

The Researcher: An Interdisciplinary Journal

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Submission requirements: Submissions should be less than forty pages and sent in electronic form, on a Compact Disc or via email, in Microsoft Word or Rich Text Format in 12-point Times New Roman font, double-spaced, with two-inch side margins. All maps, charts, and graphs must be camera ready. Each article should be accompanied by an Abstract with keywords and have an Introduction. Documentation format should follow a style appropriate to the discipline: MLA for humanities and APA for social and behavioral sciences. Please include a removable cover page giving the institutional affiliations, positions, and highest degrees earned of all authors, as well as a return address and the article title; the article itself must carry only the title.

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The Researcher: An Interdisciplinary Journal

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Guest Editors' Foreword

The Center for Undergraduate Research (CUR) is an activity funded through Title III which is designed to promote undergraduate research by providing opportunities for faculty mentors and students in a year long experience of indentifying a topic of interest and employing research methodology producing research papers, posters and panel presentations.

The Center promotes undergraduate research by continually engaging student learning through mentoring relationships with faculty, by helping to develop critical thinking, creativity, problem solving and intellectual independence. The literature is replete with research and reports that show the benefits derived by students who participate in undergraduate research and detail how involvement is key to student success in higher education. Among these benefits are knowledge and skills gained, academic achievement and educational attainment, professional growth, advancement and personal growth.

Research experience with an experienced faculty mentor has shown to positively correlate with improvement in students' grades, retention rates and motivation to pursue and succeed in graduate school. The more students are involved with faculty, staff, and peers in research activities, the more likely they are to learn and persist. While universities have given a great deal of attention to student social involvement, they have done less to engage undergraduate students in research and scholarly activities, even within the classroom.

It is still the case that too many students, especially first-year students, encounter learning in isolation and are separated from one another. More importantly, they typically are not actively engaged with others in the construction of knowledge or discovery activities. Fortunately that is beginning to change. Jackson State University is among still a small but growing number of universities that have taken on the challenge of student involvement in learning by initiating a number of endeavors that involve faculty, administrators, and student affairs' professionals across the campus. One such endeavor is captured by the university's use of undergraduate research.

Jackson State University believes that faculty members enhance their teaching and contribution to society by remaining active in research and by involving undergraduates in research.

This special issue of the *Researcher* captures the collection of undergraduate research activities with faculty mentors supported by the Center for Undergraduate Research (CUR) during the 2011-2012 academic year. This body of undergraduate work demonstrates how undergraduate research is evolving at Jackson State University.

The variety of research papers presented in this special issue of the *Researcher* reveals how Jackson State University has adapted undergraduate research to serve a wide range of students and academic colleges and themes. The papers represent the views and findings of an array of faculty and students' year-long research activities from different academic disciplines at Jackson State University, united by the university's mission and emphasis on providing interdisciplinary experiences for all students and deep quality through innovation, research and technology. The papers in this special edition were presented by the student authors to an audience of their peers, orally and in poster formats on April 3, 2012 at the first Spring Research Conference at Jackson State University. They examined a broad spectrum of topics which include: reading instruction; entrepreneurship; school dropouts; service learning; centrality of race; game theory; a robotics-based educational tool; student Praxis I preparation practices; and evaluation of faculty student rapport. Jackson State University's efforts to expand undergraduate research are one important way in which it seeks to live up to its Carnegie Foundation designation of a high research activity university by continually engaging student learning through mentoring relationships with faculty, helping to develop critical thinking, creativity, problem solving and intellectual independence, developing an understanding of research methodology and promoting an innovation-oriented culture.

Best wishes to our faculty mentors and undergraduate student researchers who invested their expertise, time and engagement to ensure that our students are competitive and ready to solve problems and issues through innovation, research and technology. It is our hope that featuring your papers with your faculty mentors in this special issue of the *Researcher* will be the beginning of presentations, papers and articles or thoughtful discussion on issues and views throughout and beyond your undergraduate experience.

Dr. Evelyn J. Leggette

Dr. Tor A. Kwembe

A Pilot Study: An Exploration of Social, Emotional, and Academic Factors Influencing School Dropout

by

Ronica Arnold Branson, Ph.D. and students in the Department of School, Clinical Mental Health & Rehabilitation Counseling:
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Abstract

The concern over the dropout rates, especially among minority students, has forced many educational institutions to examine the problem and find ways to motivate and prevent students from continuing on the track of the dropout epidemic. Although some efforts to reduce high school dropout rates have been helpful, schools are still not aggressively addressing the problem enough to make a significant impact on the phenomenon. This qualitative study identified emerging themes reported by minority individuals and explains some of their internal and external factors that impacted their decision to drop out. Using a qualitative interview technique, the participants identified social, emotional, familial, and academic factors that influenced their decision to drop out.

Keywords: dropout, recovery, at-risk, prevention

Introduction

Today's educational systems strive to provide a quality education for all students, which include the basic skills necessary for them to succeed in life. Unfortunately for many students today's academic systems are not meeting this goal. For many, graduating from high school is non-existent; in particular for students of color, those from low socio-economic backgrounds, and those with disabilities (National Center for Education Statistics, 2008). Of the estimated one million students that dropout each year, minority students are the ones that are most disproportionately affected (NGA Center for Best Practices, 2009, p.2). The data reports, time and time again, that African American and Hispanic children, and those living in poverty continue to be

overrepresented in dropout rates. This has caused many educational systems to inquire about the phenomenon with these populations. The literature cites many reasons why this particular population is at a greater risk for the dropout epidemic. Research suggests that dropping out is a decision that is made over a period of time as a result of many influential factors (Tyler & Lofstrom, 2009). Low academic achievement, low test scores, transitions, retentions, behavioral difficulties and lack of engagement are some of the top reasons cited for dropping out. Researchers, as well as educators, have reported that one can predict who will be candidates for high school dropout as early as the sixth grade (Balfanz & Legters, 2004). Some of these predictors include: low achievement in math and reading, high absenteeism rates, excessive behavioral referrals, and lack of engagement (Balfanz & Legters, 2004). Additionally, other factors such as involvement in criminal activities and contact with the juvenile justice system, mental health issues such as low self-esteem, lack of socialization with peers, anxiety, aggressive behaviors, and also depression are some predictors that can affect attrition (Newcomb et al, 2002). The literature concludes that personal, social, and academic factors all play a role in one's decision to drop out. These complex factors that occur within the context of the home, school, and community should be further investigated to help school personnel lower the probability of dropout among high risk populations (Christenson, Sinclair, Lehr, & Hurley, 2000). Because of many external factors that are often unrelated to academics, it has become almost necessary that educational systems strive to gain a better understanding of outlying factors that influence early school departure among minority students.

In this study, the researchers used a qualitative approach to answer the research questions. First, they conducted a literature review of articles that examined factors influencing school dropout. Next, the undergraduate researchers used qualitative methods to examine emerging themes from interviews conducted with four high school dropouts. This design was chosen because it allowed the researchers to investigate and conduct a more thorough examination of the topic by first reviewing the literature and then by getting the point of view and perceptions of actual dropouts which would allow them to compare the literature with the statements of actual dropouts.

Why Students Drop Out

The decision to drop out of school is not one that is made overnight, but rather a process that occurs over a period of time (Tyler & Lofstrom, 2009). Multiple factors in elementary or middle school may influence students' attitudes, behaviors, and performance in high school prior to dropping out. Rumberger and Lim (2008) reviewed a number of long-term studies that tracked groups of students from preschool or early elementary school through the end of high school. They identified early indicators that could significantly predict whether students were likely to drop out or finish high school. The two most consistent indicators were early academic performance and academic and social behaviors (Rumberger & Lim, 2008).

The research has also evidenced that high school dropouts have lower incomes and less financial stability throughout life as compared to individuals who do graduate. According to Balfanz et al. (2009), the average yearly income for a high school graduate was on average \$26,000 as compared to slightly under \$18,000 for a high school dropout. National data indicate that individuals who drop out of high school are 72% more likely to be unemployed and earn 27% less than high school graduates (U.S. Department of Labor, 2011).

Not only do employed high school dropouts earn less than employed high school graduates, high school dropouts are much more likely to be unemployed during economic downturns. Since the economic recession began in December 2007, the national unemployment rate has gone from 5 percent to 9 percent in August 2011. The unemployment rate for high school dropouts four years after the start of the recession was 14.3 percent compared to 9.6 percent for high school graduates (U.S. Department of Labor, 2011).

In essence, dropouts earn less and experience a poorer quality of life than those who graduate. Children often follow their parents' example in educational attainment. Children whose parents did not finish high school are more likely to enter their 20s without high school degrees than children whose parents are high school graduates (Urban Institute, 2012). In addition, children in families that move to new homes for negative reasons (such as eviction, foreclosure, or divorce) are less likely to complete high

school by age 20 than children who do not move or who move for non-negative reasons. These negative moves might be indicative of economic hardship and instability. The aforementioned nuances may cause children of dropouts to perform poorly in school, and place them at greater risk for leaving school without a high school credential; thus, continuing the vicious dropout cycle.

As a result of the literature review, the researchers found common themes as to why students drop out:

Age. Students who drop out tend to be older than their grade level peers.

Gender. Students who drop out are more likely to be male.

Socioeconomic Background. Dropouts are more likely to come from low-income families.

Ethnicity. The rate of dropout is higher for Black and Hispanic youth.

Native Language. Students who come from non-English speaking backgrounds are at a higher rate for dropout.

Family Structure. Students who come from single-parent families are at greater risk for dropout.

Parental Employment. Dropouts are more likely to come from parents who are unemployed.

Disability. Students with disabilities (especially those with emotional and behavioral disabilities) are at greater risk for dropout.

Ability. Individuals who score lower on measures of cognitive ability are associated with higher rates of dropout.

Additionally, the research has reported that students with extreme out-of-school problems and those that are influenced by many other external factors are also at a greater likelihood for premature school departure. One example of this is, children with mental health issues such as anxiety and depression and those exhibiting aggressive and delinquent behaviors are reported as being at a greater risk for dropout (Newcomb et al. 2002). Students that also have involvement in the juvenile justice system and youth court rank high on the list of dropouts as well. According to the U.S. Office of Juvenile Justice and Delinquency Prevention (2005), these students also have a harder time and/or fail to re-enter school because of low academic performance levels, the complexity of the re-enrollment process and many of these students need special education and mental health related services but are not properly

identified. For example, it is reported that a large number of young offenders involved in the criminal justice system have some type of learning disability, substance abuse problem, or mental health issue that goes unaddressed (National Center on Addiction and Substance Abuse, 2005).

The purpose of the current study was to examine the social, emotional, and academic factors influencing African American male and females' decisions to drop out of school. The interview and research questions highlighted in this study included:

1. Why did you drop out of school?
2. Is there anything that could have been done differently to keep you in school?
3. What was the main reason: social, emotional, or academic that led to your decision to drop out?
4. How did these interviewees' responses compare to what has been reported in the literature?

Methodology

In this study the qualitative approach was used to gain a more in-depth understanding of these dropouts lived experiences by hearing their own words and voices, which is suggested by Groenewald (2004), as an accurate method to gather this type of information. This approach also allowed the researchers to examine emerging themes through the use of interviews and allowed the researchers to investigate and conduct a more thorough examination of the topic by getting the point of view and perceptions of the participants.

Participants

The participants in this study were 2 African American males and 2 African American females who identified themselves as high school dropouts. These students were enrolled in an alternative education program and were working towards completing the requirements for their GED. The participants ranged in ages from 19 to 33 and reported having an annual income of less than \$20,000 a year.

Table 1: Participant Background Information

Participant	Age	Gender	Ethnicity	Yearly Income	Years Since Initial Dropout	Grade Dropout Occurred
1	24	Female	African American	<\$20,000	8	11 th
2	31	Male	African American	<\$20,000	15	11 th
3	19	Female	African American	<\$20,000	4	10 th
4	22	Male	African American	<\$20,000	7	9 th

Participant Overview

This study shares the stories of four individuals between the ages of 19 and 31 who made the choice to drop out of high school. These individuals were identified because they were enrolled in an alternative educational program that was designed to help them meet the requirements for obtaining their GED. The faculty researcher met with the coordinator of the program, and also with some participants in the program and asked for volunteers to be interviewed for the study.

The four individuals volunteered to be interviewed and recorded, and signed consent forms acknowledging their understanding and agreement. For the purposes of this research and to maintain confidentiality, the real names of the participants have been changed.

Interviewee #1. This participant was a 24-year-old African American female who has three small children, works part-time and attends the program two days out of the week in an attempt to meet the requirements to prepare for the GED. She dropped out of school when she was in the 11th grade due to familial and mental health issues that impacted her attendance in school. In response to the question “Why did you drop out of school?” she stated, “I had a lot of issues going on with my family.” The researcher went on to ask: “What kind of issues were you having with your family?” She responded by saying: “Well, there was a lot of incest going on in my family and I was raped and I went to the hospital and stayed for a while and after that, school was not on my mind. I tried to commit suicide and then I

feared everybody knowing about it, like my peers, so I just didn't ever go back.”

Interviewee #2. Participant #2 was a 31-year-old African American male who dropped out of school in the 11th grade as a result of a lengthy suspension. He explained that he left the school grounds without permission and was suspended. After a lengthy suspension he said knew that he couldn't go back home, so he just decided to “stay in the streets,” as he describes it. He stated he had not considered dropping out prior to his suspension. However, during the suspension, he became involved with people who were not attending school and he became fascinated by the money they were making by being involved in illegal activities. He decided to stay with that lifestyle for a while, until he got caught and had to serve some time in jail. During the interview he stated, “After the days of suspensions and being in the streets, I had got too far gone. I started selling drugs so going to school was out of my mind. I picked money over education, which was a bad decision.”

Interviewee #3. This participant was a 19-year-old dropout and was the youngest participant in the study. She became pregnant in the 10th grade and due to lack of parental support she had to drop out to care for her newborn child. Before becoming pregnant she was very active in school, in extra-curricular activities, was a cheerleader, and was an honor student. After she became pregnant, she stated that her peers and teachers began to isolate her and treat her differently. Her parents told her that they were not going to help her raise a child. She stated that they said she made the decision to conceive a child, so she would have to make the grown up decision and decide how to handle it. Because of all of the tension, she eventually decided to leave home and went to live with a cousin.

Interviewee #4. Participant #4 was a twenty-two-year-old African American male who admitted to dropping out of school because of a host of internal, external, and academic factors. Keith admitted that since the beginning of elementary school he always had a problem keeping up in his classes. He had fairly good behavior and never gave his teachers any problems, so they just kept passing him on. He

stated that he had a lot of problems at home, and his mom moved a lot. “She had a lot of different boyfriends and we would sometimes go live with them, so that meant I had to change schools. My mom was also not at home a lot, and sometimes when I didn’t feel well, I just didn’t go. Nobody was there to look after us, so we decided when to go to school and when not to go to school. When I did go, I was confused a lot and had a hard time catching up on the work. I couldn’t focus much because I was thinking about other things. So in the 9th grade, I just decided to drop out.”

Procedures

The faculty researcher and primary investigator contacted a coordinator who worked with an alternative education program and asked the coordinator for time to come and speak with some of the program participants about the nature of the study. After setting up a time, the faculty researcher went to the site, explained the study, and asked for volunteers to participate. The primary investigator explained the study and research protocol, obtained their signed consent to participate, and set up a convenient time to conduct the interviews. The volunteers who participated signed consent forms to participate in the study as well as consent forms agreeing to be videotaped. The participants were then interviewed one by one by the researcher and asked a series of questions related to the present study. Each interview was recorded and transcribed. The interviews ranged in duration from 30 - 45 minutes.

Data Analysis

A qualitative data analysis was used to organize and summarize the participants’ responses for each interview question and to identify the themes that emerged. This type of research was not conducted to generalize results, but to get a more thorough understanding of the phenomenon of school dropout, and a better understanding of what preventative measures could take place to intervene with other minority students that might be at a greater risk for dropout. Research has shown that qualitative methods can be very helpful when trying to gain a more in-depth understanding of a participant’s behavior and experiences. This type of inquiry further investigates lived experiences and helps bring a greater understanding to certain social phenomena.

The researchers viewed the videotaped interviews and were asked to transcribe the interviews, type them up, and return them to the faculty mentor. The faculty mentor then compared the transcripts to check for accuracy. The research group then met together to compare notes on their individual analyses and identified emerging themes from the interviews.

Discussion of Results

From the analysis of the interview questions, the main research question was answered—specifically, “What were the contributors to dropping out?” for the participants that were interviewed. The participants’ responses identified the main contributors which included: emotional issues which encompassed mental health issues and personal traumas; environmental factors; as well as social and academic challenges—under which the themes emerged (see Table 2). In Category One, “Social and Environmental Influences,” Peer pressure and support, School environment, and Community and environmental characteristics emerged as overarching themes. In Category Two, “Emotional, Mental, and Personal Influences and Stressors,” Personal stressors and Emotional and mental health concerns, emerged as overarching themes.

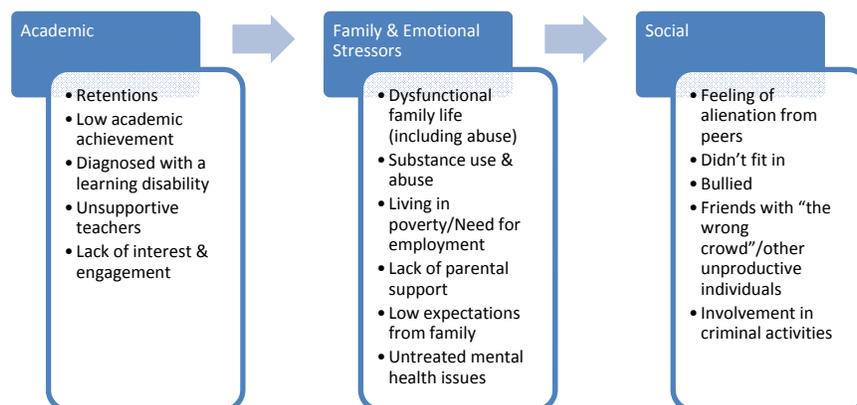


Table 2: Emerging Themes

<p><i>Category 1: Social and Environmental Influences</i></p>	<p><i>Category 2: Emotional, Mental, and Personal Influences and Stressors</i></p>
<p>1. <i>Peer Pressure/Support</i> Feelings of alienation from peers Involvement with the wrong crowd Had friends who did not finish school Sense of belonging with gang/peers Peers were non-judgmental Did not feel that peers would be accepting after they found out about personal issues No one to connect/relate with Lack of socialization skills needed to fit in</p> <p>2. <i>School Environment</i> Classes not interesting/boring Teachers acted like they didn't care Didn't feel comfortable asking questions Large class sizes made student feel like just a number No school follow-up when absent or experiencing problems More interest and teacher attention given to the smart students Labeled Judgmental atmosphere</p> <p>3. <i>Community/Environmental Characteristics</i> Low income community Lack of positive role models Poverty ridden neighborhood No positive outlets in community High crime neighborhoods Focus on fast money to support self and family No win situation, couldn't see how to get out</p>	<p>1. <i>Personal Stressors</i> Abusive family environment Unsupportive family Lack of parental involvement Had the responsibility to care for younger family members/brothers and sisters Living in poverty/Need for employment Dysfunctional family life Low or no expectations of success from family</p> <p>2. <i>Emotional/Mental Health Concerns</i> Lack of focus at school because of problems taking place in the home Feelings of helplessness and hopelessness Depression Suicidal Ideation Aggressive behaviors which led to criminal offenses Socialization problems with peers Substance use and abuse Untreated mental health issues Feelings of isolation and unworthiness Lack of self-esteem Unresolved trauma</p>

Below is a discussion on how the researchers examined the data to determine the themes for Categories 1 and 2 shown above in Table 2.

Category 1. Social and Environmental Influences

In an attempt to better understand the reasons for dropout among these African American participants, the researchers further examined social and environmental factors that contributed to these individuals' decision to drop out of school. The researchers reviewed the literature from previous studies in the literature to gain a better understanding of the social and environmental factors and to find consistency between the literature and the comments made by individuals in this study. All of the participants acknowledged some social or environmental factor that affected their decision to drop out. It is also important to acknowledge in this study that these factors are not discussed in order of relevance, but are discussed in reference to how these influences impacted these individuals' decisions to both drop out and return to work toward their GED.

Some of the main themes that emerged from the interviews with the participants was associated with peer pressure and support or lack of support from peers, uncaring classroom environments, and the lack of positive influences and feelings of despair in the communities in which they lived. These themes are apparent in these excerpts:

Interviewee #1: I never really thought about dropping out of school until my family issues got worse. I always thought I was going to finish school and walk across the stage and get my diploma. I had a lot of issues with my family so I dropped out and I never went back, and didn't even think about getting my GED until I got older and started having children. It's been so hard to get a job now. You mostly need a GED for everything. Now working at McDonald's still you have to have a GED. I didn't have much support from my family and I want to live better than they did. I have to say there were people who tried to help me stay in school, some of my friends. But I just never

did, I was staying with my aunt at that time and I just didn't think school was important. Most of the people I knew were making it and they didn't finish school, so I thought I could do the same. But it didn't work out like I thought it would.

Interviewee #2: I was in the eleventh grade when I dropped out. I was hanging with the wrong crowd and um I had got caught skipping school, leaving the school grounds while school was going on. The principal rolled up on us and he told us we had to get expelled for 20 days. For the twenty days I was out of school, I was in the streets. I was an average student, I could have graduated but I just didn't go back. I come from a strict mom and she didn't tolerate stuff like that, so after I was expelled, I knew I couldn't go back home. I was in the streets and I didn't have nothing that's when I first started trying to get some money. I come from a family that really didn't have nothing. I started selling drugs so school was out of my mind. Once I started, I had got too far gone. It was over with. She (my mom) wanted me to get back in school but it was over with. I picked money over education which was a bad decision. I had no teacher support, no principal support, no school support. It was like I disappeared.

Interviewee #3: There were so many things that led me to dropping out of school, but the main contributor was me getting pregnant. I tried to hide it for as long as I could, but eventually I started to show. My mom was very unsupportive, even though she had me when she was young. I thought she would be more understanding, but she wasn't. My friends stopped wanting to hang out with me and on top of that the teachers started to look at me and treat me differently. I had been a pretty popular student for the most part. I was a cheerleader, in the choir, made good grades and even was in the honor society. But all of that didn't matter when they found out I was pregnant. Finally, I couldn't take the pressure any more, the looks, the laughs, the isolation, the unfair treatment. I decided to move and go live with my cousin who had already graduated. I stayed with her and helped babysit her kids while she went to work. I really liked school and wanted to go back, but with my new baby there was no way I could make it, especially by myself.

Interviewee #4: There were a lot of reasons why I did not complete high school, but one of the main reasons was because I could never catch up. We moved around a lot and I missed so many days that I really didn't know what was going on when I did go to school. To go along with that, the teachers never cared to sit there and explain it where everyone could understand. They never took the time; they just flew through their lessons. But to be honest, I was too afraid to ask. I didn't want to look dumb. I was already out of place and got teased a lot, so I didn't want to bring any more attention to myself. My mom didn't really care, she was too busy with her boyfriends. The teachers didn't really know me, and I didn't try to get to know them. I just started skipping more and more. Nobody cared anyway. And there was no way I could catch up, so why not give up.

The interviewees recognized the lack of effort put forth by school officials and even family members to offer them that extra encouragement and support that could have affected their decisions. The participants also suggested that it might have been helpful to offer alternative forms of instruction to meet their unique situations and needs.

Category 2. Emotional, Mental, and Personal Influences and Stressors

Another theme that was common among the participants as a contributor to dropping out was personal and social stressors. All of the participants reported some life event that was a result of an internal or external stressor. Many reported problems with the infrastructure of the family system, financial difficulties within the family, lack of support in the family system, and ongoing problems in the family environment that led to feelings of isolation and dysfunction. As a result of these stressors, some became involved in gangs, drug related activities, and substance use and abuse. Personal feelings of hopelessness, along with other stressors; the need for income to meet basic daily living needs, social problems with peers, involvement in the criminal justice system, and untreated mental health issues also contributed to dropping out.

Interviewee #4: For me, school was always a challenge, and I could never really focus. I attended school at times because it allowed me to get away from the problems at home. Home wasn't really a positive environment. Things really started going downhill at the end of junior high. I found myself zoning out a lot during class because I was thinking about my personal problems and home issues.

Interviewee #1: My problems started when I was about 13. It started earlier but I blocked it out. It was so much going on emotionally and personally that prevented me from focusing on school. After the rape, I turned to drugs and became addicted to forget all of my problems. There was too much stress on me. What motivated me to do better and come back and work on my GED was the program I am now enrolled in. It is a drug treatment program for women and it has helped me to get back on the right track.

Limitations and Recommendations for Future Research

Although the present study provides much useful information about dropouts, there were some limitations inherent in the study. The first limitation was the sample size. By having a small sample size it limited the generalizability of the results. The second limitation was the ethnicity of the participants. All of the participants were African American, therefore the results can not be generalized to other populations. A third limitation was the geographic location of the study. The study was done in the South in an area where many of the residents have a reported annual income of less than \$25,000.00, which could be indicative of poor financial resources and a limitation of access to better opportunities. While the information obtained from participants in this study can help educators and other professionals understand and work more effectively with this population in preventing, curtailing, or reducing future dropout, future studies should be expanded to include a more diverse and larger sample. Future research should also include an exploration of student outcomes across time, and interviews should be done with family members of these youth to measure comparison effects as to how they both related and reported, and to what extent the identified trends were present.

Conclusion

Although many of these participants have faced significant life events, they are now enrolled in an alternative program to help them get their GED. The participants' responses suggest a desire for success and a demonstration of inner motivation and resilience that emerged as a contributor in their decision to improve past life choices. The study sought to examine the social, emotional, and academic factors influencing African American male and females' decisions to drop out of school. The themes that emerged from the interviews highlighted the need for more flexible alternatives and interventions when working with these individuals. School interactions, influences of family problems, and the need for better communication, socialization, and positive behavioral health interventions and supports provide ideas for programming and interventions that could help facilitate more successful educational experiences for some students who may be dealing with extraordinary circumstances.

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References

- Azzam, A. M. (2007). Why students drop out. *Educational Leadership, 64*, 91-93.
- Balfanz, R., & Fox, J. H. (2009). *a*. [ERIC]. doi: ED505363
- Balfanz, R., & Letgers, N. (2004). Locating the dropout crisis: Which high schools produce the nation's dropouts? In G. Orfield (Ed.), *Dropouts in America* (pp. 57-84). Cambridge, MA: Harvard Education Press.
- Balfanz, R., & Letgers, N. (2004). *Locating the dropout crisis: Which high schools produce the nation's dropouts? Where are they located? Who attends them?* Baltimore, Md.: Center for Social Organization of Schools, Johns Hopkins University.
- Groenewald, T. (2004). A Phenomenological Research Design Illustrated. *International Journal of Qualitative Methods,*

- 3(1), Article 4. Retrieved December 11, 2012 from <http://www.ualberta.ca/niigm/backissues/31/pdf/groenewald.pdf>.
- NGA Center for Best Practices. (2009). *Reducing Dropout Rates through Expanded Learning Opportunities*. Washington, DC: U.S. Government Printing Office.
- National Center for Education Statistics. (2008). *Dropout rates in the United States*. Retrieved from National Center for Education Statistics: <http://nces.ed.gov>.
- National Center on Addiction and Substance Abuse. (2005). *Criminal neglect: Substance abuse, juvenile justice and the children left behind*. Retrieved from: <http://casacolumbia.Org>.
- Newcomb, M. D., Abbott, R. D., Catalano, R. F., Hawkins, J. D., Battin-Pearson, S., & Hill, K. (2002). Mediation and deviance theories of late high school failure: Process roles of structural strains, academic competence, and general versus specific problem behaviors. *Journal of Counseling Psychology, 49*, 172-186.
- Orfield, G. (Ed.). (2004). *Dropouts in America: Confronting the Graduation Rate Crisis*. Cambridge, Mass.: Harvard Education Press.
- Rumberger, R. and Linn, S. (2008). *Why Students Drop out of School: A Review of 25 Years of Research*. California Dropout Research Project, University of California, Santa Barbara.
- Tyler, J., & Lofsrom, M. (2009). Finishing High School: Alternative Pathways and Dropout Recovery. *The Future of Children, 19*, 77-94.
- Urban Institute (2012). Poor Parents' Education is Key in Their Children's Escape from Poverty. Retrieved from <http://www.urban.org>.
- U.S. Department of Education. (2004). *No Child Left Behind*. Retrieved from: <http://www.ed.gov/nclb/landing.jhtm>.
- U.S. Department of Education, Office of Special Education and Rehabilitative Services. (n.d.) *History: Twenty-five years of progress in educating children with disabilities through IDEA*. Retrieved January 27, 2010, from <http://www.ed.gov/print/policy/speced/leg/idea/history.html>.

- U.S. Department of Labor. (2011). *So you're thinking about dropping out of school*. Retrieved from: <http://www.dol.gov/as%5B/fibre/dropout.html>.
- U.S. Office of Juvenile Justice and Delinquency Prevention. (2005). *Overcoming barriers to school re-entry*. Retrieved from: <http://www.ncjrs.org/pdffiles1/ojjdp/fs200403.pdf>.

Students' Evaluation of Faculty-Student Rapport at an Urban HBCU

by

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Abstract

This study was designed to explore how undergraduate students evaluated their faculty on measures of faculty-student rapport at an urban, Historically Black Colleges and Universities (HBCU) in the southern United States. The Student Instructional Rating System (SIRS) was the student evaluation of instruction instrument of choice at this university. Rapport was measured by the following indicators on the SIRS: faculty was friendly/civil towards students, faculty was accessible to students, faculty was available to students during office hours, faculty worked with each student without showing favoritism-bias to any students, and faculty welcomed students seeking advice. Marked differences emerged between the College of Education and the other colleges for most of the items, especially the College of Science. Implications and the need for professional development and improved faculty availability were discussed.

Introduction

Rapport is defined by the Merriam-Webster dictionary as “close and harmonious relationship in which the people or groups concerned understand each other’s feelings or ideas and communicate well.” The term implies that the people involved develop a good working relationship with clear communication and mutual respect. These two elements are needed in any effective learning environment for students to succeed. The Psychological Society defines rapport as “development of trust, understanding, respect, and liking between two persons.” From both definitions it is evident that establishing rapport is an essential element of effective human communication. The author identifies four basics of establishing rapport:

People who wish to build rapport should strive to build trust (e.g., demonstrate honesty, reliability, and fairness), understand another person's views (e.g., make statements that you understand how a person feels), show respect (e.g., be polite and express gratitude), and be the kind of person whom others would like (e.g., be empathetic and altruistic) ("Rapport" 56).

Rapport is important because of its potential to increase student motivation for learning and satisfaction with the course materials. Rapport is more often built through consistent implementation of a combination of teacher behaviors that encourage students to look forward to class and meeting the instructor (Weimer, 2010). In such a process, faculty members invest substantial time in the role of mentor and advisor to students. Such faculty-student relationships can positively affect student determination to remain in a course and successfully complete it (Swenson, 2010 & Kobul, 2010).

Research Questions

This study sought answers to two questions:

1. What are student perceptions of faculty-student rapport based on SIRS results?
2. What are the differences in student perceptions of faculty-student rapport based on types of colleges?

Purpose of the Study

Faculty members play an important role in the lives of students during their matriculation. Many admire their instructors for their knowledge and accomplishments and are inspired to work hard to achieve their own career and life goals. For faculty to fulfill this role, they must clearly communicate their expectations to students, spend time in and out of class interacting with them, being role models, delivering effective lectures and being approachable and friendly.

Institutions of higher learning are more concerned than ever before that students feel welcomed, appreciated, respected, and wanted. A warm learning environment promotes student engagement in the course, academic self-confidence, and better performance. It may ultimately be the portal to a better career. The current study is a step toward defining faculty behaviors that build rapport and contribute to students' performance, persistence, and satisfaction with the learning experience.

The overall purpose of this study is to examine how students evaluate faculty on individual rapport. Specifically, this study is designed to determine how students rate faculty on the following items on SIRS: (1) faculty was friendly or civil toward students, (2) faculty was accessible to students, (3) faculty was available to students during office hours, (4) faculty worked with each student without showing favoritism or bias to any students, (5) faculty welcomed students seeking advice.

Literature Review

Faculty-student interactions play an important role in students' learning and general college success. Young (2007) and Murphy and Valdez (2005) argue that student learning outcome is impacted more by the quality of interaction they have with faculty rather than the number of times they interact. He suggests that faculty members play a significant role as socializing agents and, to some extent, determine how students may perform in class and experience general satisfaction with the college experience (Torff & Sessions, 2005; Kobul, 2010).

Echoing other studies, Sull, (2009) and Jones, et al. (2009) argue that learning experiences are mainly impacted by faculty and administrators. They set the tone for standards and attitudes that students embrace. Granitz et al. (2009) have built on those findings and created a list of outcomes that result when rapport is developed:

- higher motivation
- increased comfort
- satisfaction
- enhanced communication

In another study, Buskist and Saville (2001) note that more than half of their students acknowledged that they experienced rapport with their instructors. They concluded that students are looking for instructors with a sense of humor, who are firm but approachable, who provide students with opportunities to discuss and share ideas with classmates, and who take time to know students names and concerns.

Benson and Cohen (2005) conclude that “instructors who establish rapport with their students are likely to have students who attend class, pay attention during class, and enjoy the subject matter. Just as important, rapport may also lay the groundwork for

interaction with teachers and students during office hours or through e-mail,” p. 238.

In his study, Weimer (2010) identifies students’ outcomes as a result of experiencing rapport as:

- Higher motivation
- Increased comfort
- Increased work quality
- Satisfaction with the course
- Growing trust between instructor and students.

Faculty may pay more attention to teaching styles that effectively convey information to students, but they may disregard the importance of establishing rapport with their students (Benson and Cohen, 2005). A possible reason for this finding is offered by Granitz et al. (2009), who suggest that establishment of rapport between faculty and students is not without its challenges, perhaps because of the gap in age and resulting interest differences.

Instructor Was Friendly Toward Students

Friendliness between faculty and students can be two dimensional: top-down and bottom-up. Top-down friendliness is when a faculty member shows friendliness toward a student. Bottom-up friendliness is when a student shows friendliness toward a faculty member. While instructors’ friendliness toward students may be a factor in helping them succeed in a course, instructor-student friendliness may be subject to a variety of interpretations.

Studies (Benson & Cohen, 2005 and Jones, et al., 2009) have shown that instructors who are more open and keep close interactions with students make a difference in students’ learning. Students may want to confer more with instructors that are friendly to them. If they realize that their instructors are friendly toward them, they are more likely to initiate interactions and relationships with the instructors. Positive benefits also include building trust, improved grades, and persistence in courses.

Faculty friendliness to students is a way of communicating that they are valued and respected. Young (2007) views it as an etiquette that should be demonstrated by all instructors because it works at all times, everywhere, and with everyone-- even with students—and contributes significantly to a more positive campus climate and a better teaching and learning environment.

Instructor Was Accessible to Students

Faculty accessibility is an important factor in helping them complete a course successfully. It is especially important for students who may have problems with registration, learning course content, or completing assignments. But ease of access may not always be available when students need it, and the results can be detrimental to achievement. In a study by McArthur (2005), students voiced frustration about difficulty reaching their teachers when they needed help. One young man said he tried repeatedly and unsuccessfully to contact his faculty advisor. He left notes and sent email messages but was still unable to get a response (Meyers, 2009).

Perhaps the faculty member student described in McArthur's study was unaware of the well documented research findings that have revealed the important benefits of positive faculty-student interaction. Fleming (2003) encourages interaction of students and instructors both inside and outside the classroom.

Instructor Was Available to Students During Posted Office Hours

Virtually all colleges and universities require instructors to post and keep office hours; however, not all instructors are available during those posted times. Instructors sometimes have other commitments such as committee meetings or conference presentations that interfere from time to time. Even when instructors are available during office hours, however, many students do not take advantage of it. Kaufka (2010), states that in practice, students rarely take advantage of the posted hours and, when they do, the duration of the visit tends to be concise in nature. A number of students rarely visit instructors for further support outside the classroom. Thus, availability of the instructor during office hours is no indication that students will make an effort to interact with the instructor outside class hours unless there is an issue to be discussed (Schiller, 2013).

Instructor Works with Each Student without Showing Favoritism or Bias to Any Students

Favoritism and bias are big issues in the classroom. Though they do not exist in all classrooms, they are nevertheless

pervasive in many educational settings and can send the wrong message to students. Favoritism has been a part of classroom life since day one of schooling (Angel, 2010), but it has more serious emotional impact than openness to diversity in ideas. True, not all teachers display favoritism. Favoritism may have its beginnings in the home when parents favor some children over others. Most of the students have faced it in one place or the other, and we may have been on either the winning or the losing side of things. Similar to Angel's observations, some teachers may give football players privileges not enjoyed by the rest of the class. For example, they may tell the players that if they win the game, they will be excused from a homework assignment but their duty should be to inspire students and encourage them to make better people of themselves not to show bias. Their duty is to educate them while show respect for the unity of the whole class. Showing favoritism discourages those students that are not teacher's pets or athletes. Likewise, separating individuals from the rest of the class, whether through disparaging statements or special privileges, is not helping them develop a sense of fairness or equality of opportunity.

According to Salas (2006, p.2), "Most faculty members believe that the classroom continues to be, and should be, an appropriate venue for multiple viewpoints and thought-provoking exchanges." But how can that type of interaction occur if some teachers are openly biased in favor of their own opinions? Salas quotes an educator who admits that his bias is evident but maintains that he balances it with an open atmosphere in which he makes specific effort to show fairness to students who hold differing views. This is a case of showing tolerance for opposing ideas and being encouraged to model that kind of behavior in intellectual exercises.

Bias need not be a direct action of the teacher; it can come from authorities higher than the classroom teacher. Germain (2005) cites a news report that has exposed administrative concerns about grade inflation, a systematic bias that can occur in colleges and universities where the administration and faculty want to keep students happy with higher grades so they will continue paying tuition to the institution. Faculty may fear they will be blamed if many of the grades are low. They may be accused of not being good teachers. As the accountability finger is pointed more at teachers, according to Germain, they may be more inclined to

consider their own reputations than the quality of the work when assigning grades.

Human beings are subjective, and experiences affect preference in different ways. We tend to be comfortable with those who most resemble our own cultural and socioeconomic experiences, and that trait easily translates into preferential treatment. The research seems to indicate that objectivity is a learned quality that has to be accepted as an appropriate teaching tool and then practiced vigilantly. We know preferential treatment can affect the self-esteem of the preferred student as well as the overlooked ones. Perhaps our training as teachers should address the effects of subjectivity vs. objectivity on student achievement. It might help us to work harder to achieve a norm of equality in our classrooms at all educational levels.

Instructor Welcomes Students Seeking Help or Advice

Many freshmen come to college unprepared for college-level work. Such students will need a lot of help and advice from their instructors if they are to succeed in college. Therefore, it becomes important that faculty members be disposed to welcoming these students on the first visit to their offices. Students who are welcomed by their instructors on their first visit are more likely to continue to seek help and advice from their instructors throughout the semester. Kaufka (2010), states that students who feel welcomed on their first visit to their instructors are more likely to return. Many of these students return regularly to the instructors for help with coursework and merely to greet the instructors.

Instructors who do not welcome students seeking help and advice are more likely to alienate them. Even when some students demonstrate courage to go to such instructors, they may not feel free to relate their difficulties. Some of these students may eventually drop the courses taught by unwelcoming instructors. On the contrary, students who feel welcomed by the instructors and that they will get help and advice as needed are more likely to persist in the courses taught by the welcoming instructors.

Instructors who welcome their students inspire trust. When they trust instructors, such students will likely interact with them in and out of the classrooms and offices. Students and especially freshmen are likely to do well when they create clear communication with their instructors (Fleming, 2003).

Method

Description of Sample

The SIRS participants consisted of undergraduate students enrolled at a major Historically Black Institution in the South.

Instrument

One standardized Student Instructional Rating System (SIRS) instrument was used in this study. This instrument has a rapport domain with 5 items. Some of the items were rated on a Likert scale of strongly disagree, disagree, agree, and strongly agree. Other items were rated on poor, fair, good, and excellent. In this article, only the results of the items that are grouped under individual rapport will be used for discussion. The rating scale gives students opportunity to make a judgment on the way courses are taught. The rapport category provided adequate information to assess how students rated student-faculty rapport. The items measuring rapport are listed below.

Rapport Categories on SIRS Evaluation Instrument

1. Faculty were friendly to students
2. Faculty were available to students
3. Faculty were welcoming
4. Faculty kept office hours
5. Faculty were accessible to students

Note. Each category has individual questions to which the students respond.

Procedure

The data for this study were obtained from the Testing and Assessment Center. After receiving permission from the Provost, the Center made Fall 2010 SIRS data available; however, the researchers were not given access to the SIRS primary database. The data were organized into tables for ease of comprehension.

Data Tables

Table 1: Instructor was friendly to students

Category	Frequency	Percent
Strongly Disagree	706	8.8
Disagree	278	3.4
Agree	3027	37.5
Strongly Agree	4052	50.3
Total	8063	100.0

Source: Institutional Data

Table 2: Instructor was accessible to student

Category	Frequency	Percent
Strongly Disagree	764	9.5
Disagree	359	4.4
Agree	3239	40.1
Strongly Agree	3718	46.0
Total	8063	100.0

Source: Institutional Data

Table 3: Instructor was available during office hours

Category	Frequency	Percent
Strongly Disagree	763	9.5
Disagree	346	4.3
Agree	3297	40.9
Strongly Agree	3656	45.3
Total	8062	100.0

Source: Institutional Data

Table 4: Instructor was helpful without favoritism

Category	Frequency	Percent
Strongly Disagree	763	9.3
Disagree	326	4.1
Agree	3007	37.4
Strongly Agree	3951	49.2
Total	8030	100.0

Source: Institutional Data

Table 5: Students seeking help and advice were welcomed

Category	Frequency	Percent
Strongly Disagree	725	9.0
Disagree	348	4.3
Agree	2987	37.0
Strongly Agree	4015	49.7
Total	8075	100.0

Source: Institutional Data

Table 6: Instructor was respectful to students

Category	Frequency	Percent
Strongly Disagree	763	9.3
Disagree	275	3.6
Agree	3000	37.3
Strongly Agree	4014	49.8
Total	8052	100.0

Source: Institutional Data

The following tables and charts represent the data categorized by colleges.

Table 7: Instructor was friendly to students

Colleges	SD	D	A	SA	Total	SA&A%
Business	55	27	295	389	766	89.3
Education	66	30	324	549	969	90.0
Liberal Arts	221	87	835	1090	2233	86.2
Public Service	40	21	233	402	696	91.2
Science	280	92	967	1074	2413	83.9

Legend:

SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree

SA & A = Strongly Agree and Agree percentage

Table 8: Instructor was accessible to students

Colleges	SD	D	A	SA	Total	SA&A%
Business	62	28	329	358	767	89.5
Education	71	38	364	487	960	88.6
Liberal Arts	255	99	883	1010	2247	84.2
Public Service	46	38	269	339	692	87.9
Science	285	128	1008	1007	2428	83.9

Legend:

SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree

SA & A = Strongly Agree and Agree percentage

Table 9: Instructor was available during office hours

Colleges	SD	D	A	SA	Total	SA&A%
Business	56	23	327	351	757	89.6
Education	71	37	386	467	961	88.8
Liberal Arts	256	104	885	996	2241	83.9
Public Service	53	25	283	331	692	88.7
Science	283	125	1000	1019	2427	83.2

Legend:

SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree

SA & A = Strongly Agree and Agree percentage

Table 10: Instructor was helpful without favoritism

Colleges	SD	D	A	SA	Total	SA&A%
Business	56	26	295	385	762	89.2
Education	69	19	340	532	960	90.8
Liberal Arts	241	101	824	1064	2230	84.7
Public Service	45	24	240	381	690	90.0
Science	283	135	940	1043	2401	82.5

Legend:

SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree
SA & A = Strongly Agree and Agree percentage

Table 11: Students seeking help and advice were welcomed

Colleges	SD	D	A	SA	Total	SA&A%
Business	51	30	294	389	764	89.4
Education	69	29	343	524	965	91.3
Liberal Arts	236	121	808	1078	2243	84.1
Public Service	42	27	235	391	695	90.1
Science	274	119	937	1092	2422	83.8

Legend:

SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree
SA & A = Strongly Agree and Agree percentage

Table 13: Rating instructor individual rapport

Colleges	Poor	Fair	Good	Excellent	Total	G & E %
Business	54	69	238	396	757	83.8
Education	69	57	258	574	958	86.8
Liberal Arts	243	144	667	1061	2215	78.0
Public Service	45	58	207	382	692	85.1
Science	286	186	796	1118	2386	80.2

Legend: G & E - Good and Excellent combined percentage

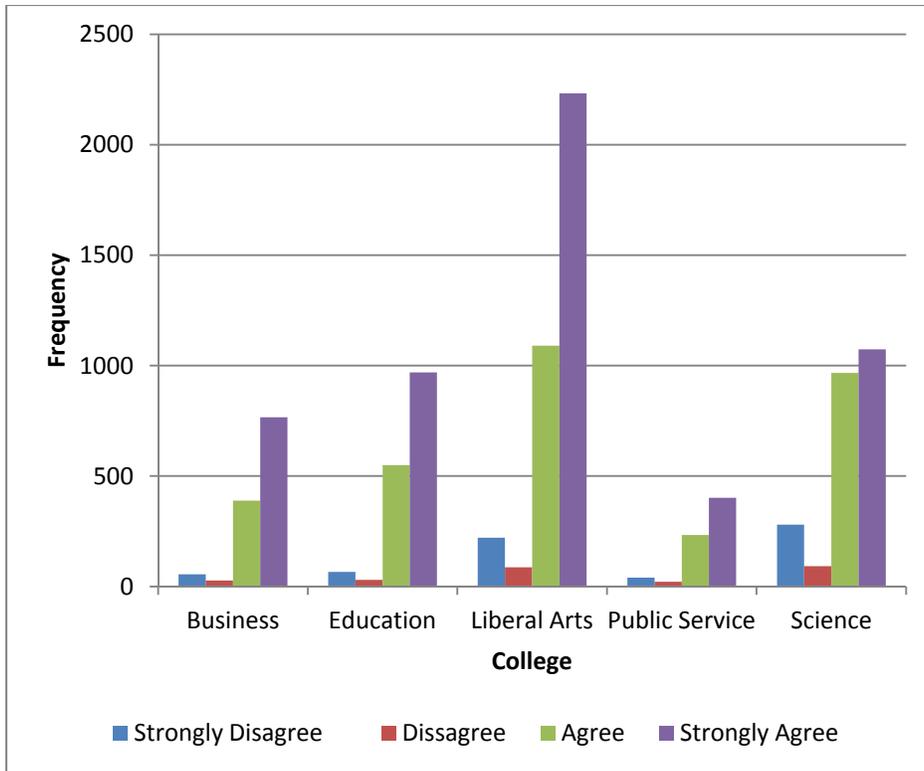


Figure 1. Showing instructor was friendly to students

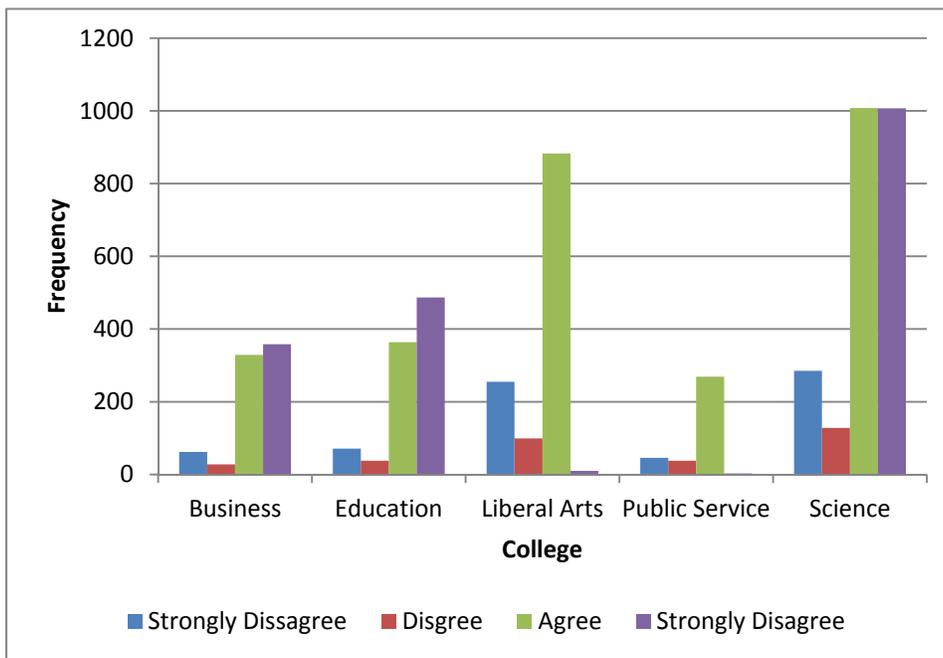


Figure 2. Showing instructor was accessible to students

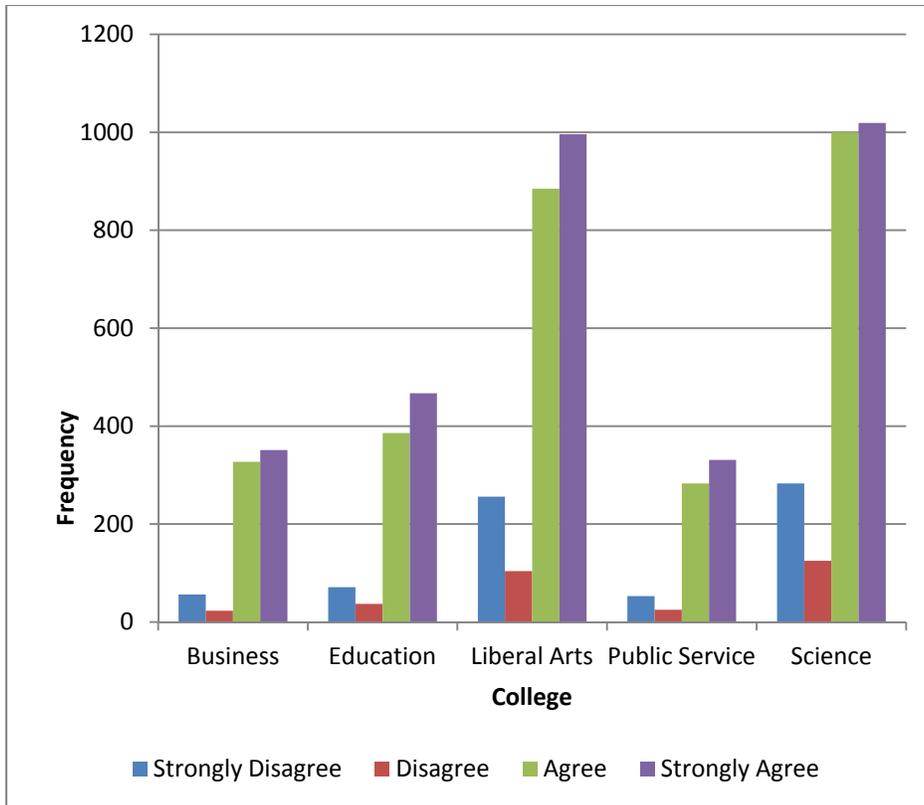


Figure 3. Showing instructor was available during office hours

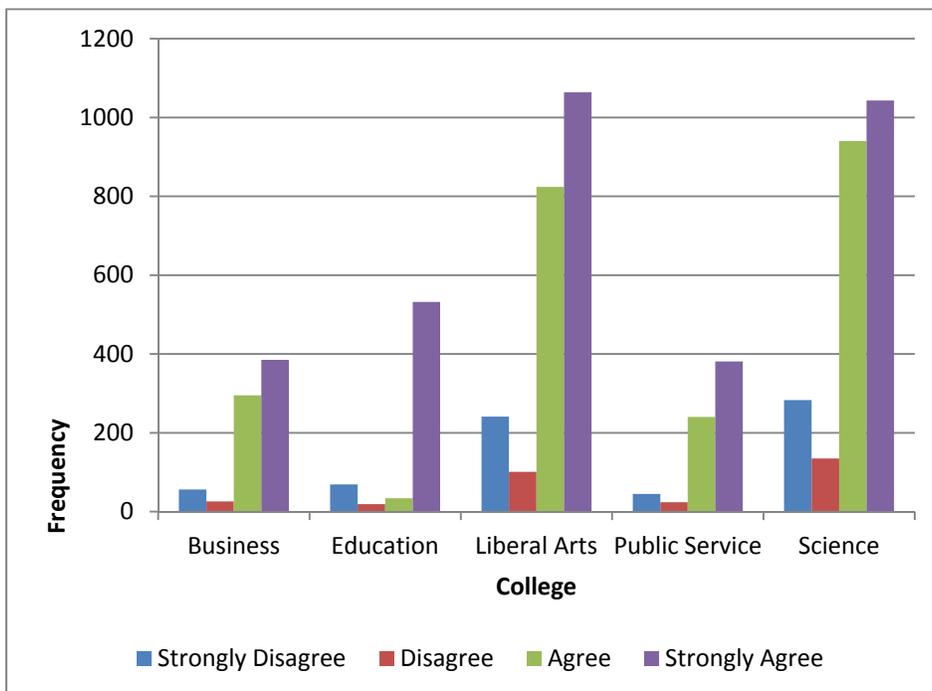


Figure 4. Showing instructor was helpful without favoritism

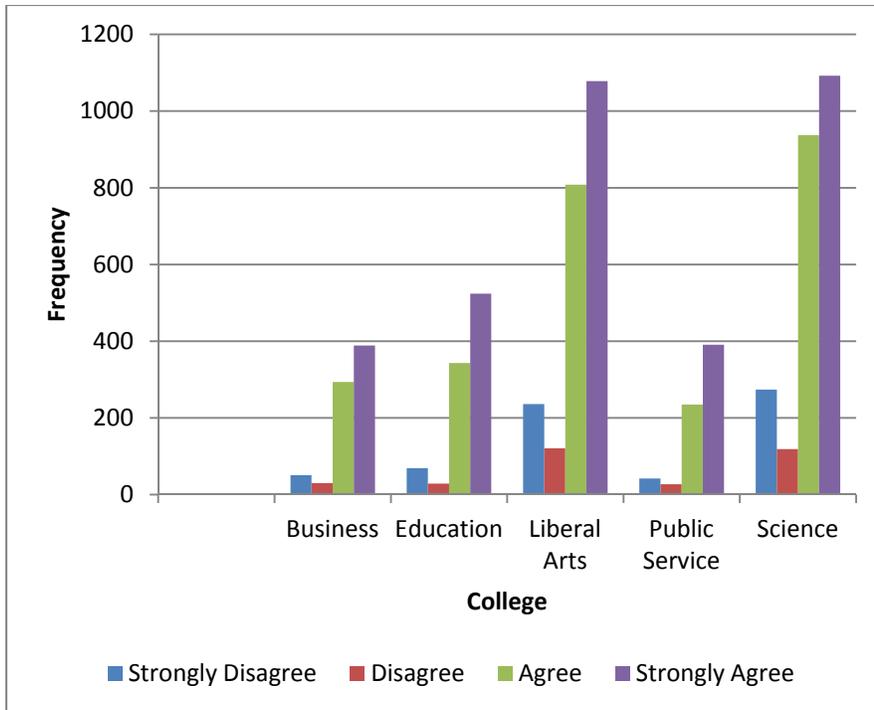


Figure 5. Showing students seeking help and advice were welcome

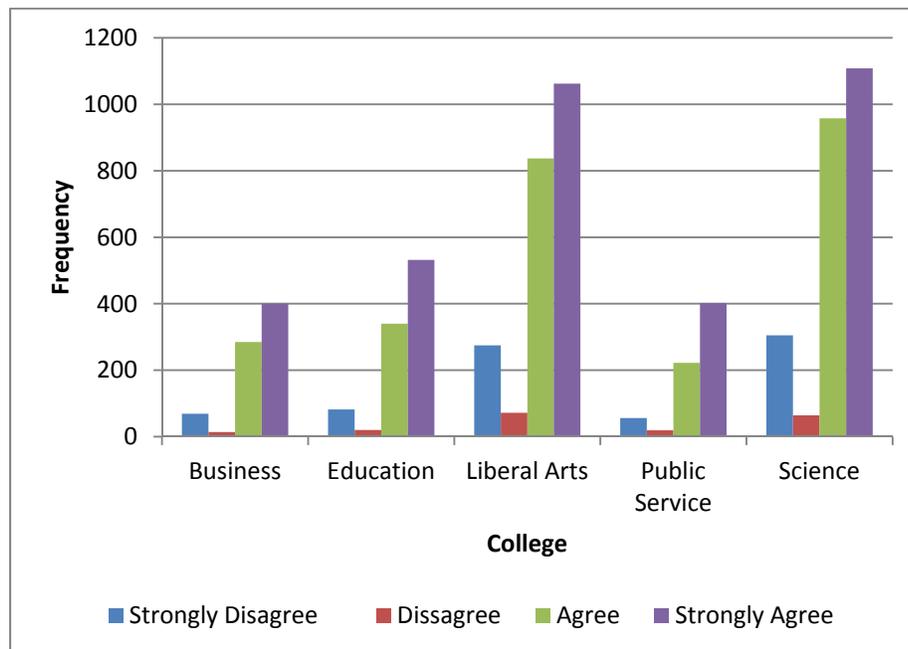


Figure 6. Showing instructor was respectful to students

Results and Discussion

This study explored faculty-student rapport based on Student Instructional Rating Scale (SIRS) conducted at the end of each semester. Students' ratings on each aspect of rapport were analyzed using SPSS. The results show student perceptions of faculty-student rapport based on SIRS. Also, results were cross tabulated to show differences in student perception of faculty-student rapport in types of colleges. The results provide more insight into the patterns of students' ratings among different colleges.

As previously stated, students' evaluation of faculty-student rapport were assessed for items measuring rapport on the instrument: Business, Education, Liberal Arts, Public Service, and Science. Tables 1-6 and Figures 1-6 above show students' perceptions of faculty-student rapport as rated by students ranging from strongly agree to strongly disagree on the rapport items assessed. Tables 1-6 and Figures 1-6 indicate that most students rated their instructors as Strongly Agree and Agree in all items assessing rapport. Combined ratings of Strongly Agree and Agree (SA & A) in all items among all colleges range from 84 percent to 91 percent. The data show that the instructors have good rapport with the students.

Instructors in the college of Education were rated highest in three out of the six rapport items on the SIRS evaluation on strongly agree and agree as follows: Faculty were friendly towards students 90%, faculty were helpful without showing favoritism 90.8, and faculty welcomed students seeking advice. The College of Business was rated highest in faculty availability during office hours on Strongly Agree and Agree at 89.6 percent. The College of Liberal Arts and the College of Public Service were rated moderately in all items measuring rapport. However, College of Science was rated lowest across the board in all rapport items. Of concern is the low rating of all colleges on faculty accessibility to students which ranged from 89 percent in the College of Business to 83 percent in the College of Science.

Recommendations

The University administration needs to look into ways of increasing faculty availability to students if students' college retention and graduation rates are to improve.

The institution's administration can use the results of this study to make important data-based decisions for improving faculty-student rapport across campus. One such decision that immediately comes to the fore is the establishment of a series of professional development workshops improving faculty availability to students in all colleges which were rated the lowest. The advantages include improving the learning environment for all students, enhancing student learning, and improving retention and graduation rates. The goal of every institution is to increase its retention and graduation rates with the understanding that most states factor student retention and graduation into the funding formula.

Finally, faculty should make efforts to reach out to the approximately 20 percent of the students who rated instructors unfavorably and indicated that they disagreed or strongly disagreed with the statement that students experienced instructors who were friendly, whose office hours were kept, and who were accessible to students. When such students feel alienated, they are more likely to skip classes, perform poorly, repeat classes due to poor performance, and even drop out altogether. Kaufka (2010), states that students who feel welcomed on their first visit to their instructors are more likely to return to the instructors for help and advice. Many of these students return regularly to the instructors for advice on coursework and to just greet the instructors. In his study, Fleming (2003) states that those college freshmen are more likely to succeed when they establish and maintain interpersonal relationships. Institutions that ensure that students' needs are met from the time they arrive on campus until they graduate have higher retention and graduation rates. Therefore, conducting follow-up case studies on the 20 percent whose responses reflected disaffection in order to identify and address their challenges has great potential for improving students' performance and retention.

Conclusions and Recommendations for Faculty

This study investigated students' perceptions of instructors on five criteria designed to evaluate student-teacher rapport over two semesters. The findings reveal consistent favorable ratings of instructors in all courses in all colleges of the University. This study finds that about 80 percent of the students rated instructors favorably on all aspects of rapport: instructors are friendly, keep

office hours, are accessible to students, are not biased to students, and welcome students seeking advice. The institution should conduct a follow-up, qualitative study interviewing a randomly selected sample of students from the 80 percent who rated instructors favorably in all five variables that constitute rapport to ascertain how objective the students were in rating the instructors.

Rapport-building is a process consisting of several elements. Buskist (2001) provided the following tips for professors in building rapport:

- Learn to call your students by name.
- Learn something about the students' interests, hobbies, and aspirations.
- Create and use personally relevant class examples.
- Arrive for class early and stay a few minutes late to chat with students.
- Explain your course policies and why they are included in the syllabus.
- Post office hours.
- Get online; use email to increase accessibility to your students.
- Interact more; lecture less to promote active learning.
- Reward students for their comments with verbal praise.
- Be enthusiastic about your subject matter.
- Understand that students occasionally have problems that hinder their progress.
- Crack a joke, and do not forget to smile.

Recommendations for Further Research

To improve the rate and objectivity of the student ratings of instructors and reliability of the resultant data use, the following measures are recommended:

1. The institution may like to conduct research using a qualitative approach to add depth in revealing reasons for student-faculty interaction and its impact.
2. Limitations to the current study include the fact that the ratings used addressed only one aspect of the eleven sections of the SIRS. Clearly, the need for further research with a broader scope to include all elements on the SIRS is recommended to better understand students' ratings of instructors in all areas.

3. Explaining the importance and use of SIRS data to students may lead students to be more objective and honest when rating instructors.
4. Current evaluation forms could be improved to allow students to provide information they deem important for the administration to know and use to enhance the rating process.
5. The administration may like to find ways of improving faculty accessibility to students because this item was rated lowest in all five colleges.

References

- Angel, K. D. (2010). Favoritism in the classroom. Retrieved from <http://www.coppellstudentmedia.com/2010/11/15/favoritism-in-the-classroom/>.
- Benson, T., and Cohen, A. (2005). Rapport: Its relation to student attitudes and behavior towards teachers. *Faculty Forum*, 32(4), 237-238.
- Buskist, W. and Saville, B. (2001). Creating positive emotional contexts for enhancing teaching and learning. Association for Psychological Science. Retrieved from: http://www.psychologicalscience.org/teaching/tips/tips_0301.html.
- Fleming, N. (2003). Establishing rapport: Personal interaction and learning. *IDEA Paper # 39*.
- Germain, M.S. (2005). Grade inflation and student individual differences as systematic bias in faculty evaluations. *Journal of Instructional Psychology*, 32(1) 1-12.
- Granitz, N. A., Koernig, S. K., and Harich, K. R. (2009). Now it is personal: Antecedents and outcomes of rapport between business faculty and their students. *Journal of Marketing Education*, 31(1), 52-65.
- Grubb, J. (2007). Is professor bias a problem in our public colleges and universities? Retrieved from <http://www.helium.com/items/613414-is-professor-bias-a-problem-in-our-public-colleges>.
- Jones, J., Warren, S., and Robertson, M. (2009). Increasing student discourse to support rapport building in web and blended courses using a 3D online learning environment. *Journal of Interactive Learning Research*, 20(3), 269-294.
- Kaufka, B. (2010). Beyond the classroom: A case study of first-year student perceptions of required student-faculty conferences. *Journal of the Scholarship of Teaching and Learning*, 10(2), 25-33.
- Kozub, R. (2010). Relationship of course, instructor, and student characteristics to dimensions of student ratings of teaching effectiveness in business schools. *American Journal of Business Education*, 3(1), 33-40.
- McArthur, R. C. (2005). *Faculty-based advising: An important factor in community college retention*. Retrieved from

http://www.atlantic.edu/program/mcarthur/faculty_based_advising.htm.

Merriam-Webster New Dictionary (2011). Springfield, Mass. Author.

Meyers, S.A. (2009). Do your students care whether you care about them? *College Teaching*, 57(4), 205-210.

Murphy, M, and Valdez,C. (2005). Ravaging Resistance: A model for building rapport in a collaborative learning classroom. *Radical Pedagogy*, 7(1)1.

“Rapport.” Retrieved from <http://www.psychologyandsociety.com/rapportdefinition.html>.

Salas, A. (2006). Academic Freedom: Under siege from claims of liberal bias. *Education Digest*, 72(4) 1-5.

Schiller, E. (2013). Taking advantage of office hours. Retrieved from <http://www.back2college.com/officehours.htm>.

Sull, E. (2009). Student engagement, motivation, and rapport. *Distance Learning*, 6(3), 90-94.

Swenson, E. (2010). Rapport in the classroom. A paper presented at Center for Teaching Excellence, United States Military Academy, West Point, N. Y.

Weimer, M. (2010). Building rapport with students. Retrieved from <http://www.facultyfocus.com/articles/teaching-and-learning/building-rapport-with-your-students>.

Young, K. and Sax, L. (2007). Different patterns of student-faculty interaction in research universities: An analysis by student gender, race, SES, and first-generation status. *Review of Higher Education*, 24(3), 309-332.

**Pre-Service Teachers' Attitudes toward Students' Use of
African American English**

by

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Abstract

The current study examined 1) pre-service teachers' attitudes toward students' use of African American English (AAE) and 2) pre-service teachers' preparedness to teach students who speak AAE. Thirty-eight pre-service teachers completed a 25-item, Likert-style survey. Results of the survey indicated that the majority of the pre-service teachers perceived AAE as an inadequate language system that adversely affects students' performance in Language Arts, writing, and other content areas. A majority of the pre-service teachers believed that speaking Standard American English (SAE) would result in improved school success and better job opportunities for African American students. Results also showed that the majority of the pre-service teachers felt adequately prepared by their teacher education program to address linguistic diversity in the classroom; however, the majority of pre-service teachers indicated a desire to learn additional teaching strategies to address the linguistic needs of AAE-speaking students.

Introduction

School children in America's schools speak various dialects of English including those that are considered nonmainstream or vernacular. These varieties, or dialects, typically reflect regional, cultural, and ethnic differences. One such variety is African American English (AAE). Spoken by many but not all African Americans, AAE is a linguistic system that has set lexical, phonological, syntactic, and morphological features (Green, 2002). Importantly, it is a rule-governed linguistic

system and a legitimate form of communication. Considered as one of the most popular sociolinguistic topics, AAE has been well researched and discussed. One of the most commonly discussed topics under the umbrella of AAE is research on education (Green, 2002).

The use of AAE by students in educational settings has sparked national attention over the years. A hallmark AAE case was the *Martin Luther King Junior Elementary School Children, et al. versus the Ann Arbor School District Board* (Civil Action No. 7-71861) case. The *King* case was a legal suit that was filed on behalf of eleven African American children alleging that they spoke a home or community dialect that prevented their equal participation within the school setting. Moreover, the suit argued that the district's school board did nothing to overcome this barrier. The presiding judge over this case, Charles W. Joiner, ruled in favor of the plaintiffs, concluding that the school board had failed to take steps to help teachers understand and accommodate the children's language differences (Joiner, 1981). Judge Joiner ruled that there was a possible relationship between the students' low reading scores and the failure of the school to take into account the home language of the children. He ordered the school district to find ways to identify AAE speakers and accommodate their language differences during academic instruction.

The *King* case and subsequent events such as the Oakland (California) Ebonics decision sparked heated dialogues and evoked strong opinions about AAE and students use of it in academic settings by nonspecialists and specialists alike. Since the 1960s and 1970s, specialists, including researchers from education, linguistics, and speech-language pathology, have extensively studied the origin, characteristics, and speakers of AAE. Researchers have also examined teachers' opinions and the educational implications of speaking this dialect (Green, 2002). Along these same lines, the purposes of the current study are to examine, within a sample of pre-service teachers, attitudes about the use of AAE by students in K-12 education, the perceived educational implications of speaking AAE, and how prepared pre-service teachers feel to meet the instructional needs of AAE-speaking students.

Attitudes toward the Use of AAE

Numerous studies have been conducted on attitudes toward the use of AAE (Blake & Cutler, 2003; Bleile, McGowan & Bernthal, 1997; Blodgett & Cooper, 1973; Carter & Smith, 2001; Cross, DeVaney & Jones, 2001; Doss & Goss, 1994; Gupta, 2010; Koch, Gross & Kolts, 2001; Taylor, 1973; White, Vandiver, Becker, Overstreet, Temple, Hagan & Mandelbaum, 1998). This body of work has examined the attitudes of the general public, teachers, and college professors about the legitimacy of AAE as a linguistic system, students' use of AAE in school, the intelligence and personal characteristics of AAE speakers, and the educational implications of speaking AAE. Many of these research studies have shown that speakers of nonmainstream dialects are generally held in low esteem, in academic and nonacademic settings (Adger, Wolfram & Christian, 2007).

An example of a current study on this topic is Gupta (2010), which investigated elementary school teachers' opinions about students' use of AAE. Participants included 152 teachers, 44 percent of which were African American and 54 percent of which were Caucasian. More than half of the teachers taught in schools in which the student body was primarily African American. The teachers completed a survey consisting of 25 items that queried the teachers' perceptions of AAE and how well prepared they felt about addressing the instructional needs of AAE-speaking students. Results indicated that the teachers viewed AAE as an inadequate language that contributed to problems with general learning, reading, classroom communication, writing, and poor standardized test outcomes. Results also indicated that the majority of the teachers felt underprepared by their teacher education program to meet the instructional needs of students who speak AAE.

The attitudes of pre-service teachers' toward students' use of AAE have also been examined. Pre-service teachers are of interest because relative to experienced teachers (such as the ones used in Gupta, 2010), pre-service teachers' attitudes may be more malleable and subject to experience shifts because pre-service teachers are still in the process of learning (Kennedy, 1999). One study that has examined pre-service teachers' attitudes toward different dialects of English including AAE is Cross, DeVaney and

Jones (2001). Participants for Cross et al. (2001) included 303 pre-service teachers from an Alabama university. The majority of the participants were Caucasian (58%), female (68%) and between the ages of 17 and 25 (66%). The pre-service teacher participants listened to five passages read by five native speakers of different dialects. The pre-service teacher participants rated the speakers on several personal qualities including intelligence, consideration, education, friendliness, honesty, trustworthiness, ambition, and social status. Results were that speakers who represented nonmainstream English dialects that are associated with minority cultures and/or low socioeconomic status were rated lowest on the various personal characteristics. For the dialect that represented high socioeconomic status African Americans and the dialect that represented low socioeconomic status African Americans, raters who were African American tended to rate the personal qualities higher than did the Caucasian raters. These findings provide some evidence that nonmainstream English dialects that are spoken by minorities as well as persons – both African American and Caucasian – of low socioeconomic statuses lead to negative judgments about a range of personal qualities including education.

The work of Cross et al. (2001) was extended to examine the attitudes of another group of southern pre-service teachers toward three different dialects of English (i.e., Standard American English, Southern English and Gullah Dialect) by Richardson and Lemmon (2009). In their study, they surveyed 46 prospective teachers. Participants in the study were asked to listen to a tape and rate the speakers on the same qualities used in Cross et al. (2001). The authors reported that the participants rated the Southern English speaker highest on the majority of the personal characteristics and the Gullah speaker lowest on the majority of the personal characteristics. They argue that familiarity of the dialect to the participants is a factor that influences listeners' perceptions and attitudes toward the dialect and its speaker. Listeners are more likely to have a positive perception or attitude toward familiar dialects, or in the words of Richardson and Lemmon, dialects that are "comfortable" to them. In the case of their study, Gullah was the least familiar dialect to pre-service teachers who completed the survey.

Based on the robust findings in the literature that speakers of nonmainstream dialects like AAE are generally perceived less

favorably, another set of studies has extended this work to examine how prepared pre-service teachers feel to work with students who speak diverse dialects of English. For example, Wenger and Dinsmore (2005) studied pre-service teachers' perceptions of their preparedness to teach culturally and linguistically diverse students. Thirty-one pre-service teachers participated in the study and were randomly assigned to two groups. Participants in both groups participated in group interviews that questioned their daily teaching experiences and their previous education programs. The data of Group 1 consisted of journal entries, classroom observations, assignments and informal interviews. The data of Group 2 consisted of videotaped group interviews, surveys, and assignments. Analyses of these data suggested that most pre-service teachers considered teaching culturally and linguistically diverse students to be very challenging. Results also indicated that the pre-service teacher participants thought a sustained focus in preparation programs should be on cultural and linguistic diversity and ways to foster positive learning experiences with diverse populations.

In summary, several studies have examined teachers' attitudes toward students' use of nonmainstream dialects of English such as AAE. The literature suggests that nonmainstream dialects of English are often judged by teachers to be an inadequate linguistic system that is incompatible with the language of schools. The work on teachers' attitudes toward AAE has recently been extended to another population – pre-service teachers. This line of work has suggested that pre-service teachers judge speakers of nonmainstream dialects like AAE to have lower personal qualities than speakers of mainstream dialects of English. Unfortunately, work in this area has not specifically examined pre-service teachers' attitudes toward students' use of nonmainstream dialects such as AAE in the classroom and the perceived educational implications of such use. That is, studies comparable to those that have been conducted with teachers have not been completed with this population.

To learn more about this population's attitudes toward students' use of AAE, the purpose of the current study was to replicate the Gupta (2010) study with a sample of pre-service teachers. The following questions guided the research:

1. What are the attitudes and beliefs of pre-service teachers toward the use of AAE in K-12 education?

2. How well prepared do pre-service teachers feel to teach linguistically diverse students?

Methods

Participants

Thirty-eight pre-service teachers served as participants. Participants were recruited from Jackson State University, a Historically Black University in Mississippi. All participants were majoring in early education and enrolled in a senior-level educational course. Permission to solicit participants was obtained from the professor of the class (third author of the current study). Participants completed a consent form approved by the Institutional Review Board at Jackson State University. Those students who were enrolled in the class and completed the consent form were eligible for participation.

Table 1 presents the characteristics of the 31 participants who completed the demographic form. As shown, the majority of the participants were African American, female, between the ages of 22-25, and had grade point averages that were between 3.0 and 3.5 and senior students. All pre-service teachers were native monolingual speakers of English. All participants presented no evidence of physical disorders and hearing loss.

Materials

A published survey (Gupta, 2010) was used to collect data about the participants' attitudes toward students' use of AAE. The survey consisted of 25 items with a Likert-type scale (with 1 designating "strongly disagree" and 5 designating "strongly agree"). The 25 questions were divided into two sections. The first section of the survey contained questions (n = 17) about the attitudes about students' use of AAE in K-12 education. The second section of the survey contained questions (n = 8) about perceptions of teacher preparation related to linguistic diversity in K-12 education. Acceptable constructed validity and internal reliability were documented in the original study.

Procedures

The data collection site was the classroom for the course. The pre-service teachers were given a short synopsis of the research project presented by the student researcher from a script. The pre-service teachers were provided an opportunity to ask any

questions and were given an option to participate. Pre-service teachers who indicated their desire to participate in the study were asked to complete and return the consent form to indicate willingness to participate in the study. After completion of the consent form, the pre-service teacher participants returned the form to the student researcher. Then, participants were given a survey comprised of twenty-five Likert scale items. For each item, participants were instructed to select one response: 1-Strongly Disagree, 2-Disagree, 3-Uncertain, 4-Agree, 5-Strongly Agree. A demographics form was attached to the survey. The pre-service teacher participants were asked to complete the survey and demographic form in its entirety. Completed surveys and demographic forms were returned to the student researcher.

Data Analysis

Responses for each item were entered into a database using the Statistical Package for the Social Sciences (SPSS; Version 18) program. In the database, an alpha-numeric code was assigned to each participant to protect confidentiality of responses. Responses for each item were entered into the database. A point score of 1-5 was provided for each item based on the participant's responses.

Codes were established to correspond to the various demographic variables queried on the demographic form (e.g., gender, age). These demographic variables served as the independent variables in the analyses. The dependent variables were the data obtained from the survey responses. SPSS was used to compute response frequencies and measures of central tendency.

Reliability

Twenty percent of the data (i.e., 7 surveys) were randomly selected for inter-coder reliability. A graduate student in the Communicative Disorders department re-entered the data of the surveys selected for reliability in a separate SPSS database using the codes established for the project. Data entry for those surveys was compared to the original database and a percentage of agreement was 99 percent. The one discrepancy that was revealed was resolved by referring back to the survey.

Results

Items on the survey were analyzed to answer the study's research questions. Participants' reported attitudes concerning AAE (Items 1-17) are presented in Table 2. The table includes percentages (%) and number of responses (n) for each item on a 5-point Likert scale.

Research Question 1: What are the attitudes and beliefs of future teachers toward the use of AAE in K-12 education? Results indicated that high percentages of the future teachers perceived AAE as an inadequate language system (Item #1, n = 23, 60.5%) and that teachers are likely to have lower expectations of speakers of AAE (Item #7, n = 16, 42.1%). While findings were mixed about whether speaking AAE impacts learning in school (Item #10, strongly agreed/agreed = 39.5%, strongly disagreed/disagreed = 31.6%) and whether speaking AAE is a contributing factor to the black-white achievement gap (Item #11, strongly agreed/agreed = 42.1%, strongly disagreed/disagreed = 36.9%), high percentages of future teachers reported that speaking AAE will have an effect on performance in Language Arts (Item #12, n = 27, 71.1%), writing (Item #4, n = 23, 60.5%) and other content areas (Item #13, n = 18, 47.3%). In contrast, speaking AAE was not thought to affect performance in math (Item #14, n = 29, 76.3%) or general communication in the classroom (Item # 2, n = 16, 42.1%). The majority of the future teachers believed that addressing linguistic issues of AAE speakers in the schools will enhance student achievement (Item #16, n = 26, 68.4%) and that speaking SAE, rather than AAE, is likely to result in improved school success (Item #8, n = 23, 60.6%) and better job opportunities for African American students (Item #9, n = 32, 84.2%).

Research Question 2: How well do future teachers feel prepared to teach linguistically diverse students? Table 3 presents how well future teachers believe they are prepared for meeting instructional needs of AAE speaking students and what their perceptions are regarding their teacher preparation program. The majority of the future teachers (Item #18, n = 25, 65.8%) agreed or strongly agreed that their teacher preparation program adequately prepared them to address linguistic diversity in the classroom and that they were familiar with the linguistic features of AAE (Item # 22, n = 27, 71.1%) and can identify them in students' reading (Item # 24, n = 35, 65.8%) and writing (Item # 25, n = 31, 81.5%).

However, although the majority of the future teachers indicated that they have acquired some strategies to address the linguistic needs of students in general, more than three-fourths of the future teachers (Item # n = 31, 81.6%) indicated a desire to learn some teaching strategies to address the linguistic needs of students speaking AAE.

Discussion

Two important findings emerged from analyses of the pre-service teachers' survey responses: 1) The majority of the pre-service teachers perceived AAE as an inadequate language system for education that adversely affects academic performance in Language Arts, writing, and other content areas; and 2) The majority of the pre-service teachers indicated that their teacher preparation program well prepared them to work with AAE-speaking children and that they feel knowledgeable about AAE, but they indicated a desire to learn some teaching strategies to address the linguistic needs of AAE-speaking students.

With the majority (n = 23, 61%) of the pre-service teachers not accepting AAE as an adequate language system, these results are generally consistent with those of other studies that have used experienced teachers as participants (e.g., Blodgett and Cooper, 1973; Gupta, 2010; Taylor, 1973). In comparison with Gupta (2010) which this study replicated, the pre-service teachers shared some of the same opinions about AAE as the teachers in Gupta's study regarding the adequacy of AAE and some of the educational implications of speaking it. For example, approximately 60 percent of respondents in both samples viewed AAE as an inadequate language system (i.e., 60.5% of pre-service teachers in the current study either strongly disagreed or disagreed with Item #1; 63% of teachers in Gupta's study either strongly disagreed or disagreed with Item #1.). To the survey item that asked if AAE affects students' performance in Language Arts, 71 percent of the pre-service teachers in the current study agreed or strongly agreed, and 78 percent of the teachers in Gupta's study agreed or strongly agreed. To the survey item that asked if addressing linguistic issues of AAE speakers in the schools will enhance student achievement, 68 percent of the pre-service teachers in the current study agreed or strongly agreed, and 70 percent of the teachers in Gupta's study agreed or strongly agreed. Similarities were also

found in the Pedagogical Beliefs section of the survey. Both the pre-service teachers in the current study and the teachers in the Gupta study indicated that they would like to learn teaching strategies to address the linguistic needs of students speaking AAE. There were differences in opinion found between the two samples of respondents, as well. For example, 39 percent of the pre-service teachers in the current study agreed or strongly agreed that speaking AAE impacts learning in school, whereas 67 percent of the teachers in the Gupta study agreed or strongly agreed.

The findings of the current study, particularly those that suggest that a majority of pre-service teachers, like the teachers in Gupta (2010), view AAE as an inadequate language system that adversely affects various aspects of education is noteworthy because of the potential damaging effects such attitudes can have on teaching, learning, and student-teacher interactions. A substantial body of scholarship has documented strong relationships between teachers' negative attitudes about stigmatized nonmainstream dialects such as AAE, teachers' lower expectations for the student, and lower student achievement (Godley, Sweetland, Wheeler, Minnici & Carpenter, 2006). Moreover, Birch (2005) states that the teachers' negative attitude toward a student's dialect may become a barrier in teacher-student interaction and if it is perceived by the student, it may begin to adversely affect the student's performance. Similarly, Cazden (1988) discusses the effects of the self-fulfilling prophecy and a potential linkage between teachers' negative attitudes toward dialects like AAE, lower expectations for AAE-speaking students, and lower achievement for the student.

How do we begin to shift attitudes about nonmainstream dialects of English such as AAE? In *Making the Connection: Language and Academic Achievement among African American Students*, Geneva Smitherman wrote, "As far as language diversity and language attitudes are concerned, the school remains a critical agent of social change" (1999, p.117). Pre-service teachers, given that they are still learning, could prove to be valuable agents of change in attitudes toward students' use of AAE in school. Kennedy (1999, p. 57) expressed the value of pre-service teacher education in altering pre-service teachers' ideas:

An important role for pre-service teacher education (PTE) is to change these initial frames of reference. Pre-

service teacher education is ideally situated to foster such a shift in thinking. It is located squarely between teachers' past experiences as students in classrooms and their future experiences as teachers in classrooms. From their experiences, teachers develop the ideas that will guide their future practices. If these ideas are not altered during pre-service teacher education, teachers' own continuing experiences will reinforce them, cementing them even more strongly into their understandings of teaching, and reducing the likelihood that these ideas might ever change.

Although the findings across studies involving pre-service teachers, including the current study, have been robust concerning their attitudes toward students' use of AAE in education, perhaps it may be the case that the attitudes of pre-service teachers are not cemented and can still be changed through systematic and intense training exercises during teacher preparation programs.

Implications

The results of the current study call for a systematic focus on language variations and teaching linguistically diverse students in teacher preparation programs. Although the pre-service teachers in the current study reported familiarity with AAE, a large percentage of them ($n = 31$, 72%) expressed a need to broaden their repertoire of instructional methods to better teach AAE-speaking students. One participant commented about the lack of AAE instruction throughout his/her matriculation: "There should be more [emphasis] put on African American English through our matriculation as future educators."

Likewise, Godley and her colleagues (2006) advocate for teacher preparation that is grounded in linguistic research and principles. This type of sociolinguistic approach may help equip pre-service teachers with an understanding of dialect diversity and a broad repertoire of instructional methods that are needed to meet students' needs in increasingly diverse classrooms. To this end, teacher preparatory programs might incorporate special workshops or designated classes as a part of the curriculum. Workshops could focus on educating pre-service teachers about universal aspects of language acquisition, linguistic diversity, linguistic theory related

to the rule-governed nature of AAE and other dialects of English, and sensitivity to cultural and linguistic differences.

Godley et al. (2006) argue that an interdisciplinary approach between educators and sociolinguists will be most beneficial in assisting pre-service teachers to effectively teach students who speak nonmainstream dialects of English such as AAE. Therefore, teacher preparation programs should collaborate with English Linguistics and Speech Language Pathology departments to provide seminars about language development and linguistic diversity. Language experts in these fields and others can help to alter negative attitudes toward AAE by informing future teachers and teachers in schools about AAE. These seminars should go beyond identifying features of AAE but should assist pre-service teachers in recognizing the rule governed, pattern-based nature of AAE. This will help build an appreciation for the linguistic maturity of AAE speakers and enhance instructional possibilities.

Bibliography

- Adger, C. T., Wolfram, W., & Christian, D. (2007). *Dialects in schools and communities* (2nd Ed.) Mahwah, NJ: Lawrence Erlbaum Associates.
- Birch, B. (2005). *Learning and teaching English grammar, K-12*. Upper Saddle River, NJ: Pearson Education, Inc.
- Blake, R. & Cutler, C. (2003). AAE and variation in teachers' attitudes: A question of school philosophy? *Linguistics and Education*, 14, 163-194.
- Bleile, K. M., McGowan, J.S., & Bernthal, J.E. (1997). Professional judgments about the relationship between speech and intelligence in African American preschoolers. *Journal of Communication Disorders*, 30, 367-383.
- Blodgett, E., & Cooper, E. (1973). Attitudes of elementary teachers towards Black dialect. *Journal of Communication Disorders*, 6, 121-133.
- Carter, L. A., & Smith, L.M. (2001). Supervisors' perceptions of African American Verbal English. *Contemporary Issues in Communication Science and Disorders*, 28,30-39.

- Cross, J. B., DeVaney, T., Jones, G. (2001). Pre-service teacher attitudes toward differing dialects. *Linguistics and Education*, 12, 211-227.
- Doss, R.C. & Gross, A. (1994). The Effects of Black English and code-switching on Intra-racial Perceptions. *Journal of Black Psychology*, 20, 282-293.
- Green, L. (2002). *African-American English: A linguistic introduction*. Cambridge, UK: Cambridge University Press.
- Godley, A. J., Sweetland, J., Wheeler, R. S., Minnici, A., & Carpenter, B. D. (2006). Preparing teachers for dialectally diverse classrooms. *Educational Researcher*, 35, 30-37.
- Gupta, A. (2010). African-American English: Teacher Beliefs, teachers needs and teacher preparation programs. *The Reading Matrix*, 10, 152-164.
- Joiner, C. (1981). Memorandum opinion and order. In G. Smitherman (Ed.), *Black English and the education of black children and youth; Proceedings of the national invitational symposium of the King decision* (pp. 336-358). Detroit, MI: Harlo Press.
- Kennedy, M. M. (1999). The role of preservice teacher education. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of teaching and policy* (pp. 54-86). San Francisco, CA: Jossey Bass.
- Koch, L. M., Gross, A. M., Kolts, R. (2001) Attitudes toward Black English and code switching. *Journal of Black Psychology*, 27, 29-42.
- Richardson, J., & Lemmon, R. (2009). *Prospective teachers' attitudes towards differing dialects*. Student Forum presented at the Annual Meeting of the American Speech-Language-Hearing Association, New Orleans, LA.
- Smitherman, G. (1999). Language policy and classroom practices. In C.T. Adger, D. Christian, & O. Taylor (Eds.), *Making the connection: Language and academic achievement among African American students* (pp.115-124). McHenry, IL: Delta Systems and Washington, D.C.: Center for Applied Linguistics.
- Taylor, O. L. (1973). Teachers' attitudes toward Black and nonstandard English measured by the language attitude scale. In R. W. Shuy & R. W. Fasold (Eds.), *Language*

attitudes: Current trends and prospects (pp.174-201).
 Washington, D.C.: Georgetown University Press.

- Wenger, K. J., & Dinsmore, J. (2005). Preparing rural preservice teachers for diversity. *Journal of Research in Rural Education*, 20. Retrieved December 12, 2011 from <http://jrree.psu.edu/articles/20-10.pdf>.
- White, M. J., Vandiver, B.J., Becker, M.L., Overstreet, B.G., Temple, L.E., Hagan, K.L., & Mandelbaum, E.P. (1998). African American evaluations of Black English and Standard American English. *Journal of Black Psychology*, 24, 60-75.

Table 1. Pre-service Teacher Profiles^a

Gender	
Female	22
Male	9
Racial/Ethnic Identification	
American Indian or Alaskan Native	0
Asian	0
Black or African American	28
Caucasian	1
Native Hawaiian or other Pacific Islander	0
Hispanic or Latino	1
Other	1
Age Range	
18-21	6
22-25	19
26-29	3
Over 30	3
Grade Point Average	
2.0-2.5	1
2.6-2.9	10
3.0-3.5	14
3.5-4.0	6
Current Classification	
Junior	2
Senior	29

^a38 pre-service teachers participated in the study although only 31 completed the demographic questionnaire.

Table 2. Pre-Service Teachers' Attitudes toward AAE: Response Percentages and Frequencies

Survey Item-Part I	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. AAE is an adequate language system	28.9% (11)	31.6% (12)	13.2% (5)	21.1% (8)	5.3% (2)
2. Students who speak AAE will have communication problems in the classroom	7.9% (3)	34.2% (13)	23.7% (9)	28.9% (11)	5.3% (2)
3. Students who speak AAE are likely to have reading problems	10.5% (4)	31.6% (12)	18.4% (7)	34.2% (13)	5.3% (2)
4. Students who speak AAE are likely to have writing problems	7.9% (3)	15.8% (6)	15.8% (6)	44.7% (17)	15.8% (6)
5. Speakers of AAE will do more poorly on standardized achievement tests than will speakers of SAE	7.9% (3)	31.6% (12)	28.9% (11)	28.9% (11)	2.6% (1)
6. AAE is incompatible with the language of the schools and will therefore interfere with learning	10.5% (4)	26.3% (10)	31.6% (12)	26.3% (10)	5.3% (2)
7. Teachers are likely to have lower expectations of speakers of AAE compared to speakers of SAE	13.2% (5)	21.1% (8)	23.7% (9)	39.5% (15)	2.6% (1)
8. Speaking SAE is not likely to result in improved school success for African American students	13.2% (5)	47.4% (18)	26.3% (10)	13.2% (5)	0% (0)
9. Speaking SAE is not likely to result in better job opportunities for African American students	36.8% (14)	47.4% (18)	5.3% (2)	10.5% (4)	0% (0)

10.	Speaking AAE impacts learning in school	5.3% (2)	26.3% (10)	28.9% (11)	31.6% (12)	7.9% (3)
11.	AAE is one of the many factors contributing to the achievement gap among black and white students	5.3% (2)	31.6% (12)	18.4% (7)	34.2% (13)	7.9% (3)
12.	AAE affects students' performance in Language Arts	0% (0)	15.8% (6)	13.2% (5)	57.9% (22)	13.2% (5)
13.	Speaking AAE affects students' performance in content areas	5.3% (2)	28.9% (11)	18.4% (7)	44.7% (17)	2.6% (1)
14.	Speaking AAE affects students' performance in Math	31.6% (12)	44.7% (17)	15.8% (6)	5.3% (2)	2.6% (1)
15.	Resource teachers are more effective in using specific teaching strategies to students speaking AAE, as compared to regular classroom teachers	10.5% (4)	13.2% (5)	57.9% (22)	18.4% (7)	0% (0)
16.	Addressing linguistic issues of AAE speakers in the schools will enhance achievement	2.6% (1)	10.5% (4)	18.4% (7)	44.7% (17)	23.7% (9)
17.	Oral language has little to do with academic performance	39.5% (15)	50.0% (19)	5.3% (2)	5.3% (2)	0% (0)

Table 3. Pre-Service Teachers' Pedagogical Beliefs: Response Percentages and Frequencies

Survey Item - Part II	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. My teacher preparation program trained me to address the linguistic needs of students speaking AAE	10.5% (4)	13.2% (5)	10.5% (4)	52.6% (20)	13.2% (5)
2. I have received in-service training to address the linguistic needs of students speaking AAE	13.2% (5)	31.6% (12)	13.2% (5)	34.2% (13)	7.9% (3)
3. I have acquired some teaching strategies on my own to address the linguistic needs of my students	0% (0)	15.8% (6)	7.9% (3)	60.5% (23)	15.8% (6)
4. I would like to learn some teaching strategies to address the linguistic needs of students speaking AAE	5.3% (2)	7.9% (3)	5.3% (2)	42.1% (16)	39.5% (15)
5. I am familiar with the linguistic features of AAE	7.9% (3)	13.2% (5)	7.9% (3)	50.0% (19)	21.1% (8)
6. I am comfortable teaching students who speak AAE	7.9% (3)	5.3% (2)	15.8% (6)	26.3% (10)	42.1% (16)
7. During a read-aloud by a student, I can identify if a deviation from a text is a dialect variation	0% (0)	0% (0)	34.2% (13)	47.4% (18)	18.4% (7)
8. I can identify AAE features in a writing sample of a student	2.6% (1)	2.6% (1)	13.2% (5)	44.7% (17)	36.8% (14)

**An Examination of African American Student Praxis I
Preparation Practices and Their Impact on Matriculation at a
Historically Black University**

by

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Abstract

While the number of African American and other minority students increases in public schools nationwide, the number of African American teachers is in a state of decline. Historically Black Colleges and Universities have played a major role in preparing African American teachers and have been identified as critical in meeting the demand for new teachers of color. While these institutions continue to produce a significant percentage of the nations' African American teachers, many African American students are unable to complete their matriculation due to their performance on certification examinations. This research study examined student preparation practices, performance on the Praxis I exam, and the effects of student performance on the Praxis I exam on the matriculation of 100 teacher education students attending a Historically Black University.

Introduction

While the number of African American and other minority students increases in public schools nationwide, the percentage of African American teachers is in a state of decline. D'Amica (2012) indicated that more than 83 percent of the teaching force is comprised of white females. Nearly ten years ago minority students made up more than 40 percent of public school enrollment and African American teachers represented 8 percent of that population (Educational Testing Services [ETS], 2011). Today, African American teachers comprise only about 5 percent of the teacher workforce (Johnson, 2011).

In recent years, a plethora of research has documented the benefits of increasing the representation of African American teachers in the workforce (National Collaborative on Diversity in the Teaching Force [NCDTF], 2004; Johnson, 2011; and Lewis 2006). Several of the most frequently discussed benefits are

increasing the number of role models for students of color, enriching student learning due to shared racial and cultural identities, and the ability to serve as cultural brokers that can better help students and their families navigate the school environment.

It is evident that African American teachers can make a difference if we are able to increase their representation in the teacher workforce. African Americans often, however face barriers which impede or slow their entry into the profession. Educator Chance Lewis (2006) states that we must first be aware of the pitfalls in the educational pipeline before we can truly address the problem. In recent decades one of the major challenges has become the adoption of licensure exams as a part of the admissions criteria for pre-service teachers.

Licensure Guidelines and HBCU Teacher Education Policy

Historically HBCUs have accounted for approximately half of all African Americans teaching in public schools and have been identified as critical in meeting the demand for new teachers of color. While these institutions continue to produce a significant percentage of the nations' African American teachers, many African American students are unable to complete their matriculation within their respective teacher education programs due to their performance on licensure examinations. Even though disparities in standardized testing performance between African American and majority students have long been documented, many teacher education programs within HBCUs utilize licensure examinations, such as the Praxis Exam Series, as requisites for admission and program completion. Aspiring teachers that are unsuccessful in their attempts to pass these examinations are often left with few options other than change of major or withdrawal from the institution.

As of 2006, all but three states required teachers to pass some form of standardized licensure exam (Goldhaber and Hansen, 2009). Most states have adopted the Praxis Exam Series by Educational Testing Services (ETS) as their state licensure exams. Students hoping to gain a teacher's license are often required to complete two or more of the following exams: Praxis I exam, Praxis II Content area exam and the Praxis II Principles of Learning and Teaching (PLT) exam. The Praxis I is a basic skills test focusing on the areas of reading, writing, and math. The

Praxis II Content area exam focuses on the content knowledge from the specific discipline that the teacher is preparing to teach in, and the Praxis II PLT focuses on theory and practice within the field of education.

In the last two decades teacher preparation has received a great deal of attention. More emphasis is being placed on candidate performance on licensure exams. Many teacher education programs have adopted the National Council for the Accreditation of Teacher Education's recommendation that 80 percent of their programs students successfully complete the state's licensure exam as policy for their programs. Many HBCUs have adopted this policy also, even though it presents major challenges to the primary population of students that they serve. It has been well documented that African American students score significantly lower on these exams than majority college students (ETS, 2011). Lewis (2006) states that as a result, many HBCUs have been in danger of losing their teacher education programs. He went on to use Southern University in Baton Rouge as an example. At one time their program was placed in jeopardy due to their low passage rates, but they responded with a 97 percent pass rate (Lewis, 2006; Dyer, 2003).

On the surface this seems great, considering their success, all other HBCUs need to do is replicate the success of Southern or other institutions with similar demographics. The problem is that a consistent replicable model for African American Praxis preparation has not been produced. HBCUs are addressing Praxis preparation through a variety of means including semester long courses, weekend workshops, making materials available, and encouraging faculty to take the exams to become more knowledgeable (ETS, 2011).

The biggest challenge to finding out what is working, however, is a policy that many HBCUs have adopted in order to ensure that they meet that 80 percent passage rate. Many HBCUs including the one in this study (and the other HBCUs within that state) require that students pass the Praxis I as part of the admissions requirements into the program. This process ensures that the university maintains a 100 percent passage rate on the Praxis exams, but it masks the true percentage of students passing the tests. If HBCUs are not internally maintaining data on the performance of all of their students, not just the ones officially

admitted and completing the program, then faculty and administrators may not be aware of the actual performance rates of students within their respective institutions making it more difficult to design interventions, collect data, and produce replicable models for others to follow.

Factors Affecting AA Praxis Performance

While it has been well documented that African Americans score below majority students the Praxis exams, the reasons why are not as well understood. There is one school of thought that states that the tests are biased, but that alone does not explain the differences. In the last decade several studies, both quantitative and qualitative studies, have shared characteristics of successful and unsuccessful students as well as documented some possible factors that may be affecting African American performance on the Praxis exams. An ETS (2011) survey of students in 28 states concluded that there is a strong relationship between GPA and Praxis scores, but GPA is not necessarily the strongest factor. Grades do not appear to be as accurate a predictor in terms of test performance among African Americans as they are among majority students. ETS also interviewed faculty as a part of this study and faculty reported that they believe that high school academic deficiencies and student's lack of motivation to prepare for the Praxis are impediments to their performance. The faculty members sampled stated that their students often have to be pushed to take advantage of university services. Their survey revealed that most African Americans do not begin taking Praxis Exams until their junior year. The survey also revealed that there may be a connection between the socio-economic status of the family that the student comes from and the selectivity of the institution.

Peggy Albers (2002) interviewed four African American pre-service teachers in her study and found that in the instances of the unsuccessful students, they often felt confident about their preparation in coursework but it did not necessarily translate to their performance on the exam. She also found that peers have a great deal of influence on the preparation practices or lack of thereof on other students. Another notable factor appears to be prior performance on standardized tests. Success on Praxis I means that African American students are more likely to be successful on Praxis II (ETS, 2011). Furthermore, initial failure

often leads to increasing anxiety making it increasingly difficult to pass the tests. In *Demystifying the Process* Dr. Roni Ellington, an assistant professor at Morgan State, stated, “The research shows that African-American students are taking it four and five times. What I got from the conference is that it signals we are not doing a good job preparing them, and I would argue that other factors are at play (Dodson, p.9, 2007)”. Because we know that our population of students often struggles with this requirement, it is imperative that teacher educators within HBCUs get a better understanding of the factors affecting African American Praxis I performance in general and specifically within their own programs.

Purpose

The purpose of this study is to examine how African American students within an HBCU are preparing for the Praxis I exam and performing on the exam, and to examine how their performance is affecting their matriculation at this HBCU. The goal is to determine how students are preparing and performing so that better interventions might be designed to aid in students successfully completing the Praxis I exam. The following research questions were examined:

1. How do HBCU teacher education students prepare for the Praxis I Exam?
2. What parts of the Praxis I Exam do HBCU students experience the most difficulty completing successfully?
3. How does performance on the Praxis I Exam impact HBCU candidate matriculation decisions?

Methodology

This study examined the characteristics and preparation practices for the Praxis I exam of one hundred students in a teacher education program within an HBCU. Students enrolled in mid- to upper-level teacher education coursework during the Spring 2012 semester were administered the *Praxis I Preparation and Test-taking Experience Survey (Appendix)*. This 27-item survey was developed by Dr. Tony Latiker and examined for face validity by a panel consisting of university professors, certified teachers, and students, all of whom have taken the licensure examination. It is organized into sections including Demographic Information, Preparation for Praxis I, Praxis I Test-taking Experience, and

Impact of Praxis I Outcomes. Data collected from the survey were analyzed using the Statistical Package for the Social Sciences (SPSS). The data were analyzed and reported utilizing descriptive statistics (i.e. frequencies, means, percentages, and modes). Instances where students skipped a question on the survey or marked multiple answers were deleted from the data samples, so the sample size in the data charts will not always reflect 100 participants.

Findings

One hundred African American HBCU students were surveyed in this study. There were 87 elementary education, four secondary education, and nine music and physical education majors. There were two sophomores, thirty juniors, and sixty-eight seniors. Sixty-eight percent had G.P.A.s above 3.0 with 26 percent reporting G.P.A.s ranging from 3.5 to 4.0, 42 percent reporting G.P.A.s ranging from 3.0-3.49, 31 percent reporting G.P.A.s ranging from 2.5-2.99, and the remaining student's G.P.A. was below 2.49. Most students were female (78%) and nearly half (49%) of the students surveyed were transfer students.

Research question #1 asks, "How do HBCU teacher education students prepare for the Praxis I Exam?" Table 1 provides an analysis of when students within this program started thinking about taking the Praxis I exam and when they actually took it for the first time. A majority of the students surveyed indicated that they did not seriously start thinking about taking any of the Praxis exams until their sophomore and junior years. The majority (55.3%) of the students reported that they took the Praxis I exam for the first time their junior year. Several even waited until their senior years to take it for the first time.

TABLE 1: Taking the Exam
I seriously started thinking about taking the Praxis I Exam N=99

Question/Category	Frequency	Valid Percentage	Mode
<i>Freshman Year</i>	11	11	
<i>Sophomore Year</i>	35	35.4	
<i>Junior Year</i>	49	49.5	3
<i>Senior Year</i>	4	4	

I took the Praxis I for the first time during my *N=94*

<i>Question/Category</i>	<i>Frequency</i>	<i>Valid Percentage Mode</i>	
<i>Freshman Year</i>	8	8.5	
<i>Sophomore Year</i>	28	29.8	
<i>Junior Year</i>	52	55.3	3
<i>Senior Year</i>	6	6.4	

Table 2 provides an analysis of how students prepared for the Praxis I and what factors influenced how they prepared for the exam. The findings indicate most students do not utilize university resources to prepare for the Praxis I. Fifty-four percent of the students who took the Praxis I reported that they purchased materials and studied on their own, while only twenty-six percent reported that they utilized university resources and/or study sessions. Peer information and personal research were the dominant factors in influencing how students prepared for the Praxis I Exam.

TABLE 2: Preparing for the Exam

<i>I prepared for the Praxis I exam by</i>		<i>N=95</i>	
<i>Question/Category</i>	<i>Frequency</i>	<i>Valid Percentage Mode</i>	
<i>Doing Nothing</i>	11	11.2	
<i>Purchasing materials & Studying on my own</i>	53	54.1	2
<i>Tutoring from non-university affiliated person/organization</i>	5	5.1	
<i>University Resources/Study Sessions</i>	26	26.5	

<i>How I prepared for Praxis I was most influenced by</i>		<i>N=96</i>	
<i>Question/Category</i>	<i>Frequency</i>	<i>Valid Percentage Mode</i>	
<i>Personal Research</i>	30	31.3	1
<i>Information from Peers</i>	30	31.3	2
<i>Information from Non-University Source</i>	12	12.5	
<i>Faculty Information</i>	24	25	

Research question #2 asks, “What part of the Praxis I exam do HBCU students experience the most difficulty successfully completing?” Table 3 provides an analysis of how many times the students took each part of the Praxis I and which parts they had the most difficulty with. Review of the findings indicate that most students were successful on the Praxis I on their first attempt. The

successful completion percentage on the first attempt was highest for the writing portion of the test. It is also evident from viewing the tables that time, fatigue, and/or boredom is a significant challenge for students across all three tests included in the Praxis I Exams. Time, fatigue, and boredom are most often identified as what students had the most trouble with for both the reading and writing portions of the Praxis I exam.

TABLE 3: Passing the Exam

<i>I took the reading portion this many times before passing</i> <i>N=93</i>			
Question/Category	Frequency	Valid Percentage	Mode
<i>Once</i>	58	62.4	1
<i>Twice</i>	23	24.7	
<i>Three or more</i>	5	5.4	
<i>Not yet completed</i>	7	7.5	
<i>I had the most trouble with this on the reading portion of the exam</i> <i>N=86</i>			
Question/Category	Frequency	Valid Percentage	Mode
<i>Comprehending vocabulary</i>	10	11.6	
<i>Comprehending passages</i>	18	20.9	
<i>Argument evaluation</i>	20	23.3	
<i>Time/ fatigue/ boredom</i>	38	44.2	4
<i>I took the writing portion this many times before passing</i> <i>N=91</i>			
Question/Category	Frequency	Valid Percentage	Mode
<i>Once</i>	61	67	1
<i>Twice</i>	17	18.7	
<i>Three or more</i>	3	3.3	
<i>Not yet completed</i>	10	11	
<i>I had the most trouble with this on the writing portion of the exam</i> <i>N=88</i>			
Question/Category	Frequency	Valid Percentage	Mode
<i>Multiple choice-grammar</i>	16	18.2	
<i>Multiple choice-identifying errors</i>	16	18.2	
<i>Essay writing</i>	23	26.1	
<i>Time/ fatigue/ boredom</i>	33	37.5	4

<i>I took the math portion this many times before passing N=92</i>			
Question/Category	Frequency	Valid Percentage	Mode
Once	61	66.3	1
Twice	19	20.7	
Three or more	5	5.4	
Not yet completed	7	7.6	

<i>I had the most trouble with this on the math portion of the exam N=88</i>			
Question/Category	Frequency	Valid Percentage	Mode
Number operations	13	14.8	
Algebra	15	17	
Geometry & data analysis	34	38.6	3
Time/fatigue/boredom	26	29.5	

Research question #3 asks, “How does performance on the Praxis I exam impact HBCU student matriculation decisions?” Table 4 provides analysis of how students feel that the Praxis I impacted their matriculation towards graduation and whether or not they have seriously considered changing their majors due to their performance on the Praxis I exam. The findings indicate that students largely feel that their performance on the Praxis I has positively impacted their matriculation. Nearly 22 percent, however, have considered, plan to, or already have changed their majors because of their performance on the Praxis I exam.

TABLE 4: Impact of Performance on the Exam

<i>My performance has impacted my matriculation towards graduation N=91</i>			
Question/Category	Frequency	Valid Percentage	Mode
Not at all	9	9.9	
Negatively	7	7.7	
Positively	70	76.9	3
N/A	5	5.5	

<i>I have considered changing my major due to my performance on the exam N=91</i>			
Question/Category	Frequency	Valid Percentage	Mode
Never	62	68.1	1
Occasionally	14	15.4	
Regularly	13	14.3	
Plan to or have already changed major	2	2.2	

Discussion

The findings from this study largely fit with existing literature which states that African American students take the Praxis I exam later in their programs than majority students, but it provides further insight into how they are preparing for it, what influences them, specifically what portions of the exam or factors are most challenging to them, and the impact of their performance on their matriculation decisions. Nearly 50 percent of the students reported that they did not seriously start thinking about the Praxis I until their junior year, even though they are required to complete hours in the Test Preparation Clinic and write summaries of their strengths and weaknesses based on taking practice Praxis I and Praxis II Content area tests in their Introduction to Education classes. This may mean that the students are viewing the Praxis related assignments more as assignments or tasks than actual preparation for a series of exams that they must pass in order to be admitted into their programs and eventually become certified teachers.

Another finding was that most of students' preparation practices and advisement comes from non-university sources. Students mostly prepare by purchasing their own materials and studying on their own, even though the university has a lab designated for test preparation. This also is consistent with the ETS (2011) faculty interviews where faculty stated, "They [students] often have to be pushed to go to the labs and to devote the necessary time to the work required to pass the tests" (p. 43). Students are primarily relying on information from their peers and personal research to prepare for this licensure exam making them more susceptible to faulty or unreliable information.

HBCU students also reported that time, fatigue, and/or boredom was a bigger challenge in terms of their successful completion of the reading and writing portions of the Praxis I exam than the content covered on those tests. Forty-four percent reported that they had the most trouble with time, fatigue, and/or boredom on the reading portion; 33 percent reported this on the writing test, and 26 percent on the math test. This finding further supports the literature that states that factors other than academic preparation are also having a significant effect on minority student standardized test performance. Furthermore, nearly a third of these students are taking one or more parts of the Praxis I Exams

multiple times. This coupled with the low percentage of students utilizing university resources shows that a significant portion of unsuccessful test-takers aren't receiving formalized remediation through the university.

Finally, most students reported that they felt positive about the impact their performance on the Praxis I had on their matriculation. Most of them stated that they have not considered changing their majors, although nearly 30 percent have considered changing their majors based on their performance. Two of the students have or plan to change their majors due to difficulty passing the Praxis I Exam. The number of students that have already considered changing their majors simply because of their performance on this exam is particularly concerning, because this is typically just the first of three licensure exams and a number of other requirements that teachers must meet in order to complete their programs.

Conclusion

Historically, HBCUs have played a major role in the education of our nation's African American teaching force and will continue play a critical role in meeting the demand for new teachers of color. We are, however losing many potentially effective teachers due to their performance on licensure exams. The findings from this study indicate that students within this particular HBCU largely reflect issues that have been reported by other educators of African American pre-service teachers. Students don't seem motivated to prepare or don't know to prepare for the exam early in their matriculation causing them to have to take the all of the exams in a short time frame (junior and senior years). This also impacts their matriculation particularly in institutions that have restricted courses. Students enter into programs expecting to graduate within four or five years and end up spending much more time and money than they expected to complete their degrees.

Additionally, this study sheds light on exactly how students prepare and what influences their preparation. Part of the reason for the difficulty that students are having with these exams may be that they are largely preparing for this with little professional guidance. Peers serve as the major source of information utilized by students and they purchase materials and study on their own

more than they utilize university resources. This issue, in particular, needs further investigation. Do the students feel that the resources are inadequate, are they unfamiliar with them, or are they just accustomed to studying and preparing on their own? HBCUs must investigate this to determine exactly what the challenges are. It is important that HBCUs not only investigate this, but utilize systematic assessment practices in order to identify patterns of student weaknesses on specific Praxis I content better enabling them to prepare students yet to take the exam and to remediate those that will be unsuccessful on the first attempt.

HBCUs nationwide have implemented practices designed to address some of the aforementioned issues. These practices often vary from institution to institution, but it seems that many of the issues that students face are common. Large scale studies further examining the relationships between factors and African American student performance on licensure exams are needed to further illuminate the issue. It also seems that the students themselves must play a major role in the solutions. More efforts must be focused on utilizing upperclassmen to share knowledge with lowerclassmen, since much of the advisement concerning preparation occurs between students. While many believe that the Praxis I exam should serve a gatekeeping function ensuring that students lacking basic skills do not become teachers, the reality is that the gate keeps out more potential African American teachers than it should. If we are to increase the quality and number of African American teachers in the field, teacher education programs within HBCUs must strategically approach preparing our students for licensure exams. This process must begin with research, practice, and developing data based models for preparing African American students to be successful on licensure exams.

References

- Albers, P. (2002). Praxis II and African American Teacher Candidates (or, Is Everything Black Bad?). *English Education, January 2002, Volume 34 N 2.*
- D'Amico, A (2010). Beginning K-12 Teachers Characteristics and Preparation by School Type, 2009. (NCES-2013-53) National Center for Education Statistics Institute of Education, U.S. Department of Education.
- Dodson, A. (2007). Demystifying the Process: ETS and HBCUs work together to improve the Praxis passage rates of Black students. *Diverse Issues in Higher Education, March 8, 2007; 24, 2, p. 9.*
- Dyer, S. (2003). Higher Standards Spell Success for Louisiana HBCUs. *Black Issues in Higher Education; May 8, 2003; 20, 6, p.8.*
- Goldhaber, D. and Hansen, M. (2009). Race, Gender, and Teacher Testing: how informative a tool is teacher licensure testing? *American Educational Research Journal Online First, published December 2, 2009.*
- Johnson, J.A. (2011). Foundations of American Education: Perspectives on Education in a Changing World. 15th Edition New Jersey: Pearson.
- Lewis, C. (2006). African American Male Teachers in Public Schools: An examination of three urban school districts. *Teachers College Record Volume 108, Number 2, February 2006, pp224-245. Teachers College, Columbia University.*
- National Collaborative on Diversity in the Teaching Force. (2004). Assessment of Diversity in America's Teaching Force: a call to action.
- Nettles, T.; Scatton, L.; Steinberg, J.; and Tyler, Linda (2011.) ETS Research Report: Performance and Passing Rate Differences of African American and White Prospective Teachers on Praxis Examinations.

Appendix

PRAXIS Preparation & Test-taking Experience Survey

Thank you for your participation. This survey will take approximately 15 minutes to complete. Personal information or identifiers that you provide will not be revealed in any form to your institution of higher learning. This study will address this void in current literature by identifying and describing key factors or influences on students' preparation and performance on the Praxis Exam Series within HBCUs in Mississippi.

I. Demographic Information

Race/Ethnicity	African American <input type="checkbox"/>	Other <input type="checkbox"/>		
Gender	Male <input type="checkbox"/>	Female <input type="checkbox"/>		
Community College Transfer	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
HBCU Currently Attending	Jackson State Univ. <input type="checkbox"/>	Alcorn State Univ. <input type="checkbox"/>	MVSU <input type="checkbox"/>	Other MS HBCU <input type="checkbox"/>
Degree Program	Elem. Ed. K-3/ K-6 <input type="checkbox"/>	Early Childhood (Licensure) <input type="checkbox"/>	Secondary Ed. Content Area <input type="checkbox"/>	Music Ed. Or Physical / Health Ed. P - 12 <input type="checkbox"/>
Classification	Freshman <input type="checkbox"/>	Sophomore <input type="checkbox"/>	Junior <input type="checkbox"/>	Senior <input type="checkbox"/>
Current G.P.A.	3.5 – 4.0 <input type="checkbox"/>	3.0 – 3.49 <input type="checkbox"/>	2.5 – 2.99 <input type="checkbox"/>	2.49 or Below <input type="checkbox"/>

II. All questions in this section pertain to the Praxis I (Reading, Writing, & Math) only. Please complete this section based upon your experiences preparing for and/or taking the Praxis I Exam.

<i>Preparation for Praxis I Exam</i>				
1. At what point in your program did you seriously start thinking about taking the Praxis I Exam?	Freshman Year <input type="checkbox"/>	Sophomore Year <input type="checkbox"/>	Junior Year <input type="checkbox"/>	Senior Year <input type="checkbox"/>
2. I prepared for the Praxis I Exam by:	Doing nothing <input type="checkbox"/>	Purchasing materials & studying on my own <input type="checkbox"/>	Receiving tutoring from a non-university affiliated organization <input type="checkbox"/>	Attending Praxis Study Sessions &/or using university resources <input type="checkbox"/>
3. My preparation made me aware of specific content that would be covered by the exam.	Not at all aware <input type="checkbox"/>	Somewhat aware <input type="checkbox"/>	Aware <input type="checkbox"/>	Very aware <input type="checkbox"/>
4. My choice of how I prepared for the Praxis I Exam was most influenced by	Personal Research <input type="checkbox"/>	Information from Peers <input type="checkbox"/>	Information from Non University Affiliated Person or Organization <input type="checkbox"/>	Information from Faculty <input type="checkbox"/>
5. I feel that my coursework taken in my current program was	Not relevant to material covered on the exam <input type="checkbox"/>	Somewhat Relevant to material covered on the exam <input type="checkbox"/>	Relevant to material covered on the exam <input type="checkbox"/>	Very Relevant to material covered on the exam <input type="checkbox"/>
6. My preparation for the exam	Decreased my confidence <input type="checkbox"/>	Did not affect my confidence <input type="checkbox"/>	Increased my confidence <input type="checkbox"/>	Greatly Increased my confidence <input type="checkbox"/>

<i>Praxis I Test Taking Experience</i>				
7. I took the Praxis I Exam for the 1 st time during my	Freshman Year <input type="checkbox"/>	Sophomore Year <input type="checkbox"/>	Junior Year <input type="checkbox"/>	Senior Year <input type="checkbox"/>
8. I took the Reading Portion of Praxis I Exam this many times before successfully completing	One Time <input type="checkbox"/>	Two Times <input type="checkbox"/>	3 or More <input type="checkbox"/>	Not Yet Successfully Completed <input type="checkbox"/>
9. I feel that I had the most trouble with the following on the Reading portion of the Praxis I Exam	Comprehending vocabulary in passages <input type="checkbox"/>	Comprehending ideas in Passages <input type="checkbox"/>	Argument Evaluation (what's relevant; making judgments) <input type="checkbox"/>	Time, fatigue, or boredom <input type="checkbox"/>
10. I took the Writing Portion of Praxis I Exam this many times before successfully completing	One Time <input type="checkbox"/>	Two Times <input type="checkbox"/>	3 or More <input type="checkbox"/>	Not Yet Successfully Completed <input type="checkbox"/>
11. I feel that I had the most trouble with the following on the Writing portion of the Praxis I Exam	Multiple Choice – Grammar <input type="checkbox"/>	Multiple Choice – Identifying Errors in Relationships <input type="checkbox"/>	Essay Writing <input type="checkbox"/>	Time, fatigue, or boredom <input type="checkbox"/>
12. I took the Math Portion of Praxis I Exam this many times before successfully completing	One Time <input type="checkbox"/>	Two Times <input type="checkbox"/>	3 or More <input type="checkbox"/>	Not Yet Successfully Completed <input type="checkbox"/>
13. I feel that I had the most trouble with the following on the Math portion of the Praxis I Exam	Number Operations (basic math as well as fractions, decimals, percents, proportions) <input type="checkbox"/>	Algebra (equations, inequalities, problem solving, patterns) <input type="checkbox"/>	Geometry & Data Analysis (use of formulas, graphing, measurement, interpreting data) <input type="checkbox"/>	Time, fatigue, or boredom <input type="checkbox"/>

<i>Impact of Praxis I Outcomes</i>	Never	Occasionally	Regularly	N/A
14. I discuss my success on part or all of Praxis I with other students	Never <input type="checkbox"/>	Occasionally <input type="checkbox"/>	Regularly <input type="checkbox"/>	N/A <input type="checkbox"/>
15. I discuss my failure on part or all of the Praxis I with other students	Never <input type="checkbox"/>	Occasionally <input type="checkbox"/>	Regularly <input type="checkbox"/>	N/A <input type="checkbox"/>
16. My performance has impacted my level of confidence in my test-taking ability	Not at all <input type="checkbox"/>	Negatively <input type="checkbox"/>	Positively <input type="checkbox"/>	N/A <input type="checkbox"/>
17. My performance has impacted my level of confidence in my own ability as a student	Not at all <input type="checkbox"/>	Negatively <input type="checkbox"/>	Positively <input type="checkbox"/>	N/A <input type="checkbox"/>
18. My performance has impacted my level of confidence in my own ability to teach	Not at all <input type="checkbox"/>	Negatively <input type="checkbox"/>	Positively <input type="checkbox"/>	N/A <input type="checkbox"/>
19. My performance on the Praxis I has impacted my matriculation towards graduation in a teacher ed. program	Not at all <input type="checkbox"/>	Negatively <input type="checkbox"/>	Positively <input type="checkbox"/>	N/A <input type="checkbox"/>
20. I have considered changing my major to a non-licensure program simply because of my performance on the Praxis I Exam	Never <input type="checkbox"/>	Occasionally <input type="checkbox"/>	Regularly <input type="checkbox"/>	I plan to/or have changed my major <input type="checkbox"/>

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**“I’m Black and I’m Proud”: The Centrality of Race and Racial
Regard at an HBCU
A Pilot Study**

by

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Abstract

This survey is a pilot test examining the centrality of Blackness to students’ racial identity, and the level of regard they have for their racial group. Respondents in the convenience sample (n=114), are Jackson State University (JSU) students. JSU is a Historically Black College and University, located in Jackson, Mississippi. Sample respondents are majority urban, southern, and female, traditional-aged college students. Survey results indicate that Blackness is a central aspect of these students’ racial identity, and they possess a high degree of regard for their racial group. Respondents also maintain a high degree of race pride, a positive self-image, and feel connected to other African-Americans, all of which echo research on racial identity and enrollment at HBCUs.

Introduction

A central aim of Historically Black Colleges and Universities (HBCUs) is to educate African-American students, maintain Black historical and cultural traditions, and meet the “emotional needs of Black students” (Roebuck & Murty 1993, 10). HBCUs foster the development of a healthy Black identity and provide a setting for Black affirmation (Roebuck & Murty 1993, 3). Gurin and Epps (1975) found that Black students at HBCUs had stronger levels of race pride, and more positive self-images. Further, Black students whose racial identity is central to their self-identity connect more strongly with their African-American instructors in the HBCU classroom (Rucker & Gendrin 2003). A positive racial identity has been linked to happiness (Yap 2011), well-being (Whittaker & Neville 2010), increased self-esteem (Oyserman, Harrison, & Bybee 2001), and academic achievement (Ortiz & Santos 2009). Racial identity has also been shown to

increase intercultural competence and maturity (King & Baxter-Magolda 2005), the development of moral reasoning (Moreland & Leach 2001), and institutional commitment (Dovidio, et al. 2002), all of which are important higher education outcomes. Allen (1992) asserts that Black students on predominantly Black campuses, “emphasized feelings of engagement, connection, acceptance, and extensive support and encouragement.” Allen further indicates that these students, like most human beings, develop best in environments where they feel valued, protected, accepted, and socially connected. “[and HBCUs] communicate to Black students that it is safe to take the risks associated with intellectual growth and development” (Allen, 39-40). In short, the HBCU climate is safe, positive, accepting, supportive, and culturally relevant, and according to the literature, these factors are effective in fostering and supporting the development of healthy, positive, and culturally influenced identities.

This project is concerned with identifying the degree of racial centrality and racial regard of Jackson State University (JSU) students. Given that the HBCU student population is predominantly African-American, most people, Black and White, focus on the racial distinctiveness of the institution. However, HBCU’s offer a level of Black diversity—socioeconomic, regional, urban, suburban and rural, as well as international students—less likely to be found at predominantly white institutions. Interaction within and with a diverse majority Black population may influence the level of racial salience and racial regard that students possess. Interaction and experimentation in a comfortable environment may lessen or increase the level of salience students place on Blackness as a part of their racial identity. Consequently, this survey is concerned with discovering how salient Blackness is to JSU students, as well as the degree of racial regard they hold for Blacks as a group.

Multidimensional Inventory of Black Identity

This survey was conducted using scales from the multidimensional inventory of Black Identity (MIBI). This model considers the significance of race to the individual’s self-concept and the individual’s subjective meaning about what it means to be Black. The MIBI takes a phenomenological approach, emphasizing the individuals’ self-perception as opposed to objective criteria in

determining whether an individual is racially identified. The MIBI, constructed by Sellers, Rowley, Chavous, Shelton, and Smith (1997), examines racial centrality, racial regard and racial ideology. This study examines only centrality and regard. Racial centrality is “the extent to which a person normatively defines her or himself with regard to race” (806). Regard has two dimensions: private and public. Private regard refers to “a person’s affective and evaluative judgment of her or his race,” whereas public regard refers to non-group members’ evaluative beliefs or attitudes about Blacks as a group.

Methodology and Measures

This study was a student-faculty collaborative research project funded by Jackson State University Center for Undergraduate Research. Five undergraduate students participated,* and due to the limited time period (one academic year) and limited resources required to launch a large-scale probability sample, this survey utilized a convenience sample of (n=114) Black students from Jackson State University—an urban, large, four-year, state university in Mississippi. Respondents were recruited via classroom visits to hand out the link, emails were sent to department chairs across campus including business, CSET, STEM, and liberal arts to disseminate the survey link, and flyers were given out with the survey link on the main plaza, in the dorms, and at campus events multiple times during the month of February 2012. Respondents include undergraduate and graduate students from all academic divisions and majors, males and females, traditional and non-traditional aged students, on-campus and commuter students. Web-based surveys were administered *via* Qualtrics, and were initiated February 2012. Informed consent was secured, and the survey took about fifteen minutes to complete. Data is presented descriptively to identify sample characteristics, and to determine the level of racial centrality and regard of the respondents. The results of this study are used to gain preliminary information and to test the survey prior to a large-scale random survey of students at additional institutions. Respondents were asked about the importance and relevance of Blackness to their

* Students had little to no experience engaging in research. As such the project was designed to provide students with an overview of the entire research project guided by the scientific method.

central identity, their attitudes towards Blacks as a group, and the perception of non-group members' attitudes towards Blacks as a group. Standard demographic information including major, classification, income, region, and community type (urban, rural, and suburban) was collected. For sample demographics see the Table below.

Table: Sample Demographics (n=114)

	%	N		%	N
Gender			Residence		
Female	63	72	On-campus	44	46
Male	37	43	Off-campus	33	24
Race			Community area		
Black	88	101	Urban		
White	4	4	Rural	42	45
Asian	3	3	Suburban	19	21
Latino/a	3	3	Small Town	25	28
Sexual orientation			Metro area	11	13
Straight	89	101		4	5
LGB	8	9	Region		
Age			South	79	87
Traditional	55	63	North	2	2
(<22)	45	51	West Coast	4	4
Non-traditional (>23)			Midwest	14	15
Classification			East Coast	2	2
1 st year	19	21	West	4	4
2 nd year	7	8	Household income		
3 rd year	26	29	<\$41K	76	86
4 th year	42	42	>\$41K	24	27
Graduate	12	13			

Source: Author, 2012

Sample Characteristics

Of the 114 respondents in this sample, 38 percent grew up in mostly Black neighborhoods; 29 percent in neighborhoods that were all Black, 17 percent in neighborhoods that were half African-American, 12 percent in areas with only a few Blacks, and 4 percent in areas with no Blacks. Fifty-six percent of respondents attended high schools that were mostly or all Black, 25 percent attended schools that were half Black, 15 percent with few Blacks, and 4 percent with no African-Americans. African-Americans,

particularly southern Blacks, attend church more frequently than other Americans; in this sample 76 percent of respondents reported attending church every Sunday when they were growing up; seventeen-percent reported occasional attendance, and 7 percent reported rarely or never attending. Due to the high percentage of students reared in a Black environment, it is not surprising that 68 percent of respondents said they feel a sense of community among students of their own race or ethnicity. Twenty percent of students did not feel this way, and 13 percent were neutral. Moreover, 48 percent of students think about their race or ethnicity “sometimes”, and 30 percent think about their race and ethnicity “often”; eighteen percent rarely think about their race and four percent never think about it. Although these respondents seem comfortable with their race and comfortable interacting with individuals who share their ethnic background, that does not preclude interaction with individuals that are of a different background. In fact, 46 percent of respondents report that they “often” interact socially or academically with individuals whose racial/ethnic identity is different than theirs. Forty percent “sometimes engage” in cross racial interaction and 15 percent “rarely” or “never” interact with individuals of a different racial identity. These sample characteristics demonstrate that the students in this sample have been socially and culturally reared in environments in which nearly everyone is of the same ethnic background; they are predominantly urban and southern, are at ease with members of their own racial group, and are comfortable interacting with people of different racial backgrounds. The sample demographics also reveal that this sample consists of a high number of non-traditional aged respondents and is largely female.

Survey Results

Centrality

Because JSU students spend a great deal of time in a predominantly Black environment, with few reminders of racial difference, we presumed that Blackness would be highly salient for JSU students; due to the reality that JSU students are in the majority at Jackson State, they interact with and see other Blacks daily on campus, in class, conducting class, in the dorms, and in the city of Jackson (which is 78% African-American (United States Census 2010)). The data suggests that JSU students place a

very high degree of importance on Blackness as a central aspect of their racial identity. For example, an overwhelming majority of students (72%) agreed that “being Black is an important reflection of who I am.” Sixty-nine percent of students agreed (32% agreed strongly) that being Black was an important part of their self-image and more than half (56%) agreed that being Black was important to “the type or kind of person I am.” However, while Blackness is important, nearly half of respondents (49%) also felt that Blacks did not have to just think of themselves as Blacks, they should also think of themselves as individuals, and respondents were nearly equally distributed (35% disagree, 45% agree) on the statement, “overall, being Black has very little to do with how I feel about myself.” In short, Blackness was strongly related to students’ identity and highly salient for the majority of respondents.

HBCUs provide a culturally relevant and racially affirming environment, and the students in this survey demonstrate a strong sense of group identity. For example, 55 percent agree that Blacks “can still be thought of as one racial group,” Sixty-eight percent expressed a “strong sense of belonging to Black people,” and 70 percent reported that they have a “strong attachment to other Black people,” and a strong majority (65%) also believe that shared oppression binds Black people together. Furthermore, despite growing intra-class divisions (Pew Research Center for the People & the Press, 2009) fifty-percent of students believe that “the Black poor and the Black middle-class have values in common.” Although respondents demonstrated a strong sense of group attachment and group identity, less than half (49%) expressed a sense of “linked fate” or that their “future is tied to the future of other Black people” (Dawson, 1995). Conceivably, attending an HBCU reinforces group identity and attachment because similarity and belonging, rather than difference and exclusion, are accentuated. It could also be the case that Historically Black Colleges and Universities’ emphasis on the development of Black consciousness, racial identity, and race pride strengthen group identity and attachment. To tease out contextual influences on racial centrality, further study of both internal and global aspects of the HBCU environment is necessary.

Racial Regard: Private and Public

Just as students in this sample displayed a high degree of racial centrality and group identity, they also hold a high degree of private regard for their racial group. For example, three-fourths of respondents indicate that they feel good about being Black, are happy that they are Black (82%), are proud to be Black (81%), and feel good about Black people (75%). Students that attend Jackson State are exposed to—in course content, discussions, activities, student organizations, volunteering—the uniqueness and value of the Black experience and African-American accomplishments and achievements. Subsequently, nearly all (91%) of respondents feel that Blacks have made major accomplishments and advancements, and 82 percent feel that the Black community has made valuable contributions to our society. Thus, HBCU attendance may be more likely to foster high levels of private racial regard.

JSU students are cognizant that other groups and segments of society do not view Blacks in the most positive manner. Half of respondents disagree with the statement, “Overall, Blacks are considered good by other people.” Students also responded that Blacks are not respected by the broader society (67%), were nearly evenly divided in their opinion on “in general, other groups view Blacks in a positive way” (36% agreed, 41% disagreed), and “in general, other people respect Blacks” (40% disagreed, 39% agreed). Although students displayed a degree of variation in these attitudes, a majority (72%) agreed that “most consider Blacks, on average, to be less effective than other racial groups.” Perhaps, as stated prior, these attitudes on the part of students, may explain why the nurturing and supportive environment of the HBCU campus is important in the academic achievement and personal development of students which can foster a strong positive racial identity. Overall, respondents held a high degree of positive racial regard for their ethnic group, were “proud to be African-American”, “felt good about Black people”, and were “happy to be Black”. Yet, they were also aware of society’s views of them as members of a disparaged racial group.

Conclusion

The results of this survey, although only a small non-random sample, are in line with the research on racial identity and enrollment at an HBCU (Allen1992, Roebuck & Murty 1993).

Respondents' displayed a high degree of race pride and a positive self-image, as suggested by Gurin and Epps (1975). These students feel connected to others and feel a sense of community as suggested by Allen (1992). Overall, for JSU students, being Black is a central aspect of their racial identity and students' possess a high degree of regard for their racial group. Possibly being in an environment in which being Black is taken for granted (Jost 2003), and the subsequent freedom to discover one's own truths about race (Simpson 1998), diminish the development of a post-encounter Blackness (Cross 1971) and rather than tempering, instead nurtures a strong and positive sense of Blackness and a high degree of private racial regard. It may also be the case that a predominantly Black campus accentuates feelings of belonging and inclusion, which could promote a strong sense of group identity. Or, perhaps the HBCU emphasis on race pride, Black consciousness, and racial identity strengthens group attachment and identity. Either way, future research should investigate aspects of the academic environment to determine those which are related to racial centrality and regard.

Due to the small non-probability sample, the results of this survey are limited to the population studied and cannot be generalized. However, the results are in line with the literature on the relationship between HBCU attendance and racial identity, and future research should include a large random sample of students at other HBCU institutions, as well as Black students attending predominantly White institutions to determine if there is any variation in identity due to context (Shelton & Sellers 2000). The results of the pilot test revealed no issues with administering only the centrality and regard scales of the model, although the explanatory power is limited. The test also showed that all respondents answered every question, which is a positive indication of question comprehension and that the survey is not too lengthy (most respondents completed it in eight to ten minutes). Overall, the results suggest that Blackness is highly salient for Jackson State University students and these students possess a high degree of racial esteem for African-Americans in general.

References

- Allen, W. R. (1992). The color of success: African-American college student outcomes at predominantly white and historically black public colleges and universities. *Harvard Educational Review*, 62(1), 26-44.
- Cross, W.E. (1971). Negro-to-Black conversion experience. *Black World* 20, 13-27.
- Dawson, M. C. (1996). *Behind the mule: The roots of contemporary African-American political ideologies*. Chicago: University of Chicago Press.
- Dovidio, J. F., Gaertner, S. L., Niemann, Y. F. and Snider, K. (2001), Racial, ethnic, and cultural differences in responding to distinctiveness and discrimination on campus: Stigma and common group identity. *Journal of Social Issues* 57: 167–188.
- Gurin, P and Epps, E. (1975). *Black consciousness, identity, and achievement: A study of students in Historically Black Colleges*. New York: John Wiley & Sons.
- King, P.M., and Baxter-Magolda, M.B., (2005) A developmental model of intercultural maturity. *Journal of College Student Development* 46(6), 571-592.
- Ortiz, A. M., and S. J. Santos. (2009). *Ethnicity in college: Advancing theory and diversity practices on campus*. Arlington, VA: Stylus.
- Oyserman, D., Harrison, K., and Bybee, D. (2001). Can racial identity be promotive of academic efficacy? *International Journal of Behavioral Development* 25(4), 379-385.
- Roebuck, Julian and Murty K. (1993). *Historically black colleges and universities: Their place in American higher education*. Westport: Praeger.
- Rucker, M. L., and Gendrin D.M. (2003). The impact of ethnic identification on student learning in the HBCU classroom. *Journal of Instructional Psychology* 30(3), 207-215.
- Sellers, R. M., Smith, M. A., Shelton, J. N., Rowley, S. J., & Chavous T. M. (1998). Multidimensional model of racial identity: A reconceptualization of African American racial identity. *Personality and Social Psychology Review* 2(1), 18-39.
- Sellers, R. M., Chavous, T. M., Cooke, D. (1998). Racial ideology and racial centrality as predictors of African American

- college students' academic performance. *Journal of Black Psychology* 24(1).
- Sellers, R. M., Rowley, S. J., Chavous T. M., Shelton, N. & Smith, M. A. (1997). Multidimensional inventory of black identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology* 73(4), 805-815.
- Shelton, J. N. and Sellers, R. M. (2000). Situational stability and variability in African American racial identity. *Journal of Black Psychology* (26)1, 27-50.
- Thompson, D. C. (1978). Black college faculty and students: The nature of their interaction. In *Black colleges in America*, in *Black Colleges in America: Challenge, Development, Service*. C.V. Willie and R.R. Edmond (Eds.). New York: Teachers College Press, 180-194.
- Whittaker, V.A., and Neville, H. A. (2010). Examining the relation between racial identity attitude clusters and psychological health outcomes in African American college students. *Journal of Black Psychology* 36(4), 383-409.
- Yap, S.C., Settles, I.H., and Pratt-Hyatt, J.S. (2011). Mediators of the relationship between racial identity and life satisfaction in a community sample of African American women and men. *Cultural Diversity and Ethnic Minority Psychology* 17(1), 89-97.

The Effectiveness of the Service-Learning Component in the English Capstone Course: Jackson State University Students Reflect on and Respond to Service Requirements

by

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Abstract

Via the Jackson State University Center for Undergraduate Research, a faculty researcher selects undergraduate students to whom she or he can provide guidance and instruction on a collaborative research project. This article chronicles the research process of five undergraduates, one graduate student, and a guiding professor who chose to research the attitudes of students regarding the required service learning component in their own discipline of English. The team's experiences cover the span from the recruitment of students for the research team to the team's academic presentation of the research conducted.

Introduction

At Jackson State University, a Historically Black College/University (HBCU), Senior Seminar in English (ENG 495) is the capstone course for all undergraduate English majors. The course is one in which English majors are required to revisit, utilize, and exhibit the skills and materials learned in all aspects of their matriculation through the English discipline. The culmination of course assignments is an electronic Senior Portfolio which includes the areas of American Literature, British Literature, World Literature, African American Writers, Novel/Book Review, Literary Theory, Curriculum Vita, and most recently the addition of Service Learning.

The service learning component of the portfolio is the latest component added as service hours tentatively became a graduation requirement for the Class of 2012, the first graduating class considered to be held to the standard. So now, undergraduate students at Jackson State University (JSU) are now dealing with a

120-hour service graduation requirement, with 60 hours for transfer students, and, as expected, the students have become quite vocal about their opinions of this controversial requirement. Students' opposition for and negative attitudes toward the university service requirement are factors which prompted this study.

This study was established to examine the effectiveness of the service-learning component in the English capstone course by looking at what students had to say about their service experiences through their required reflection essays and survey responses. The idea of looking at freshman or first-year students' attitudes was also added to the study to gauge the incoming student's pre-service attitude about the service requirement in possible comparison to the graduating student's post-service attitude. The study was conducted by the capstone course professor (Dr. Preselfannie McDaniels) and a team of student researchers selected by the professor, via the Center for Undergraduate Research at JSU. The importance of this study has a direct connection to the significance of service at the HBCU, which has a rich history.

Background on Students and Service at the HBCU

In recent years, the United States Commission on Civil Rights report, *The Educational Effectiveness of Historically Black Colleges and Universities (HBCU)*, reported that HBCU students are more likely to participate in service activities than non-HBCU students (USCCR). Early academic exposure to the tradition of service typical of HBCUs may be a strong contributor to students' tendency toward higher participation in service learning activities.

Campus Compact's study discovered that HBCUs have a significant and historical role in instructing the next generation of societal leaders (Campus Compact). Many non-profit figures and government leaders who partner with HBCUs are also alumni of the colleges with which they are partnered. A tradition of using service as a way to "give back" has led many HBCUs to institute a service graduation requirement for students: "Such requirements highlight service learning and facilitate the coordination of community based activities on campus" (Campus Compact). Further, this emphasis "helps many students embrace working with younger students as a basic personal responsibility," and the emphasis is important for creating a positive climate of service and

engagement. Campus Compact's 2003 study of more than four hundred colleges and universities found HBCUs as well as other minority serving institutions to require service for graduation, provide support structures for engagement activities, have a community service or service learning office, and establish partnerships with K-12 schools (Pasque et al).

Service learning programs aid Historically Black Colleges and Universities by extending the long existing tradition of community service. LeMoyne-Owen College's Dean of Academic Affairs, Dr. Barbara Frankle, supports this concept of HBCU tradition, stating that "within African American colleges, the notion of leadership and service are interchangeable," and goes as far as declaring that those students "have been trained to uplift everyone in the community, not just the individual students" (qtd. in Brotherton). Director of Community Outreach Programs for the United Negro College Fund (UNCF), David B. Ray, points toward implementing structure, finding that in 1993, the Ford Foundation awarded a grant to the UNCF to help formalize service learning at HBCUs and to steer the academic institutions in the direction of the national movement. While much of the service has been performed informally, instituting service learning programs often allows for formalization and documentation of these institutions' accomplishments (Brotherton).

Although service learning programs continue to grow in recognition as well as organization, there are still challenges to overcome. A primary issue facing the implementation of service learning programs is the increased time commitment on both students and faculty. According to Elizabeth Hollander of Campus Compact, some faculty are less than enthusiastic about whether service learning truly enhances learning and is worth their extra commitment, and she states that "the challenge is helping faculty understand that this is about learning." Despite challenges, however, growth continues. Hollander suggests that service learning is a powerful form of teaching, stating "the most powerful learning experience is when you teach somebody else," and adding "the second is when you do something. Service learning does both" (qtd. in Brotherton). Service learning combines service with course instruction and includes discussions, readings, and compositions in order to assist student reflection and integration of experiences into the students' academic regiment.

The Research Team: Process and Methodology

The students' academic regiment was an important consideration in the selection of the student research team for this study, as all students on the team had either been enrolled in, were enrolled in, or would be required to enroll in the Senior Seminar in English course. The role of the faculty researcher was to form the student research team and facilitate the students through the research process, which included developing, collecting, and analyzing the qualitative data. After students were recruited by the faculty researcher as undergraduate student researchers (via the JSU Center for Undergraduate Research structure), the project orientation session included distribution and discussion of materials on writing a research essay, the Qualtrics survey building and monitoring tool, and a discussion of the background of service-learning requirements. As a result, a permanent team was structured for this research process.

The choice to use qualitative methods in this research project hinged on the fact that as researchers, the team was looking for nuances and the essence of understanding with this research in order to better understand student perspectives. It is noted that "researchers who use qualitative methods seek a deeper truth. They aim to 'study things in their natural setting, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them,' and they use 'a holistic perspective which preserves the complexities of human behaviour'" (qtd. in Greenhalgh and Taylor 740). Two studies served the faculty researcher well in the decision to use qualitative methods in this study and to use the qualitative combination of reflective essays, surveys, and interviews. Krisanna Machtmes et al.'s 2009 article "Teaching Qualitative Research Methods Through Service-Learning" makes the following declarations: the "class-based research project" is an effective tool in training students to become solid qualitative researchers and that the study addressed two academic needs, "the expansion of research on service-learning as a teaching methodology" and the expansion of "the research on the value of experiential learning in teaching qualitative research methods" (161-162). In addition, Jeannie Beard's *Composing on the Screen: Student Perceptions of Traditional and Multimodal Composition* successfully utilizes the trio of reflection essays, surveys, and

interviews in order to gain a more pragmatic view of students' academic gains, professional values, and acquired skills (14).

Preparing the young scholars to conduct research was done by completing the Institutional Review Board (IRB) research approval process. Whereas the faculty researcher was chiefly responsible for completing the IRB application, students were expected to complete the Collaborative Institutional Training Initiative (CITI) responsible conduct of research certification that is required for students and faculty conducting research at Jackson State University. The IRB application was used as a teaching tool with undergraduate researchers, providing instruction that would enable students to compose their own future applications.

Student researchers were assigned the task of bringing in possible items for a pre and post survey on service learning for capstone course students, the course in which four of the research students were currently enrolled. Of the 38 items they submitted, eight (8) items were actually selected. Many of the submitted items were duplications. Because of timing, only the post survey was deemed relevant at the time. It has remained the only survey still used. Qualtrics, a web-based survey tool was utilized to implement the post-survey. All student researchers received a cursory training opportunity on Qualtrics; however, the faculty researcher was responsible for physically constructing the survey, due to access granted on Qualtrics via JSU.

In addition to the post survey that was given, two additional forms of qualitative data were examined for the study. They included reflection essays (senior students' reflections on their service experiences) and the freshman students' interview responses (first-year students' initial perspectives on future service experiences). The reflective essays on the service-learning experience were written by students enrolled in Senior Seminar (ENG 495) the English capstone course; this class was chosen because it is the culminating course for the students in our field of study. In essence, we began our research by examining the effectiveness of the service learning requirement on those within our own discipline.

In order to code the qualitative data (assignments) students were first provided with copies of each of the types of data, careful to make sure that any identifying marks had been removed. The addition of freshman pre-service reactions to the JSU service

requirement was the conception of the research team's only freshman student member, which resulted from conversations she had already had in formal classroom settings and informal campus conversations.

In coding this data, each of the qualitative components had specific areas of examination usefulness for this research. The reflection essays were examined for commonalities as it related to the impact that the service experience had on the student servants. The post-survey responses were examined for students' attitudes and beliefs about service learning as a graduation requirement, types of service projects, and the impact of the service on the community. The freshman interview responses were evaluated in order to gauge incoming students' attitudes toward the service graduation requirement before having had the service experience as a matriculating undergraduate student. The data is limited in its scope as only reflective essays and surveys were examined from students in enrolled in the ENG 495 course during two semesters, and the freshman interviews were solicited in one summer English course, resulting in only a few consenting participants.

From examination of the three forms of data, common themes did emerge. For example, common themes such as enhanced skills, public awareness, and worthwhile experiences were found in the students' reflection essays on their service experiences. From the survey responses, regardless of demographics in race, gender, and age, themes of positive personal impact and worthwhile experiences were found across the board. On the other hand when examining the freshman students' interview responses, the students' attitudes toward future service was mostly negative, but it was still a mixed group of responses. Overall, however, the students' attitudes toward service being a university requirement were overwhelmingly negative, regardless of the data form examined. These themes are explored in the findings sections that follow. The student researchers' individual research sections of the project compose the remainder of this article.

Findings: Senior Seminar Service-Learning Reflections

In her article entitled "Passion for Learning, Passion for Life," Margit Watts provides the following assessment of service to student enhancement:

Involvement in community service might actually raise the level of engagement of our students. It is apparent that many arguments can be made in favor of participation in a project, regardless of the degree of connectivity to the content of a particular course. After all, we want to build positive bonds between our students and the communities in which they live. We want to renew the belief that it might just be possible for ordinary citizens to have a hand in solving the problems of society. Meaningful experiences can be seen as inspiration for our students to view themselves in the greater context and to begin to act for the common good. They might even learn to value themselves and their contributions more highly. In the end, community service validates their whole college experience. They can't help but learn. And we can't help but allow this learning to flourish. (66-67)

In addition, serving others often forces the servants to relinquish part of themselves to someone or some cause, and this is what becomes easily detected in the student reflection essays that were submitted as an integral part of the service-learning assignment (Appendix A). Assessments of these essays from two semesters are included in the following two sections of this essay. From examination of the common themes in the students' service reflection essays, researchers found that students believed that their academic, social, networking, and personal skill sets had been positively enhanced by their service experiences.

Spring 2011 Semester

Each of these students was changed. Some went from being negative to positive about service learning. Others were excited from the start and even more willing to give after the hours were completed. Several saw beyond their own personal agendas in life and were able to revamp their future plans. The inspiration and challenge that resulted from these experiences were priceless for many.

There were several stories that can be considered deeply touching. These stories range from helping young children, to serving at nursing homes, as well as assisting a high profile attorney. Also, the 5th Annual Creative Arts Festival that was held

at JSU was a “hot spot” for service, as it related directly to students major area of study. There was amazing feedback which presented different knowledge levels and ideas about of the meaning of service learning. One student writes, “Service learning is important because it teaches us the beauty of helping others.” This young woman was able to go back to her roots in the rural Mississippi Delta and serve. She was able to reflect on the “limited resources” that were afforded to her while growing up. Serving in her hometown allowed her to recognize the importance of a strong family, dedication to service and social support. It changed her focus; it changed her indecisiveness about a career, but most importantly, it changed her.

Another student gave her time, instructing young girls in a church dance ministry. This student was very grateful for the lifelong lessons she would learn from interacting with these young girls. Her main responsibility was to teach the students basic ballet skills. However, once she became personally involved with them, they began to open their minds and hearts to her. As a result, not only did the girls grow, but so did this serving student. The student admitted that she wanted to participate in this dance ministry because she wanted to have an impact on young girls, but also because she needed this for credit in the English Senior Seminar course. In the end, she received credit for her work, a lesson in patience, and the will to endure. Since her involvement, the dance ministry has greatly impacted the community in serving by performing for others.

Yet, another story that is worthy of acknowledgement is about a young man who volunteered at an attorney’s office. What was most impressive about this reflection was the student’s raw honesty. He served at a well respected, high profile attorney’s office. His mindset was that he would learn all that he could in order to be a successful attorney himself someday. By successful, he meant “wealthy.” However, one particular case involving the case of the Scott Sisters (two sisters with a wrongful imprisonment claim who sought a legal pardon) changed his heart and mind. He now believes that it is more important to help those in need than to obtain financial success. In his reflective essay, he quoted Marian Wright Edelman’s poignant statement on serving others: “Service is rent we pay for being. It is the very purpose of life and not something you do in your spare time.” He also remembered the

words of his mentor: “In order to be a good lawyer, you have to be a good person.”

The last reflection essay chosen to be highlighted was written by a student who served at a nursing home. This young lady was greatly humbled by the privilege of having to assist the elderly. Through this experience, she gained so much knowledge about life. She was able to witness the struggle of those who came before her and how education along with giving back to your community is the only way to truly succeed in life. She was enthralled by the sharpness of the older generation and how they still held high hopes for the future generations. They encouraged her in such a way that she now believes that servicing learning is vital for communities. It gave her a sense of fulfillment that she will carry with her for the rest of her life.

Fall 2011 Semester

A common question that is asked among students is about the specification of the core of service learning. Students identified service learning as participating in different communities to create service projects in education, global awareness, and other social areas. The main goal of service learning is to provide a meaningful service. Students used their specific majors/concentrations as a platform to help their communities. Not only does the community benefit from students’ participation in service learning, but service learning also helps mold students into the individuals that they desire to become. One student explains the following: “The Community Relief Foundation affords me the chance to establish relationships through networking. I am able to establish a good rapport with these individuals and that leads to more opportunities in the future.” Many students believe that service learning should be a requirement because it will help students discover, establish and mature in their life’s passions. Service learning can play an important role in nurturing the growing student and community. Students also found that service learning helped them learn valuable life skills such as teamwork, communicating and patience. Most of all, the students felt by committing time and effort to something important, they experienced wonderful fulfillment.

Students participated in numerous service learning projects that helped with their major and also their communities. Most of the students focused on using their love for teaching by serving at

daycares, as well as revolving their service learning project around the area of politics and mental health services. Many students want to become teachers, and using the tools that they have acquired for a learning environment (working with children) seemed to best suit them. One student writes the following: “I worked with students individually, helping them with their [school] work and sharing knowledge with them. I helped students go over their numbers and letters.” Another student remembered why English was her major: “Volunteering at The Perkins Center opened my eyes to actually see why I chose to be an English major and use my degree to teach for a few years; helping at the center gave me the satisfaction of knowing I have made a small but big impact on some child’s life.” Some of the organizations to which the students chose to commit/serve have a great history. In 1983, Dr. John M. Perkins, along with his wife Vera Perkins and other major supporters, founded the John M. Perkins Foundation for Reconciliation and Development to help the poor in Mississippi meet their own needs. Their purpose is “advancing the principles of Christian community development and racial reconciliation throughout the world” (John M. Perkins Foundation).

Another student focused on politics by serving with the Washington County Circuit Clerk’s campaign. The student served people with disabilities in the process of registering to vote and inputting their information in computers to vote. The student states, “During my time as an assistant, I have met numerous people in the community, talked to many youth, and passed out what seems like hundreds of flyers.” One student was highly interested in serving at the Washington County Mental Health Center in Greenville, Mississippi. This student provided services for outpatients with severe mental health needs. The student assisted clients with reading and completing applications. The amount of work that the students allotted to these various organizations shows that they had the opportunity to be impacted in a major way. They strived to aid others inside and outside of their communities while internalizing didactic values about life.

Finally, there was an interesting spectrum of responses to service experiences. Many students stated, “This service learning project has definitely influenced my life.” The students learned lifelong lessons that they eventually want to continue in their professional careers. Some felt that the service-learning project

taught them to be appreciative and to be a positive force in the world. The observations that the students made during their servant-hood experiences helped them grow in major ways. Students learned more in the areas of patience, teamwork, communicating, and organizing. Learning new skills will benefit students in the future, especially in relationships with family members, significant others, and in a professional environment. One student says, “I discovered that politics and hard work go hand and hand. I gained a newfound respect for the position of Circuit Clerk, and my experience allowed me to meet many new faces in my community.”

One thing that is certain, serving others can make a significant impact on someone’s life, whether it is good or bad. Students worked hard and committed to service in order to leave a mark on the hearts of others and themselves. There are many stories left to be told. Most were impacted in a positive manner. Some may have started out on a shaky, reluctant path, but the end of their journey was very uplifting. All of the students grew internally as a result of volunteering their time and talent. It seems that most learned that life is not about what we receive, but what we are willing to give.

Findings: Senior Seminar Service Learning Survey

As aforementioned, in 2008, Jackson State University began moving toward requiring that each undergraduate student acquire service hours in order to complete graduation requirements. This study’s post survey on students’ service experience seeks to analyze the effectiveness of this policy. The survey was taken by only six of the students enrolled in the fall 2011 Senior Seminar course (ENG 495); other students enrolled in the course did consent to take the survey but did not log on to the Qualtrics survey instrument and participate for unknown reasons. Upon completion of the service-learning component of the course, each student enrolled was contacted via email and/or face-to-face request and asked to complete a survey that was sent to them through their specified email system. The survey consisted of questions that asked each student’s demographics, classification, area of study, and feelings about service learning/community service as an undergraduate requirement for graduation (Appendix C).

The survey revealed that all of the students were seniors, five being English majors and one an English Education major. Students were also asked to indicate their race and sex. These demographics hold no real bearing on the survey results, and served more as preliminary questioning and background information, if needed for future use during the study's duration.

Upon further review of the survey, it was noted that 83% (5 of 6) of the students agreed that Jackson State University should not require service learning/community service hours to graduate from a college undergraduate program. Also, there was a unanimous agreement that each student would volunteer their time even if it were not a requirement, and five of six of the students already volunteered/served. Take notice that it is hard to predict what a person would or would not do without structures to guide him/her. However, this survey was taken by senior students approaching graduation who should have completed or nearly completed their service learning/community service hours by that time, so their responses should have held more reflective significance about the subject at hand.

The survey also analyzed the impact that completion of service learning/community service hours had on the participants. When asked, "Do you feel service learning projects are beneficial to your learning experience?" Five of the six students answered yes, with one stating no. Participants were also asked, "Do you feel that you made an impact on the community?" Five of the six students answered yes, with one stating no. It would be easy to infer that the responder stating no to such questions is one and the same. However, this survey revealed that while many of the students felt that service learning/community service should not be required, those same students declared that they enhanced themselves positively in a manner that can only be gained through the selflessness that comes with the task of serving.

Next, the survey also revealed that 83% of the participants agreed that the choice of what service learning project they undertook should be left up to the students. Affirmatively, the majority revealed that students should choose their own projects, and there was unanimous agreement that they would make future contact with the agencies they served. The students gained contacts that they will probably continue to use in their professional lives. It is easy to conclude that despite students'

disapproval of service learning/community service being required of them, the majority of students did positively benefit from their experiences of helping others. The disapproval factor seems to be connected to what the students perceive as lack of free will associated with the university's service requirement itself.

Findings: Freshman Interviews

In the JSU Service Learning Program, students enroll in service-learning courses and work in community agencies whose members help them relate course content to real life experiences. In order for service-learning to accomplish its varied goals—to strengthen classroom learning, to contribute to the community, and to be beneficial to students' personal and civic development—it is important that the faculty and students are actively engaged in planning and implementing service activities. Unfortunately, the entire student body at JSU does not take interest or participate in this program. Students in the service-learning program are realizing why community service is important and how it benefits their futures.

The following are some brief interview results from conversations with first-year students, who volunteered to participate in conversations about the research topic. The participating students were enrolled in various first-year English courses. Students were asked one of several prepared questions; each question was randomly selected by the interviewer. The term community service was used interchangeably with service learning, as incoming students might not have yet been equally familiar with the term service learning. It was found that the majority of the students' responses included here displayed negative attitudes toward required service.

Student #1:

Q: Do you feel that community service projects are helpful for college students? How so?

A: I feel that community service can be much more helpful if universities provided hands-on resources that would aid students in effectively committing to the specific projects.

Student #2:

Q: How has community service aided your overall perspective of humanitarianism, and are you looking forward to projects outside of the campus?

A: Honestly, community service has had no impact on my views of taking interest in becoming a humanitarian. While I love helping others, I feel a bit pressured by the university to complete community service projects. If I understood why I am obligated to commit to community service, then performing the tasks would not be in vain. Now, I only do community service to graduate.

Student #3:

Q: What does community service mean to you?

A: Community service is the gateway to learning about aspects of my environment that would otherwise be unknown to me. I also build relationships with people of various organizations, networking and essentially helping me in future endeavors.

Student #4:

Q: What does community service mean to you?

A: I wholeheartedly enjoy community service. Having knowledge that I am able to make a difference in a community that I have invested much time in validates my purpose for living. Being a devoted church member, community service is no stranger to me.

Student #5:

Q: Have you grown an appreciation for community service? Do you feel that it is a necessary requirement for graduation?

A: No, I have not grown to appreciate community service simply because my only motive for completing the tasks is to graduate. I have never quite understood why JSU requires students to perform community service activities. Personally, I hardly have the allotted time with basketball practice, regular course hours to complete, and study periods.

Discussion and Recommendations

Why do the opinions of some students attending institutions that require service hours remain skeptical concerning the benefits of mandatory service? The answer, quite frankly, lies in the importance of emphasizing structured service learning experiences as opposed to highlighting a specific calculation of hours to be completed. Though schools' requirement of service comes from the best of intentions, motivated by universities' hopes to cultivate an environment which will produce socially aware students that give back to their local communities, such efforts should be paired with organization and structure in order to yield maximum benefit to the students' academic experience. When students are given a

required task of performing service without structure and guidance, the connection between service and their own education is readily lost. The focus changes from a partnership of simultaneous learning while impacting the community to that of merely completing hours in order to graduate. Further, if students lack a deeper understanding of the purpose of their service, their choice of service projects will reflect their misunderstanding. Rather than choosing a project that relates to their field of study, those students may succumb to the temptation of selecting the easiest service project available, though the activity may have no relation to their studies. Having no personal academic connection to their misdirected energies, the point of service learning is effectively lost altogether.

If service is incorporated into academic requirements for graduation, then the structure of academia can be used as a model for building the service learning experience. Just as general studies are introduced in a student's freshman year of college, the broader concept of service assisting the learning experience can easily be introduced early on. An institution such as Johnson C. Smith University (Charlotte, NC) exudes this idea in their own academic criteria, as the basic freshmen composition class, required for all majors, has adopted service into the curriculum. Tutoring youth in skills related to their course allows for active interaction with their lessons, supported and reinforced by their service in the community. Early exposure to structured service paired with classroom lessons ensures that the message of learning throughout the service experience is understood early in the students' academic career. As students progress through their courses, entering into their junior and senior level courses, the presence of service learning can then be concentrated to fit specific needs in regard to a student's major field of study for a more personal connection. This idea is seen put to use at an institution like LeMoyne-Owen College (Memphis, Tennessee), where juniors and seniors are given a service learning course in which they are expected to perform a structured community service project related to their majors.

Though structure is imperative, creativity should also be celebrated within the realm of student service initiatives. Allowing students the freedom to construct their own community service projects related to their studies encourages individuals to take

learning into their own hands and strive to meet their personal potential for academic and professional excellence. A balance between supervised structure and room for creativity is vital to the foundation of a progressive service learning environment. Without structure and accountability the message of service learning is missed, whereas without some creative outlet, personal drive is stifled.

Furthermore, the goal of education is to provide individuals with the tools needed to thrive academically and professionally, as well as equip students with the ability to continue developing their skills as they advance in their own future endeavors. Personal ambition and self motivation are highly favored qualities in the work force, and fostering a structured environment that stimulates creativity enables students to explore and develop those qualities. This interaction is valuable when considering that, in addition to gaining hands-on skills working in venues related to their field of study, students engage in networking opportunities that serve to aid them in their future professions.

Self reflection is the vehicle to awareness of personal growth. Reflective essays assist students to fully understand the impact service learning accomplishes in their personal and academic lives, as well as the surrounding communities. Research indicates that in most cases, given the time to reflect both before and after community service projects, students' perspectives concerning community outreach and their own personal role within the community's wellbeing is heightened along with their drive to continue giving back. Not only do reflective essays provide the chance for contemplation but also give documentation to the positive internal changes and growth transferred through a marriage of service and learning. Hence, there is a need for further research in this area, specifically focusing on student perspectives and student learning as it is connected to service learning.

Conclusion: A Team Perspective

Ultimately, the questions remain, why are students obligated to complete community service hours and is such a requirement broadly effective? There still seems to be a lacking level of appreciation and devotion from the students toward community service. But, who is really to blame for this apathetic attitude? Is it parents, teachers, or high schools, maybe? At this

level in education, students should be fully aware of the purposes and advantages of service to others. Serving the community can be beneficial to one's overall character and demeanor; however, demanding students to complete 120 hours along with regular college course hours seems to be considered somewhat overwhelming by most students. If this is the case, then how are the students truly benefiting?

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Works Cited

- Beard, Jeannie Parker. *Composing on the Screen: Student Perceptions of Traditional and Multimodal Composition*. Diss. Georgia State U, 2012. Web. 23 May 2013. <http://digitalarchive.gsu.edu>.
- Brotherton, Phaedra. "Connecting the Classroom and the Community." *Diverse Issues in Higher Education* (2005): n. pag. Web. 6 March 2012. <diverseeducation.com/article/2130/>.
- Campus Compact. "Indicators of Engagement Project." 6 March 2012. www.compact.org.
- Greenhalgh, Trisha and Rod Taylor. "How to Read a Paper: Papers That Go Beyond Numbers (Qualitative Research)." *BMJ* 315 (20 Sept. 1997): 740-743. Web. 24 May 2013.
- John M. Perkins Foundation for Reconciliation and Development. *Biography: John M. Perkins*. Web. 8 March 2012. www.jmpf.org.
- Machtmes, Krisanna, et al. "Teaching Qualitative Research Methods through Service-Learning." *The Qualitative Report* 14.1 (March 2009): 155-164. Web. 24 May 2013.
- Pasque, Penny A., et al. *Higher Education Collaboratives for Community for Engagement and Improvement*. National Forum on Higher Education for the Common Good. Web. 6 March 2012. www.thenationalforum.org.
- Watts, Margit Misangyi. "Passion for Learning, Passion for Life." *New Directions for Teaching & Learning* 94 (2003): 61-68. Web. 5 December 2012.

United States Commission on Civil Rights. *The Educational Effectiveness of Historically Black Colleges and Universities*. Web. 6 March 2012. www.usccr.gov/pubs.

Suggested Websites and Links

- Campus Compact, Service Statistics 2008
<<http://www.compact.org/wp-content/uploads/2009/10/2008-statistics1.pdf>>
- Corporation for National and Community Service
<http://www.nationalservice.gov/about/role_impact/performance_research.asp>
- The Service Learning Student Handbook at Jackson State University <<http://www.jsums.edu/announcements/StudentLife-StudentHandbook.pdf>>
- Teen Ink, “Why Is Community Service So Important to Me?”<http://www.teenink.com/hot_topics/community_service/article/260358/Why-is-Community-Service-important-to-me/>

APPENDIX A: ENG 495-Senior Seminar Service Learning Assignment

Service Learning Reflective Essay Assignment

The candidate is assigned to complete a service learning experience in which he or she selects an approved organization with which to complete 10+ service hours during the semester that s/he is enrolled in this capstone course (see list of approved organizations by JSU Center for Service and Community Engaged Learning or have choice approved by professor). The candidate will have an organization official document his or her hours using the university’s approved form.

The candidate will write a five-paragraph essay about his or her experience, detailing specific duties carried out and how those duties contributed to the organization’s goals and mission. Also discussed should be the importance/impact of service learning to one’s education, community, and life. An article selected by the professor will be distributed to candidates to help them better understand this assignment. The candidate will also be invited to complete a post survey on this service learning experience.

APPENDIX C: Survey Items in Qualtrics

1. Classification:
 Senior Junior
2. Academic curriculum:
 English English education English (journalism)
 English (business)
 English (computer science)
3. Sex:
 Male Female
4. Race:
 African American Caucasian Hispanic
 Asian Native American Other
5. Do you think that service learning/community service should be a requirement to graduate from a college undergraduate program?
 Yes No
6. Would you volunteer for service learning/community service if it were not a requirement?
 Yes No
7. Do you already volunteer or provide community service on your own time?
 Yes No
8. Should the student be allowed to choose his or her own service learning project?
 Yes No
9. Do you feel service learning projects are beneficial to your learning experience?
 Yes No
10. How did your service learning project for ENG 495 affect you personally?
 Positively Negatively Not at all
11. Do you feel that you made an impact on the community through your service?
 Yes No
12. Would you contact this agency again to volunteer/serve?
 Yes No
13. Do you give permission for your survey results to be anonymously used for research purposes by the professor and/or the English and MFL Department and JSU?
 Yes No

Analysis of Cournot Duopoly Model and Other Related Models

by

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Abstract

In this paper we do a quantitative analysis to Cournot duopoly model and other related models. Some of the results we present in this work are well-known, but our focus is on the mathematical analysis of the results. We consider the following different situations: the two companies choose their quantities simultaneously and have the same marginal cost, the two companies choose their quantities simultaneously and have different marginal costs, the two companies choose their quantities sequentially and have the same marginal cost, the two companies choose their quantities sequentially and have different marginal costs, and the situation there are more than two companies in the market. We compare their maximizing quantities and maximum profits. We also derive certain requirements for the parameters in the models. In addition, we do some long-term behavior analysis from the point of view of dynamical analysis.

Introduction

Cournot duopoly model is one of the most popular and influential theoretic models in game theory to model the situation where there are two competitive companies. This model was originally proposed by French mathematician Antonine Augustin Cournot in 1838 in his book *Researches into the Mathematical Principles of the Theory of Wealth* ([1]). In the Cournot duopoly model, it is assumed that the two firms produce homogeneous and indistinguishable products, the two firms make their choices simultaneously, and each firm chooses a quantity to produce. Therefore, the strategic variable to each firm is its output quantity. In 1883 the French economist Joseph Bertrand proposed the so-called Bertrand duopoly model. In this model, rather than choosing output quantity, each firm chooses its product price. In 1934 the German economist Hinrich von Stackelberg proposed a dynamic

version of duopoly model. Same as in the Cournot duopoly model, in this model, the two firms also choose their output quantities they produce. But the firms choose their quantities sequentially. That is, one firm choose its quantity first and the other firm, after observing the first firm's choice, then chooses its quantity to maximize its profit. The details of these duopoly models and other related models can be found in almost all standard game theory textbooks (e.g. see [2], [5], [6]) although the descriptions of these models vary in different books. Although it is simple, Cournot duopoly model still has influence in economics today. Some recent work related to Cournot model and its generalizations can be found in [7], [9], [12], and the references therein. We choose these models to analyze is based on the following considerations: first, although these models are simple, by analyzing these models, we can learn how to translate an informal statement of a real world problem into a normal-form representation of a game, how to perform mathematical manipulations to find the game's equilibrium and to see how mathematics is applied to other subjects, and how to solve for the backwards-induction outcome of a game. Secondly, by analyzing these models, we can learn how to improve an existing model so that it will include more situations and make more practical assumptions so that it can better reflect the real situations. In this paper we do a quantitative analysis to Cournot duopoly model and other related models. Some of the results we present in this work are well-known, but our focus is on the mathematical analysis of the results. We consider the following different situations: the two companies choose their quantities simultaneously and have the same marginal cost, the two companies choose their quantities simultaneously and have different marginal costs, the two companies choose their quantities sequentially and have the same marginal cost, the two companies choose their quantities sequentially and have different marginal costs, and the situation there are more than two companies in the market. We compare their maximizing quantities and maximum profits. We also derive certain requirements for the parameters in the models. In addition, we do some long-term behavior analysis from the point of view of dynamical analysis.

This paper is organized as follows: In Section 2 we will state and analyze the basic model. In Section 3 we will consider the situation when the two companies have different marginal

costs. In Section 4 we will analyze the situation when the two companies choose their quantities sequentially. In Section 5 we will consider the model from the point of view of dynamic analysis. Finally, in Section 6 we will generalize the model to the situation there are n companies for any given positive integer $n > 2$.

2. The Statement and Analysis of the Basic Model

As aforementioned, the Cournot model is one of the most popular classic models in game theory which can be found in many textbooks. Here we adopt the version from [3] with some changes as our starting point.

Consider the following situation: two companies compete in a market for a homogeneous product. In other words, the two companies' products are virtually indistinguishable from consumers' standpoint. For simplicity, we make the following assumptions:

1. The two companies are faced with a single linear demand curve:

$$Q = \alpha - \beta P, \quad (1)$$

where $\alpha > 0$, $\beta > 0$, and $Q = Q_1 + Q_2$ is the aggregate quantity on the market produced by these two companies. P is the market clearing price;

2. The two companies choose their quantities simultaneously;
3. There are no fixed costs and the marginal cost for both companies is constant c_0 .
4. The products produced by these two companies will be sold, that is, there is no surplus.

Question: How many items should be produced by each company in order to maximize the company's profit?

We know that, on one hand, the companies cannot produce too less since, in order to make profit, the number of the products must be greater than the break-even quantity. In addition, if one company produce too less, the other company will take over the market. On the other hand, the companies cannot produce too many products since this will drive the price down and even result in a surplus.

Since we are going to see how the quantity change will affect the profit and the profit depends directly on the clearing price, we rewrite (1) in another form so that the clearing price is expressed as a function of the quantity, that is,

$$P = a - bQ,$$

where $a = \alpha/\beta$, $b = 1/\beta$.

Since the goal of the two companies is to maximize their profits, we need to find the profit functions first. From our assumptions, it is easily seen that company i 's ($i=1, 2$) profit is

$$\pi_i(Q_1, Q_2) = Q_i [a - b(Q_1 + Q_2) - c_0]$$

Now the optimization problem becomes to find (q_1, q_2) so that

$$\begin{aligned} \pi_1(q_1, Q_2) &= \max_{0 \leq Q_1 < \infty} \pi_1(Q_1, Q_2) \\ &= \max_{0 \leq Q_1 < \infty} Q_1 [a - b(Q_1 + Q_2) - c_0], \end{aligned}$$

$$\begin{aligned} \pi_2(Q_1, q_2) &= \max_{0 \leq Q_2 < \infty} \pi_2(Q_1, Q_2) \\ &= \max_{0 \leq Q_2 < \infty} Q_2 [a - b(Q_1 + Q_2) - c_0]. \end{aligned}$$

From calculus we know that if a function $f(x)$ attains its maximum at x_0 , then $\frac{df}{dx}(x_0) = 0$. By direct computations, we have

$$\frac{\partial \pi_1}{\partial Q_1} = a - 2bQ_1 - bQ_2 - c_0,$$

and

$$\frac{\partial \pi_2}{\partial Q_2} = a - bQ_1 - 2bQ_2 - c_0.$$

Solving $\frac{\partial \pi_1}{\partial Q_1} = 0$ for Q_1 and $\frac{\partial \pi_2}{\partial Q_2} = 0$ for Q_2 gives us

$$Q_1^* = \frac{a - c_0 - bQ_2}{2b},$$

$$Q_2^* = \frac{a - c_0 - bQ_1}{2b}.$$

Continuing to find the second derivatives of π_1 and π_2 , we have

$$\frac{\partial^2 \pi_1}{\partial Q_1^2} = -2b < 0, \quad \frac{\partial^2 \pi_2}{\partial Q_2^2} = -2b < 0.$$

Therefore, by second derivative test (see [8]), we know that, for fixed Q_2 , π_1 attains its maximum at Q_1^* and for fixed Q_1 , π_2 attains its maximum at Q_2^* .

(q_1, q_2) is supposed to maximize the two profit functions simultaneously; therefore, q_1 and q_2 satisfy

$$q_1 = \frac{a - c_0 - bq_2}{2b}, \quad q_2 = \frac{a - c_0 - bq_1}{2b}.$$

We solve above system and obtain

$$q_1 = q_2 = q_0 = \frac{a - c_0}{3b}$$

and the maximum profit for the two companies is

$$\Pi_0 = \frac{(a - c_0)^2}{9b}.$$

Observe that since $q_i > 0$, we must have $c_0 < a$, that is, the marginal cost cannot be too high. Otherwise, there will be no profit for the companies.

3. When the Two Companies Have Different Marginal Costs

In this section we consider the situation when the two companies have different marginal costs c_1 and c_2 respectively. Without loss of generality, we assume that $c_1 < c_2$. In this case the two profit functions are

$$\begin{aligned} \pi_1(Q_1, Q_2) &= Q_1 [a - b(Q_1 + Q_2) - c_1], & \pi_2(Q_1, Q_2) \\ &= Q_2 [a - b(Q_1 + Q_2) - c_2] \end{aligned}$$

If (q_1, q_2) is the maximum quantity, then q_1 solves

$$\begin{aligned} \pi_1(q_1, Q_2) &= \max_{0 \leq Q_1 < \infty} \pi_1(Q_1, Q_2) \\ &= \max_{0 \leq Q_1 < \infty} Q_1 [a - b(Q_1 + Q_2) - c_1], \end{aligned}$$

and q_2 solves

$$\begin{aligned} \pi_2(Q_1, q_2) &= \max_{0 \leq Q_2 < \infty} \pi_2(Q_1, Q_2) \\ &= \max_{0 \leq Q_2 < \infty} Q_2 [a - b(Q_1 + Q_2) - c_2]. \end{aligned}$$

Again, by using first derivative condition for a local maximum, we know that for fixed Q_2 , π_1 attains its maximum at

$$Q_1^* = \frac{a - c_1 - bQ_2}{2b},$$

and for fixed Q_1 , π_2 attains its maximum at

$$Q_2^* = \frac{a - c_2 - bQ_1}{2b}$$

Same as before, since (q_1, q_2) maximize the two profit functions simultaneously, q_1 and q_2

satisfy

$$q_1 = \frac{a - c_1 - bq_2}{2b}, \quad q_2 = \frac{a - c_2 - bq_1}{2b}.$$

Solving this system, we obtain

$$q_1 = \frac{a + c_2 - 2c_1}{3b}, \quad q_2 = \frac{a + c_1 - 2c_2}{3b}$$

and the maximum profits for the two companies are

$$\begin{aligned} \Pi_1 &= \frac{(a + c_2 - 2c_1)^2}{9b} \quad \text{and} \quad \Pi_2 \\ &= \frac{(a + c_1 - 2c_2)^2}{9b}, \end{aligned}$$

respectively. Since we also need $q_i > 0$, this implies

$$a + c_2 - 2c_1 > 0 \quad \text{and} \quad a + c_1 - 2c_2 > 0.$$

That is,

$$2c_1 < a + c_2, \quad (2)$$

and

$$2c_2 < a + c_1. \quad (3)$$

Since we assume $c_1 < c_2$, to have (2), we need only $c_2 < a$. Then (3) implies that

$$c_2 - c_1 < a - c_2.$$

These are the conditions on c_1 and c_2 . This means the marginal costs must be less than a and the difference between the two marginal costs cannot be too big. Otherwise, at least one of the companies (the one with higher marginal cost) cannot make profit. It is reasonable to assume that $c_1 < c_0 < c_2$. Then by simple computations we can see that

$$q_1 > q_0 > q_2 \quad \text{and} \quad \Pi_1 > \Pi_0 > \Pi_2,$$

where q_0 is the maximum quantity and Π_0 is the maximum profit for these two companies that we found in Section 2. We see that the company with less marginal cost will make more profit.

4. When the Two Companies Choose Their Quantities Sequentially

In this section we want to answer the question: what will happen if the two companies don't choose their quantities simultaneously? This is a variation of Cournot duopoly model which is referred as Stackelberg model (e.g. see [3]).

We assume that company 1 chooses a quantity $Q_1 > 0$ first. Company 2 observes Q_1 and then choose a quantity $Q_2 > 0$. Again we assume that there are no fixed costs and the two companies have the same constant marginal cost c_0 . Therefore, the profit function for company i is

$$\pi_i(Q_1, Q_2) = Q_i [a - b(Q_1 + Q_2) - c_0]$$

To analyze this model, we first look for company 2's best response to an arbitrary quantity Q_1 chosen by company 1. This is to maximize $\pi_2(Q_1, Q_2)$, assuming that Q_1 is fixed. That is, for fixed Q_1 to solve

$$\max_{0 \leq Q_2 < \infty} \pi_2(Q_1, Q_2) = \max_{0 \leq Q_2 < \infty} Q_2 [a - b(Q_1 + Q_2) - c_2]$$

Same as before, by using first derivative condition, we know that, for fixed Q_1 , π_2 attains its maximum at

$$R(Q_1) = \frac{a - c_0 - bQ_1}{2b}.$$

When doing market analysis, company 1 expects that company 2 will take the best response $R(Q_1)$ to any company 1's quantity choice Q_1 . Therefore, company 1's maximization problem becomes to solve

$$\begin{aligned} \max_{0 \leq Q_1 < \infty} P_1(Q_1) &= \max_{0 \leq Q_1 < \infty} \pi_1(Q_1, R(Q_1)) \\ &= \max_{0 \leq Q_1 < \infty} Q_1 [a - b(Q_1 + R(Q_1)) - c_0] \\ &= \max_{Q_1 \geq 0} \frac{Q_1(a - bQ_1 - c_0)}{2}. \end{aligned}$$

Solving it we know that $P_1(Q_1)$ attains its maximum at

$$q_1 = \frac{a - c_0}{2b}$$

and for this $Q_1 = q_1$, the best response of company 2 is

$$q_2 = \frac{a - c_0}{4b}$$

and company 1's and company 2's profits are

$$\pi_1 = \frac{(a - c_0)^2}{8b} \quad \text{and} \quad \pi_2 = \frac{(a - c_0)^2}{16b}.$$

Comparing these with the profit Π_0 for both companies in Section 2 when they choose quantities simultaneously, we can see that company 1's profit is better and company 2's profit is worse:

$$\pi_1 > \Pi_0 > \pi_2.$$

Now let's see what will happen if the two companies have different marginal costs c_1 and c_2 . Since, for this situation, the two company are not symmetric, we need to consider two different cases, that is, case $c_1 < c_2$ and case $c_1 > c_2$.

Case 1: $c_1 < c_2$. The company 2's profit function is

$$\pi_2(Q_1, Q_2) = Q_2 [a - b(Q_1 + Q_2) - c_2].$$

After observing company 1's quantity Q_1 , company 2's best response is

$$R(Q_1) = \frac{a - c_2 - bQ_1}{2b}.$$

Company 1's profit function is

$$\pi_1(Q_1, Q_2) = Q_1 [a - b(Q_1 + Q_2) - c_1].$$

Having expected company 2 to respond its quantity best, company 1's maximization problem becomes to solve

$$\begin{aligned} \max_{0 \leq Q_1 < \infty} P_1(Q_1) &= \max_{0 \leq Q_1 < \infty} \pi_1(Q_1, R(Q_1)) \\ &= \max_{0 \leq Q_1 < \infty} Q_1 [a - b(Q_1 + R(Q_1)) - c_1] \\ &= \max_{Q_1 \geq 0} \frac{Q_1(a - bQ_1 + c_2 - 2c_1)}{2}. \end{aligned}$$

The solution for this problem is

$$q_1^* = \frac{a + c_2 - 2c_1}{2b}, \quad (4)$$

and for this $Q_1 = q_1^*$, the best response of company 2 is

$$q_2^* = \frac{a + 2c_1 - 3c_2}{4b} \quad (5)$$

and the two companies profits are

$$\pi_1^* = \frac{(a + c_2 - 2c_1)^2}{8b} \quad \text{and} \quad \pi_2^* = \frac{(a + c_1 - 2c_2)^2}{16b}. \quad (6)$$

Since we need $q_1^* > 0$ and $q_2^* > 0$. This requires that c_1 and c_2 should satisfy

$$a + c_2 - 2c_1 > 0, \quad a + 2c_1 - 3c_2 > 0. \quad (7)$$

The second inequality of (7) implies that we need $c_1 < c_2 < a$ and for c_1 given, c_2 cannot be too big. It must satisfy

$$c_2 < \frac{2c_1 + a}{3}.$$

Otherwise, company 2 will not make any profit.

Now let's do the following comparisons:

1. Compare these profits with π_1 and π_2 we just obtained under the assumption that the two companies have the same marginal cost c_0 . Again, we assume that $c_1 < c_0 < c_2$.

Then we have

$$a + c_2 - 2c_1 > a - c_0, \quad a + 2c_1 - 3c_2 <$$

$a - c_0.$

Therefore,

$$\pi_1^* > \pi_1, \quad \pi_2^* <$$

$\pi_2.$

That is, the profit for company 1 is better and the profit for company 2 is worse.

2. Now let's compare π_1^* and π_2^* with Π_1 and Π_2 that we obtained in Section 3. Recall that Π_1 and Π_2 are the maximum profits of company 1 and company 2 when they choose their quantities simultaneously but with different marginal costs and they are given by

$$\Pi_1 = \frac{(a + c_2 - 2c_1)^2}{9b}, \quad \Pi_2 =$$

$$\frac{(a + c_1 - 2c_2)^2}{9b}.$$

We can see that $\pi_1^* > \Pi_1$. That is, the profit of company 1 is better off. We claim that

$$\pi_2^* < \Pi_2.$$

In fact, if this is not true, then we have

$$\frac{(a + c_1 - 2c_2)^2}{16b} \geq$$

$$\frac{(a + c_1 - 2c_2)^2}{9b}.$$

Solving this inequality gives us

$$a + c_2 \leq 2c_1.$$

This is a contradiction since we have $c_1 < c_2 < a$. Therefore, we know that if the two companies choose their quantities sequentially, it will hurt company 2's profit. Case 2: $c_1 > c_2$. In this case, the maximum quantities q_1^* and q_2^* and the maximum profits π_1^* and π_2^* are still given by (4)-(6). But now, by $q_1^* > 0$ and $q_2^* > 0$, we need

$$c_2 < c_1 < \frac{a + c_2}{2}.$$

Again we have $\pi_1^* > \Pi_1$ and $\pi_2^* < \Pi_2$.

5. Dynamic Analysis

In a competitive market, the two competitive companies need to adjust their quantities frequently according to the market change. Therefore, it is reasonable to investigate the model from the point of view of dynamic analysis. Let $P(t)$ be the market clearing price at time t and $Q_i(t)$ be company i 's quantity at time t . The market demand curve is

$$P(t) = a - b[Q_1(t) + Q_2(t)].$$

Each company is assumed to have total cost C_i with constant marginal cost c_i , $i=1, 2$. Without loss of generality, we assume that $c_1 \leq c_2$.

In [11] the author considered the case of three competitive companies and in [4] the author generalized the situation to any n competitive companies. In these two papers, the authors all assumed that each company expects the quantity chosen by the other companies will not change from period $t-1$ to t . Here we assume that each company expects the other company's quantity change from period $t-1$ to period t is as follows

$$Q_i(t) = \alpha_i Q_i(t-1)$$

with $\alpha_i > 0$. Under this assumption, each company's market demand curve $P_i(t)$ at time t is given by

$$P_1(t) = a - bQ_1(t) - b\alpha_2 Q_2(t-1),$$

$$P_2(t) = a - \alpha_1 b Q_1(t-1) - b Q_2(t).$$

Thus, the profit anticipated by each of these two companies in period t is

$$\pi_1(t) = Q_1(t)[a - b Q_1(t) - \alpha_2 b Q_2(t-1) - c_1],$$

$$\pi_2(t) = Q_2(t)[a - \alpha_1 b Q_1(t-1) - b Q_2(t) - c_2].$$

To maximize the profit, the first derivative condition gives

$$\frac{\partial \pi_1}{\partial Q_1} = a - 2b Q_1(t) - \alpha_2 b Q_2(t-1) - c_1 = 0,$$

$$\frac{\partial \pi_2}{\partial Q_2} = a - \alpha_1 b Q_1(t-1) - 2b Q_2(t) - c_2 = 0.$$

Solving this system for $Q_1(t)$ and $Q_2(t)$, we have

$$q_1(t) = \frac{a - c_1}{2b} - \frac{\alpha_2}{2} Q_2(t-1),$$

$$q_2(t) = \frac{a - c_2}{2b} - \frac{\alpha_1}{2} Q_1(t-1).$$

Same as in [4] and [11], we also assume that each company adjust their quantity completely and instantaneously, that is, assume that

$$q_i(t) = Q_i(t).$$

Then above results become

$$q_1(t) = \frac{a - c_1}{2b} - \frac{\alpha_2}{2} q_2(t-1),$$

$$q_2(t) = \frac{a - c_2}{2b} - \frac{\alpha_1}{2} q_1(t-1).$$

This is a system of difference equations. We can write it in the following matrix form

$$\begin{bmatrix} q_1(t) \\ q_2(t) \end{bmatrix} = \begin{bmatrix} 0 & \frac{-\alpha_2}{2} \\ \frac{-\alpha_1}{2} & 0 \end{bmatrix} \cdot \begin{bmatrix} q_1(t-1) \\ q_2(t-1) \end{bmatrix} + \begin{bmatrix} \frac{a-c_1}{2b} \\ \frac{a-c_2}{2b} \end{bmatrix}.$$

or

$$Q(t) = AQ(t-1) + W, \quad (8)$$

where

$$Q(t) = \begin{bmatrix} q_1(t) \\ q_2(t) \end{bmatrix}, \quad A = \begin{bmatrix} 0 & \frac{-\alpha_2}{2} \\ \frac{-\alpha_1}{2} & 0 \end{bmatrix}, \quad W = \begin{bmatrix} \frac{a-c_1}{2b} \\ \frac{a-c_2}{2b} \end{bmatrix}.$$

For such a discrete dynamic system we introduce the following definition (e.g. see [3], [10]):

Equilibrium point: A point \bar{Q} is called an equilibrium point of (8) if it satisfies

$$Q(t+1) = Q(t) = \bar{Q}.$$

This means if the system is ever in the state \bar{Q} , it will remain in that state for all time. That is, no change occurs from period to period. An equilibrium point is called **stable** provided the following is true: for all starting values $Q(0)$ near \bar{Q} , the system not only stays near \bar{Q} but also $Q(t) \rightarrow \bar{Q}$ as $t \rightarrow \infty$. In our context, it means that if the companies adjust their quantities near \bar{Q} , then after many periods, the best choice for the companies will be \bar{Q} .

Question 1: How to find the equilibrium point of (8)?

To do this we need only to set $Q(t)=Q(t-1)$ in (8) and solve the system. By doing so, we find that the equilibrium point of (8) is

$$\bar{Q}=(q_1, q_2)=\left(\frac{(2-\alpha_2)a+\alpha_2c_2-2c_1}{(4-\alpha_1\alpha_2)b}, \frac{(2-\alpha_1)a+\alpha_1c_1-2c_2}{(4-\alpha_1\alpha_2)b}\right).$$

We can see that if $\alpha_1=\alpha_2=1$, these are exactly the quantities that we found in Section 3. In general, in order to have $q_i>0$, we need $\alpha_1<2$, $\alpha_2<2$, and $\alpha_1(a-c_1)<2(a-c_2)$.

Question 2: How to determine if the equilibrium point of (8) is stable? For this we have the following theorem (e.g. see [3]).

Theorem 5.1: *An equilibrium point of (8) is stable if the absolute value of the eigenvalues of matrix A are all less than 1.*

By direct computations, we can find the eigenvalues of our A are $\frac{\sqrt{\alpha_1\alpha_2}}{2}$ and $-\frac{\sqrt{\alpha_1\alpha_2}}{2}$. Since we have $\alpha_1<2$, $\alpha_2<2$, all of these two eigenvalues have absolute value less than 1. Therefore, we know that the equilibrium point of (8) we already found is stable.

6. When There Are More Than Two Companies

Now we consider a more general situation, that is, suppose there are n companies in a competitive market. Let Q_i denote the quantity produced by company i and let

$$Q=Q_1+Q_2+\dots+Q_n$$

denote the aggregate quantity on the market. Let P denote the market-clearing price and assume that inverse demand function is given by

$$P=a-bQ.$$

For simplicity, we first assume that there are no fixed cost and the marginal costs for all companies are equal and is constant c_0 . Thus the total cost of company i from producing quantity Q_i is $C_i(Q_i)=c_0Q_i$. Therefore, the profit function for company i is

$$\pi_i(Q_1, Q_2, \dots, Q_n) = Q_i [a - b \sum_{j=1}^n Q_j - c_0]$$

0].

Let (q_1, q_2, \dots, q_n) be the maximum quantity, then q_i solves

$$\begin{aligned} \pi_i(Q_1, Q_2, \dots, Q_{i-1}, q_i, Q_{i+1}, \dots, Q_n) &= \max_{0 \leq Q_i < \infty} \pi_i(Q_1, Q_2, \\ &\dots, Q_{i-1}, Q_i, Q_{i+1}, \dots, Q_n) \\ &= \max_{0 \leq Q_i < \infty} Q_i [a - b(Q_i + Q_{-i}) - c_0], \end{aligned}$$

where

$$Q_{-i} = Q_1 + Q_2 + \dots + Q_{i-1} + Q_{i+1} + \dots + Q_n$$

The first order derivative condition for company i 's optimization problem is both necessary and sufficient. It yields

$$Q_i = \frac{a - bQ_{-i} - c_0}{2b}$$

Since q_1, q_2, \dots, q_n maximize these n companies' profits simultaneously, they satisfy

$$q_1 = \frac{1}{2b} (a - bq_2 - bq_3 - \dots - bq_n - c_0),$$

$$q_2 = \frac{1}{2b} (a - bq_1 - bq_3 - \dots - bq_n - c_0),$$

.....

$$q_n = \frac{1}{2b} (a - bq_1 - bq_2 - \dots - bq_{n-1} - c_0).$$

Or

$$2bq_1 + bq_2 + bq_3 + \dots + bq_n = a - c_0,$$

$$bq_1 + 2bq_2 + bq_3 + \dots + bq_n = a - c_0,$$

.....

$$bq_1 + bq_2 + bq_3 + \dots + 2bq_n = a - c_0.$$

Solving it gives

$$q_1 = q_2 = \dots = q_n = q(n) = \frac{a - c_0}{(n+1)b}.$$

Each company's profit is

$$\Pi_i = \Pi(n) = \frac{(a - c_0)^2}{(n+1)^2 b}.$$

We can see that for $n=2$, $q(n)$ and $\Pi(n)$ become q_0 and Π_0 that we found in Section 2. Also we can see that when $n \rightarrow \infty$, we have $q(n) \rightarrow 0$ and $\Pi(n) \rightarrow 0$. This implies that if there are too many companies in the market, the profit for each company will be very small.

Now we assume that all these companies have different marginal costs c_i . Without loss of generality, we assume that $c_1 < c_2 < \dots < c_n$, then company i 's profit function is

$$\pi_i(Q_1, Q_2, \dots, Q_n) = Q_i [a - b \sum_{j=1}^n Q_j - c_i].$$

Performing the same computations as before, we know that q_1, q_2, \dots, q_n satisfy

$$2bq_1 + bq_2 + bq_3 + \dots + bq_n = a - c_1,$$

$$bq_1 + 2bq_2 + bq_3 + \dots + bq_n =$$

$$a - c_2,$$

.....

$$bq_1 + bq_2 + bq_3 + \dots + 2bq_n =$$

$$a - c_n.$$

Let

$$A = \begin{bmatrix} 2 & 1 & 1 & \dots & 1 & 1 \\ 1 & 2 & 1 & \dots & 1 & 1 \\ 1 & 1 & 2 & \dots & 1 & 1 \\ \vdots & \vdots & \vdots & \dots & \vdots & \vdots \\ 1 & 1 & 1 & \dots & 2 & 1 \\ 1 & 1 & 1 & \dots & 1 & 2 \end{bmatrix}, \quad B =$$

$$\begin{bmatrix} \frac{a - c_1}{2b} \\ \frac{a - c_2}{2b} \\ \vdots \\ \frac{a - c_n}{2b} \end{bmatrix}$$

then above system can be written as

$$Aq = B,$$

where $q = (q_1, q_2, \dots, q_n)^T$. Solving it gives

$$q = A^{-1}B.$$

It is not too hard to find that

$$A^{-1} = \begin{bmatrix} \frac{n}{n+1} & \frac{-1}{n+1} & \frac{-1}{n+1} & \dots & \frac{-1}{n+1} & \frac{-1}{n+1} \\ \frac{-1}{n+1} & \frac{n}{n+1} & \frac{-1}{n+1} & \dots & \frac{-1}{n+1} & \frac{-1}{n+1} \\ \frac{n+1}{n+1} & \frac{n+1}{n+1} & \frac{n+1}{n+1} & \dots & \frac{n+1}{n+1} & \frac{n+1}{n+1} \\ \vdots & \vdots & \vdots & \dots & \vdots & \vdots \\ \frac{-1}{n+1} & \frac{-1}{n+1} & \frac{-1}{n+1} & \dots & \frac{n}{n+1} & \frac{-1}{n+1} \\ \frac{n+1}{n+1} & \frac{n+1}{n+1} & \frac{n+1}{n+1} & \dots & \frac{n+1}{n+1} & \frac{n+1}{n+1} \\ \frac{-1}{n+1} & \frac{-1}{n+1} & \frac{-1}{n+1} & \dots & \frac{-1}{n+1} & \frac{n}{n+1} \\ \frac{n+1}{n+1} & \frac{n+1}{n+1} & \frac{n+1}{n+1} & \dots & \frac{n+1}{n+1} & \frac{n+1}{n+1} \end{bmatrix}$$

Then we have

$$q_i = \frac{a - nc_i + \sum_{j \neq i} c_j}{(n+1)b},$$

and company i 's profit is

$$\Pi_i = \frac{(a - nc_i + \sum_{j \neq i} c_j)^2}{(n+1)^2 b}.$$

Since we need $q_i > 0$, we must have

$$c_i < \frac{a + \sum_{j \neq i} c_j}{n}.$$

That is, each company's marginal cost cannot be too high. Otherwise, some company will not make any profits.

Concluding Remarks

In this paper, we have done some mathematical analysis for the maximizing quantities and the maximum profits for Cournot duopoly model and other related models. Based on the analysis, we can see that the maximum profits of the competing companies depend on their marginal costs, the information they know about other companies, and the need of the market for the products. In order to keep the models and mathematical computations simple, we made some assumptions, some of them are unrealistic. These assumptions can always be changed so that the models can be improved to better reflect the situations to be considered. This will lead to more future research topics. Other future research work as suggested by one referee could be to do some computational simulations to support our theoretical results and to analyze some real word problems.

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References

- [1]. A. A. Cournot, *Recherches sur les Principes Mathématiques de la Théorie de la Richesses*, 1838. English edition: *Researches into the Mathematical Principles of the Theory of Wealth*. Edited by N. Bacon. New York: Macmillan, 1897.
- [2]. Prajit K. Dutta, *Strategies and Games: Theory and Practice*, The MIT Press, 1999.
- [3]. L. Edelstein-Keshet, *Mathematical Models in Biology*, The Random House/Birkhäuser Mathematics Series, New York, 1988.
- [4]. Franklin M. Fisher, *The Stability of the Cournot Oligopoly Solution: The Effects of Speeds of Adjustment and Increasing Marginal Costs*, *The Review of Econ. Stu.* Vol. 28, No.2 (1961) 125-135.
- [5]. Drew Fudenberg and Jean Tirole, *Game Theory*, The MIT Press, 1991.
- [6]. Robert Gibbons, *Game Theory for Applied Economics*, Princeton University Press, 1992.
- [7] X. Gao, W. Zhong, S. Mei, *Convergence of A Cournot Oligopoly game with Extrapolative Expectations*, *Economic Computation & Economic Cybernetics Studies & Research*, Vol. 46, No. 3, p 209, 2012.
- [8]. J. Hass, M. D. Weir, G.B. Thomas, *University Calculus, Early Transcendentals*, Second Edition, Pearson Education, Inc. 2012.
- [9] N. Immorlica, E. Markakis, G. Piliouras *Coalition Formation and Price of Anarchy in Cournot Oligopolis*, WINE 2010.
- [10]. Edward R. Scheinerman, *Invitation to Dynamical System*, Prentice Hall, 1996.
- [11]. R.D. Theocharis, *On the stability of the Cournot solution on the oligopoly problem*, *The Review of Econ. Stu.*, Vol. 27, No. 2, (1960)133-134.

- [12] J.N. Tsitsiklis and Y. Xu, Efficiency Loss in a Cournot Oligopoly with Convex Demand, GAMENETS 2012, 63-76.

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