be proved or disproved with this study, but general trends were recognizable. For example, the results showed that as teacher use of student names increased, the ability level of the classes became less advanced and student engagement decreased. These

results did not show a cause and effect relationship, but instead showed a possible trend. The trend of engagement suggested that in lower ability level or standard level classes that student engagement was lower. Results showed that 6 of the 10 lowest scored classes for student engagement were standard classes and all 10 of the highest scored classes for student engagement were AP and Honors classes. Also, of the 40 hours observed total, 17 of the 40 classes were standard level. Therefore, after connecting this trend with the teaching act, it appeared that teachers responded to their students' low self-motivation and lack of engagement by more frequent student name use. This trend was not obvious with Teacher A, who had the highest engagement, but for the rest of the teachers, there was a stated increase in the use of student names in their standard level classes as compared to their Honors or AP classes.

The average for student engagement was calculated by adding together the different aspects of engagement aforementioned for each class and for a total score which could range from 5 to 15. Overall the scores for engagement averaged from 6 to 15 with the highest scores for engagement showing primarily in the AP and Honors classes. The lowest scores for student engagement were in the average classes for both the 10th and 12th grades regardless of teacher. The average number of names used in the higher ability level (Honors or AP) classes was 16. The bottom ten classes with the lowest engagement were all standard classes with the exception of one 9th grade Honors class, and the average number of times names were used was 26, while the average rate of participation was 8. The top ten classes with the highest engagement had the average score of 15 for engagement and student names were used an average of 19 times per class. The use of names within the classes with lower and higher engagement ranged from *reprimand* to *encouragement*, but in all the classes the highest numbers of tallies were in the *question* and *personal* use categories.

The general use of student names by teachers appeared most prevalent and almost crucial to encourage engagement, and perhaps also to build positive relationships with students in the lower or standard level classes. Lack of student engagement appeared to increase teacher use of student names, instead of inversely teacher use of student names decreasing student engagement. Still, the numbers presented do not show any causation or clear correlation. The teacher tactic of using student names seems effective with a

couple of considerations. For example, the tone and context of name use appeared increasingly important not only to increase student engagement but also in helping the teacher build rapport and positive relationships with their students. In these four master teacher classrooms, name use associated with a *reprimand* or *getting attention* were used an average of 3 times each per class, meanwhile *personal* and *question* use of student names were used on average 5 and 8 times per class respectively. Unfortunately, teacher use of student names for *encouragement* was also used on average 2.5 times per class.

The notes accompanying these tallies include anecdotes for interesting or exceptional uses of student names within or outside of the aforementioned categories. For example, a teacher might smile and say "Prince Steve please pay attention". The intent of the teacher in this use of the name was *attention*; therefore it is obvious that the teacher wanted the student to focus. But this particular example alludes to an inside joke or previous context in which a relationship or rapport had been established between the teacher and student. From observation, these instances worked well to improve student engagement, rather than the curt shouts like, "Jessica!" to recover attention. Also, the assumption that a teacher needs to consistently call on inattentive students by name in order to recover attention was altered with one standard class in which the reprimand was often accompanied by a sweet nick name, a smile or a soft touch, rather than *just* a scolding tone and instead of a fierce look as would seem typical.

Teacher A had the highest average of student engagement with a score of 13.5 and the second highest frequency of student name use with an average of 19 uses per class. This teacher almost always used an energetic and excited voice when communicating with students. Even in the standard and typically low engaging classes, this teacher would quickly reprimand or get attention without referring to individuals, but instead the entire class. Before the class could think about responding to the reprimand, this teacher would continue with the lesson. Teacher A used student names as often as most of the other teachers, if not slightly more, except for Teacher B.

Teacher be was an interesting case of student name use because this teacher said hello to each individual student by name as they entered the classroom and/or goodbye to each student by name as they left. It seemed second-nature to Teacher B to use the names of the students whenever directing a question, comment, reprimand, or

compliment to a student. Teacher B frequently used positive tones in addressing the students, even when reprimanding them for side conversations or goofing off. Teacher B had the highest score for name use with an average frequency of 38 times per class, and had the lowest student engagement with an average score of 10, which falls in the medium (not low) range of student engagement.

Teachers C and D used student names an average of 14 and 13 times respectively and had student engagement scores of 12 and 13 respectively. The two teachers had comfortable and humorous classroom environments. The teachers and students constantly joked with each other and these teachers would refer to students by name to other students when complimenting them or using them as a positive example. Portraying a special use of names, Teacher D would call students by name during roll or when asking questions, but it was more typical for Teacher D to use nick names such as "young star buck," which showed this teacher's individual attention to the students. These teachers had mostly Honors and AP classes, for only 1 of the 10 hours observed for Teacher D and 4 of the 10 hours observed for Teacher C were standard classes.

In conclusion, the method of using names to increase student engagement may be one effective way to encourage student engagement in classes where students are far from willing to participate. More research would be necessary to follow up on the positive or negative uses of names with special consideration to tone and accompanied body language, and to test further how the student ability levels effect engagement.

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**Teaching Grammar for Proficiency in Spanish at the Secondary Level**

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## Introduction and Review of Literature

The approach to teaching grammar in foreign language at all levels, K-12, has clearly evolved over the last forty years or so to be focused on students' proficiency. Closely tied to the proficiency-oriented approach to foreign language instruction is the standards-based approach espoused by the field of foreign language education. Adair-Hauck (2006) maintains that standards-based teaching helps "learners develop the ability to communicate in another language, gain knowledge and understanding of other cultures, connect with other disciplines and acquire information, develop insight into the nature of language and culture, and participate in multilingual communities at home and around the world" (p. 360). The *Standards for Foreign Language Learning: Preparing for the 21st Century* (ACTFL, 1996) and the *Performance Guidelines for K-12 Learners* (ACTFL, 1998) are very much products of this relatively new standards-based focus in foreign language instruction. The *Standards* provide a focus for K-12 foreign language teachers regarding the objectives of classroom instruction. The *Performance Guidelines* enable K-12 foreign language teachers to measure their students' language development by assessing their proficiency at the Novice, Intermediate, or Pre-Advanced level.

An integral part of the proficiency-oriented approach is the provision of comprehensible input in the target language by the teacher for the students (Krashen & Terrell, 1983). Teachers should provide students with input that is at a level above the input that students are capable of producing, so that they may still understand what is said but at the same time expand their linguistic repertoire. Krashen's (1980) Input Hypothesis, which attempts to describe the conditions under which students acquire language, states that acquisition occurs when they understand messages in the target

language. Van Patten (1986), too, notes the importance of target language usage by the teacher in their comprehensible input to students.

The proficiency-oriented approach to the teaching of a foreign language prefers contextualized over non-contextualized input for students, a preference shared by many researchers (Kalidova, 1990; Ruiz, 1985; Moody, 1982; Chastain, 1987; Van Patten, 1986). Van Patten (1986) stresses the importance of providing input that is in the target language for students to listen to and understand. Specifically, he notes that "teachers should make extensive use of the target language for communicative purposes and avoid as much as possible language used for mechanical activities as well as avoid the use of the L1" (p. 204).

Assessment also plays an important role in the proficiency-oriented approach to language teaching. According to Wiggins (1998), the aim of assessment should be primarily to educate students and improve their performance, not merely to evaluate the status of their language development. This shows the need for a closer connection between instruction and assessment (Adair-Hauck, 2006). Specifically, current research supports the notion that assessment should have a positive effect on pedagogical practices (Wiggins, 1998; Shohamy, 2001).

Adair-Hauck (2006) maintains that foreign language teachers need to ensure that instruction and assessment practices focus on all three modes of communication: the interpretive mode, the interpersonal mode, and the presentational mode. The interpretive mode deals primarily with the processing and production of language on the part of students. The interpersonal mode deals with students' ability to communicate with others. The presentational mode deals with students' ability to produce the language with any form of audience. Adair-Hauck (2006) argues further that assessment should focus more on oral language production, as well as authentic reading materials and reading strategies. Ideally, assessments are task-based for authentic L2 purposes. Examples of such assessments include oral and written projects and presentations, simulated cultural situations, interviews, and question-answer activities. According to Adair-Hauck (2006), teachers should use more spontaneous and open-ended type situations for students to create and use their language skills. Assessment should aid in developing students' proficiency in the language. More importantly, when assessing students, teachers should

use strategies which align with proficiency for real world communication needs. In other words, assessment should reinforce the use of language in authentic communicative contexts.

The purpose of this study was to examine instructional strategies high school Spanish teachers use to teach grammar that develops students' proficiency in Spanish.

**Methodology**

The study was carried out from September through December, 2007 in four different high schools in a public school district in central North Carolina. Once permission and consent forms were obtained, the researcher interviewed eight secondary Spanish teachers using a self-designed interview instrument with questions about the kinds of instructional strategies they use to teach grammar for proficiency. Interviews lasted between thirty and forty-five minutes and were audio-taped. Only those interviewees who gave consent were audio-taped. The researcher also observed one class taught by each teacher and took extensive field notes. Only those teachers who gave consent were observed.

**Results and Conclusions**

The teachers who participated in this study ranged in experience level from one to over thirty years and teach Levels I to AP Spanish. The majority of the interviewees stated that they use the national standards, and during observation, the researcher found that they use performance-based strategies in their teaching which supports an understanding of what the standards mean and how to implement them in instruction to develop students' proficiency in Spanish. However, the researcher did find that, in some cases, teachers' responses did not correlate with what was observed in the class. For example, two of the teachers stated that they use all three modes of communication as much as possible, but the researcher observed only the interpretive mode of communication in their classes.

When asked to describe what they believed 'proficiency' to mean, most teachers agreed that proficiency involves communicative competence in the language. The majority of the teachers responded that it means being able to use language for a communicative purpose in a communicative context. However, the researcher observed very little language usage for authentic communicative tasks. Teachers commonly gave

students handouts or engaged in question-answer activities, both of which tended to assess students' grammar knowledge explicitly.

With regards to target language usage, the researcher found that only three of the teachers observed used Spanish approximately 76-100% of the time, while in the interviews six teachers stated that they use Spanish at that frequency. This leads the researcher to believe that teachers may have a misconception regarding how much Spanish they actually use with their students. The possibility does exist that these findings are not representative of how much Spanish teachers actually use, since the researcher was only able to observe one class of each.

The interpretive mode was the most commonly addressed of the three modes of communication while the majority of the interviewees claimed to use all three modes equally in instruction. These responses show that the teachers understand the importance of using the three modes of communication, a crucial aspect of the proficiency-oriented approach to grammar instruction. That said, the presentational mode was observed very little (employed by two teachers), and, as mentioned above, the interpretive mode was addressed much more than the others.

All teachers able to respond to Question Twenty-Four regarding what role their foreign language departments play in developing students proficiency (one teacher does not have a foreign language department) claimed that their foreign language departments make efforts in that regard. Half of the teachers also mentioned that the school district needs to make more efforts in that regard by having more uniformity in terms of the foreign language expectations for students. These responses indicate the teachers' understanding of the importance of the proficiency-oriented approach to foreign language grammar instruction.

While the researcher cannot draw any concrete conclusions due to the short observation period, findings from the observations indicate an understanding of the benefits of the proficiency-oriented approach to grammar instruction, but also tendencies diverging from proficiency-oriented style teaching. The researcher found that the most common kinds of activities addressed the interpretive mode of communication and involved mainly explicit grammar instruction and explicit measurement of students' grammar knowledge. Although the researcher cannot know if these findings are

representative of how the participants of this study engage in grammar instruction on a daily basis, the researcher concludes that more performance-based instruction needs to be incorporated into students' foreign language education.

Developing students' proficiency in a high school foreign language program requires the use of performance-based teaching and assessment practices. In the district in which this study was conducted, it appears that there is attention to the importance of using proficiency-oriented, performance-based instructional and assessment strategies, both on the part of teachers and the district as a whole. However, based on the researcher's observations, it appears that teachers may need to incorporate more performance-based instructional and assessment strategies, as the vast majority of grammar concepts during the observation period were taught and assessed explicitly.

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**Investigating the Student-Teacher Relationship: A Student Perspective**

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The perceived failure of education is a major area of concern in this country. Too many students are dropping out of high school. The achievement gap between majority and minority students continues to exist and too many students are apathetic about school. A key factor is motivation. One way to improve achievement and keep students in school is to focus on motivating them because motivated students are more likely to be engaged in class and work hard on assignments. While motivating students sounds like a simple solution, it is actually a multi-faceted and complex process. Recently, research has focused on the student-teacher relationship as a means to increase student motivation. It is suggested that a positive student-teacher relationship will increase student motivation and this motivation will lead to bolstered academic success.

## Literature Review

Of the many factors that influence student motivation, the student's relationship with the teacher is one of the most important. Studies found that students were more motivated when they had a positive relationship with their teacher (Corder, 1999; Murdock & Miller, 2003). Heller and Sottile's (1996) observational study of a high school history class concluded that one way to foster a positive student-teacher relationship was to create an environment that was conducive to learning.

Another way teachers can enhance the student-teacher relationship is by making their classrooms as equitable as possible. A study of 275 African American high school students contended that students who felt they were treated equitably in the classroom felt comfortable and were more invested in their learning (Gladney & Greene, 1997). Additionally, both Stiller and Ryan's (1992) study and Dicintio and Gee's (1999) study found that choice in the educational environment led to increased engagement and desire to learn content.

The characteristics of the teacher also matter in the formation of a positive student teacher relationship. Research gives evidence that teachers can foster positive student-teacher relationships by trying to relate to their students and understanding their differences (Corder, 1999; Gladney & Greene, 1997). A study by Wentzel (1997) observing 375 middle school students found that students were more motivated when they felt supported and valued.

There are many factors that influence the motivation of students. Research has shown that the presence of a positive student-teacher relationship is a key determinant in increasing motivation. In light of this recent literature, this study was conducted in order to further examine the impact of the student-teacher relationship on motivation and achievement of high school students.

## Methodology

In order to determine the factors related to academic achievement or non-achievement, open-ended interviews were conducted with high school students. The students were from two high schools, aged 14-18. Teachers were asked to participate and those who volunteered were asked to identify students in their classes who would be good candidates for the interviews. A total of nine students were interviewed.

The individual interviews occurred during the regular school day at the back of the student's classroom or in the hallway. The students' responses were recorded via digital audio. The interview questions sought the students' thoughts about the factors that influenced their academic achievement, most notably the student-teacher relationship. The interview data were analyzed qualitatively to determine the impact of the student-teacher relationship.

## Results and Conclusions

### "I Can Be Successful With A Hat On"

The students expressed extreme irritation with being treated as young children, rather than young adults, by their teachers. As one female student pointed out, "We're treated like elementary school students—we have to walk on the right side of the hall every single day." She added that "If you're a good teacher, you'll want your students to be in class, not in the office getting a tardy slip for being ten seconds late." Her opinion was not unique as many of the students interviewed

displayed intense dissatisfaction with the teachers who worried about seemingly irrelevant things. All the students interviewed also firmly believed that being micromanaged was a distraction in the classroom and took away from instructional time. As one student reported, "I've had teachers who spend most of class telling us we can't do this or that. They're not teaching us anything because they're too worried about trying to write you up for silly stuff, like chewing gum or wearing a hat. I can be successful with a hat on." The responses of the students suggested an innate desire for increased responsibility as it relates to their academic environment. They craved being able to control the little things in their lives because so much of the school day was tightly regulated by tardy bells and school personnel. Denying students the opportunity to be responsible for themselves is clearly causing a rift, and a distraction, in many classrooms.

**"They Talk Dirty, Nasty"**

The issues of respect and caring received the most emotional responses by all of the students interviewed. The reason was that the students felt that many teachers did not respect or care about them. Throughout the interview process, students painted a stark picture of bad teachers and their interactions with them. According to one female student, "They don't let you get out what you have to say. They don't care about you, they're just interested in coming to school, teaching what they have to teach, and going home." Another student added, "They talk dirty, nasty—any kind of way they want to. As long as they look good, they don't care about anything else." These students described an experience of being in an environment where they are second class citizens. Rather than entering into a learning partnership, students were forced to be at odds with their instructors. What resulted was a hostile learning environment where students focused more on how they were treated than on learning the material presented.

While students reported many incidences of mistreatment by their teachers, they appreciated the teachers they had who treated them with respect and cared about them. According to one male student, "I've had a couple teachers that respect you and talk to you in a way that's not demeaning. It made me really comfortable and I felt like I could be myself in class." Students who felt respected and cared

about looked at their teachers as people they could trust, causing them to place more merit into what they said and what they taught.

**"She Has My Back"**

When students were asked about what kind of support they receive from their teachers, many were quick to discuss teachers who gave them extra credit or tutoring. Meanwhile, others reported that some of their teachers would let them come before or after school to make up work. One student said, "If I need to stay after they'll stay with me as late as need be, because I have late practices and stuff. They'll also let me turn stuff in late." Generally, these students reported that the teachers who support them the most were the ones who were flexible and understood their needs. According to one male student, "Good teachers are willing to work with you." Students easily noticed which teachers went the extra mile for them, and truly appreciated their efforts. One female student reported, "I have one teacher that helps me organize all my stuff. She has my back." Simply being available gave students the idea that the teacher would help if need be. This had an enormous effect on the students as it allowed them to be comfortable and confident in the classroom knowing that the teacher was there for them.

**"It's Not Fair"**

All of the students interviewed had significant, although different, problems with the way expectations were set and administered in the classroom. According to one student, "Teachers expect students to put forth effort that they don't exert. Teachers don't come across as fair. For example, they should be willing to grade the work they're willing to assign in an orderly fashion. Sometimes, they even assign work that they end up not grading." This sentiment was expressed by some of the other students, who added that they did not have enough time to complete assignments. One student added, "They act like their class is the only one we have and they give us all this work to do, but never enough time to do it. It's not fair." While some students reported staying up late to complete assignments, others replied that if there was not enough time, they just would not even try to finish. This implies that teachers run the risk of losing students when expectations are unclear or are seemingly impossible to meet.

One alarming discovery from the interviews was that often when expectations were very clear, they were not very demanding. One student reported, "All my teachers want me to do is come to class and not talk." One male student agrees, "Some just want you to fail in life, and that's clear through their expectations of not expecting you to do nothing." These responses provide clear evidence that students want to be challenged in school. If students perceive a teacher to only require the bare minimum, then that is what the teacher will get. However, when students felt genuinely challenged by their teachers, they reported working harder to meet their expectations.

**"It's Not Just Work, Work, Work"**

The classroom environment seemed to matter a great deal to students. When asked what would make their classes more enjoyable, all the students thought it should be more fun. The idea that fun and more interesting classrooms would lead to increased motivation was backed up by several student responses. According to one male student, "The good teachers I've had really try to make class fun and interesting. It's not just work, work, work." Increasing engagement is important, and students craved multiple forms of instruction. One student recalled, "One time, we discussed the math of food that students brought in. That was so much fun and we really learned a lot." These responses suggest that students will be more engaged and more motivated to study when the material is presented in a way to which they can relate.

**"Relationships Matter"**

Students reported that, without a doubt, the relationship they had with their teacher affected their engagement and motivation. According to one student, "Getting along with your teachers goes a long way because it will make you want to pay attention more." One female student agrees, "Not getting along with your teacher is really a big distraction. Good teachers make me want to go to the class because I believe I will succeed there and I'll be motivated." This is an important discovery because it shows the magnitude of the effect teachers can have on their students. Although some classes will always be more difficult than others due to the content, students reported that they would work much harder in those classes if they had a positive student-teacher relationship.

## Summary and Implications

The teacher has an enormous effect on the success of students. By respecting students and genuinely caring for their well being, teachers can create an environment of trust in their classrooms. This increased level of trust can then be used to give students more control and responsibility. Allowing students to handle the "little things" like sharpening pencils and going to the bathroom without requiring them to cut through red tape will improve the teacher-student dynamic as well as make everyone more comfortable. This will also afford the teacher the opportunity to spend time getting to know the students and their specific needs, information that will be needed in providing support for their academic success. Figuring out what students like will also be useful when planning interesting and relevant lessons. These actions effectively culminate in the formation of a positive student-teacher relationship. While the benefits of this partnership are endless, the most significant gain is the increased engagement and motivation of students. They then become the biggest winners as they obtain skills and knowledge that will empower them to succeed in their future endeavors. While the process of forming positive student-teacher relationships is not easy, it is a worthwhile goal that will enrich the lives of our nation's students.

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**The Use of Authentic Texts in the K-12 Spanish Program**

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In an effort to help foreign language teachers prepare students for the twenty-first century, the American Council on the Teaching of Foreign Languages (ACTFL) established the *Standards for Foreign Language Learning,* (ACTFL, 1996). These National Standards guide foreign language teachers toward a common language focus and represent the content knowledge that leads students to proficiency. The Standards focus on five goals of learning a foreign language which are referred to as the "five C's:" Communication, Cultures, Connections, Comparisons, and Communities (ACTFL, 1996). According to the Standards, students should be able to use the language to communicate (at progressing levels of proficiency in grades K-12: Novice, Intermediate, or Pre-advanced) and should gain understanding of the three aspects of culture – products, practices, and perspectives. The Standards promote authenticity of the foreign language in proficiency development. The use of authentic texts is one way to present students with cultural aspects while teaching proficiency through literacy.

**Review of Literature**

Many foreign language teachers use two types of texts during instruction – authentic and simplified. Authentic texts are most often defined as those that are written for native speakers and usually by native speakers (Crossley, Louwerse, McCarthy, & McNamra, 2007; Maxim, 2002; Shook, 1996; Chavez, 1994). The other type of text used in foreign language instruction is a simplified work written specifically for foreign language instruction (Crossley et al., 2007; Shrum & Glisan, 2005; Young, 1999). Both authentic and simplified texts play an important role in language development. While simplified texts provide students with easy-to-comprehend language that is catered to students' foreign language ability at a specific level, authentic texts provide students with everyday use of language and experiences in the target culture.

Incorporating authentic texts in the foreign language classroom teaches real-world language in the development of proficiency. These texts include, but are not limited to, literature such as short stories, poetry, novels, plays, and music lyrics, as well as réalia used in daily life activities such as advertisements, brochures, and newspapers. (Crossley et al., 2007). Teachers in the K-12 foreign language program incorporate authentic texts; however, the use of authentic texts varies significantly across the grade levels.

Many foreign language teachers at all levels also use simplified texts. These include abridged readings, books for specific levels of foreign language learners, and authentic texts that have been reworded or abridged (Young, 1999). The use of these texts allows students to engage with manageable language that reinforces vocabulary and grammar concepts and enables students to master language with success.

Research supports the use of both simplified and authentic texts in the foreign language classroom; though many researchers disagree on which type of text is more beneficial to the development of language proficiency. Some believe that simplified texts are more beneficial because the vocabulary used is tailored to students' language level, while others suggest that authentic texts play a greater role because of their natural syntax and real-world connection (Young 1999; Chavez, 1994; Honeyfield, 1977; Mountford, 1976). Still others argue that both texts work together to enhance student learning and should be valued equally (Crossley et al, 2007; Devitt, 1997).

The benefits of using texts, both simplified and authentic, result from careful planning and incorporation of a variety of reading strategies that increase the effectiveness of reading in the foreign language (Shrum & Glisan, 2005; Bueno, 2003; Hurley & Tinajero, 2001; Wesche & Paribakht, 2000; Knutson, 1997; Kauffmann, 1996; Shook, 1996; Barnett, 1988). Knutson defines these strategies as "reading with a purpose" which in turn "means approaching the texts with a specific perspective or goal" (1997, p. 51-2). Reading strategies place the texts in a language context that allows learners to read, understand, and apply meaning to language development. Such instructional strategies take place before, during, and following the reading process (Shrum & Glisan, 2005; Hurley & Tinajero, 2001; Kauffmann, 1996; Barnett, 1988;).

Pre-reading strategies prepare students to read the text and activate their schema about the topic (Hurley & Tinajero, 2001; Peregoy & Boyle, 1997; Tierney, Readence, &

Dishner, 1995; Alvermann & Phelps, 1994). Activities used while students read (during-reading activities) guide learners to comprehend the text (Shrum & Glisan, 2005; Shook, 1996; Barnett, 1988). Upon completion of the text, learners should be engaged in follow-up (post-reading) activities that connect and extend the text to foreign language development for a variety of language purposes. Authentic texts, accompanied with instructional strategies that contextualize the text and make it level appropriate, provide students with authentic language in a real-world context so they can understand the culture and language for communication purposes.

The purpose of this study was to investigate Spanish teachers' use of authentic texts in the K-12 Spanish program. The study examined the types of instructional strategies used with authentic texts to develop Spanish language ability.

**Methodology**

This study was conducted from September to December 2007. The subjects for this study were fourteen Spanish teachers from a public school district in central North Carolina: five elementary, three middle, and six high school Spanish teachers. After obtaining written permission from the teachers, the data was collected by interviewing the teachers using an instrument created by the researcher. The interviews were audio taped (if given written consent by the subject) and lasted approximately thirty minutes. The researcher also observed two classes of two different Spanish teachers from each of the three levels during instruction that was related to the use of authentic texts**.** The information gathered for this study was reviewed to show the types of authentic texts Spanish teachers use in a K-12 program and the instructional strategies supporting the texts to develop language.

**Results and Conclusions**

The evidence from this study suggests that while the teachers interviewed include different types of texts and instructional strategies depending on the age of their students, they use texts for similar instructional purposes. At each of the grade levels, the teachers indicated incorporating texts in instruction to reinforce vocabulary, grammar, and culture while teaching literacy for communication purposes.

Most of the teachers stated that they use the National and State Standards when planning instruction. The teachers indicated that they use the district's pacing guides,

which serve as a course map indicating an approximate schedule for teaching Spanish content. These pacing guides were carefully aligned with the National Standards. Since the Standards support the use of authentic texts, the researcher believes the teachers are aware of the need to incorporate authentic texts in their instruction.

Teachers indicated that the pacing guides are one of the ways in which the district is striving to develop an articulated Spanish program in grades three through twelve. While some teachers expressed that there are imperfections in the program, the researcher inferred that much progress is being made toward articulation. Many teachers indicated that an articulated program allows for the use of more authentic texts, in that simplified texts prepare students for future reading of authentic texts. Thus, a clearly defined articulated program allows for this progression.

The researcher found that all teachers emphasize communication ability. The teachers shared a desire to teach students how to communicate in Spanish, and most desire to present students with real world situations. Most teachers recognized the need to teach students to communicate via oral and written forms of communication and expressed the importance of reading not only as a form of communication but also as an instructional tool to enhance language development. However, they were divided on the types of texts to incorporate in instruction.

The most frequent types of authentic texts mentioned by middle and high school teachers were réalia, music lyrics, cultural readings, traditional literature, poetry, and short stories. Elementary grade teachers indicated most frequently using authentic music and Big Books. The researcher concludes that elementary teachers focus on teaching language predominately through listening and active methods such as Total Physical Response and Storytelling when incorporating texts, since students at this level are at the emerging and beginning stages of literacy in Spanish. Middle and high school students have more linguistic written ability in their primary language and are therefore able to transfer this knowledge to Spanish more easily, allowing for more types and uses of authentic texts. Most teachers indicated that authentic texts add a real-world component to the foreign language classroom and that they validate the need to learn Spanish. All teachers stated that they use authentic texts to introduce perspectives and practices of the culture, to introduce or support vocabulary, and to present a meaningful context for

proficiency-oriented instruction. The classroom observations that incorporated the use of authentic texts were consistent with the interview results with regards to their purpose in instruction. The researcher concludes that teachers use authentic texts as an instructional tool to enhance students' language ability and cultural knowledge.

Most of the teachers interviewed indicated that they use simplified texts in instruction. The most commonly used simplified texts across all levels were adapted stories, readers, cultural texts, and music lyrics. The teachers stated that they use these texts to reinforce vocabulary and grammar concepts as well as to teach Spanish culture. Half of the Spanish teachers stated that simplified texts are more beneficial, which indicates that they present students with these texts to increase vocabulary development. A few of the teachers expressed the importance for texts to be real-world or authentic. Approximately one third of teachers stated that simplified texts prepare students for authentic texts, which are the real-world reading tasks in the classroom. The researcher concludes that these teachers depend on the use of simplified texts to bridge the gap between students' reading level and the level at which the authentic texts in written.

The interviews also revealed that many teachers have difficulty finding authentic texts to incorporate in the classroom. Many teachers who said that simplified texts were more beneficial also stated that they would use more authentic texts if they could find texts that are level appropriate. The observations and interviews revealed that teachers use a wide variety of instructional strategies with their texts. The researcher noted in the observations that the teachers contextualized their texts and included a variety of instructional strategies before, during, and after the reading process. The researcher concludes from these findings that if teachers had easier access to authentic texts, they would be able to design tasks that make the texts manageable for their students.

Authentic texts provide students with real world language and culture; whereas, the use of simplified texts reinforces vocabulary and grammar and prepares students for reading authentic texts. Therefore, in an articulated program, these two types of texts, along with a variety of instructional strategies, should be selected purposely for the development of language proficiency. The researcher concludes from the study that reading is integral to language development in this district in grades 3-12. Literacy is a process that develops from emerging and beginning literacy stages in the elementary

grades to developing literacy through the use of authentic texts at the high school level. Most of the authentic texts used in the elementary school are those that the students experience through listening comprehension activities that serve as the foundation for emerging literacy, whereas middle and high school teachers incorporate authentic texts that require a higher level of literacy. The use of a variety of texts including traditional literature, music lyrics, and réalia combined with specific instructional strategies can lead students to proficiency over time in a well-designed articulated program.

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