

*The Scholar*

MCNULTY  
SCHOLARSHIP  
PROGRAM  
*Journal of Research Reports*

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WICHITA STATE  
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SCHOLARS  
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**E d i t o r s**

Jan Petersen  
Emily Christinat

## WSU Administration

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Dr. Donald L. Beggs

Vice President for Student Affairs

Dr. Ronald R. Kopita

Assistant Vice President for Student Affairs

Ms. Deltha Q. Colvin

## From the Director

I am proud to present volume 9 of the Journal of Research Reports. The articles featured in this journal represent the work of the Program participants from the 2003-2004-grant year, the first year in a newly funded four-year cycle. As one reads through these articles, it is clear that the breadth of research interests is as diverse as the students that we serve and the quality is outstanding as well. My staff and I could not be more pleased with the

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WSU McNair Scholars Program

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## From the Research Assistant

IT has been my pleasure to serve the Wichita State University McNair Scholars Program for the summer of 2004. I give great thanks to the McNair Staff: **LaWanda, Shukura, Sheri, Emily** and **Peter**—you bring joy, laughter, support and you keep me coming back to McNair year after year. The McNair staff represents leadership and teamwork at its' finest: To the **Research Mentors**, I also say thank you. Despite incredibly demanding schedules, you have taken time to mentor, teach and to care. Your contribution is invaluable to the McNair Program.

Finally, to the **McNair Scholars** I leave these messages: Within each of you lay wonderful treasures: Treasures of experiences, ideas, interests and concerns critical to society. Each of you has a story to tell and a contribution to make. As you move forward in your journey in higher education and in life, remember to



Abstract

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Youth Empowerment Project: Reducing the Risks of HIV/AIDS Among African American Adolescents

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HIV/AIDS prevention is the focus for this study. The next section describes the methods that were used to gather the needed information for this study.

### Method

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The participants were 157 African American adolescents between the ages of 12-17 who were recruited from schools, local churches, and the Wichita community (pop. 429,000). Fifty-five percent were female and 45% were males.

¶

This study was approved by the Institutional Review Board at Wichita State University. The participants and their parents or legal guardian completed a consent form and were informed that they could withdraw from the study at any time. Participants were required to have a social security card at the time of enrollment in order to receive a stipend for participating in the study. The Youth Empowerment Project Training session was held on a Saturday. At the beginning of the day, participants completed a pretest survey. Youth participants were randomly assigned to either a 5-hour HIV/AIDS and substance abuse prevention group (the intervention group) or a health education group (comparison). Immediately following the intervention participants completed a posttest







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SINCE the aging population continues to grow at a tremendous rate, maintaining independence and quality of life are critical to the older adult population. One of the most critical activities of adults' independence is the ability to drive. This examines the functional fitness, physical fitness, mental health of older adult drivers and non-drivers using the Health and Lifestyle Review (HLR) assessment battery. Eighty-five older adults (mean age of 84.89 yrs) from an independent living retirement community in the Mid-West volunteered to take the assessment. Results indicate that drivers have higher grip strength, higher level of Activities of Daily Living (ADL), and lower fear of falling than non-drivers. Given the differences found across groups, implications for interventions such as fitness programs to maintain independent living activities are discussed.

On the other hand, driving keeps older adults independent and allows them to maintain the much-needed social contacts that they would not be able to form or maintain otherwise. This independence has a positive economical impact because the need for nursing home care is delayed and shortened. In addition, it relieves the burden for all caregivers. Driving habits of older adults may benefit from the use of guidelines, restrictions and adaptations. A program like 65 Alive, offered by the AARP, provides guidelines to older adults in order to help them hone their skills, avoid accidents and traffic violations. Older adult drivers often limit themselves to daytime and light traffic driving (Hennessy, 1995), thus reducing the number of mishaps. Some suggest that automobiles could be adapted to accommodate older adults. However, automobile adaptations for a multitude of issues are available but are costly. Examples of adaptations are a steering knob, joystick, and foot and headrest controls (Warmink, 2002).

Present day older adults are very active, mobile and far more globally influenced than previous generations. In the year 2000, people 65 years and older made up 12.4 percent of the United States of America population (U.S. Census Bureau, 2004) and the next 50 years, this number is estimated to increase to more than 20 percent, with 5 percent older than age 85. In order to remain active in our society, mobility is an essential factor. Part of mobility independence is the capability of driving an automobile. The number of older drivers is predicted to increase to 39 percent of the driving population by 2050 (National Safety Council, 2004). Additionally, it is believed that these older adults will also drive more miles. Based on these results, it is evident that our older adult population, and in particular those driving, needs consideration.

The specific physical and mental aspects of older adult drivers continues to be researched. Most studies relate to the wider field of older adult mobility. According to Chandler (1996), mobility is greatly affected by physical functions. In a study of exercise and injury prevention in older people, Skelton and Beyer (2003) concluded that muscle function and fitness are essential to an independent life. The 2002 study by McGrea-McDermott et al., which looked at lower extremity performance associated with daily life physical activity, found that reduced physical activity levels may contribute to subsequent disability. A Danish study reports that functional abilities at old age are closely associated with physical activity, postpone severe chronic diseases and death, and promote independent living (Schroll, 2003). Further study by Resnick (2001) states that exercise and any other form of physical activity is a benefit to functional performance in older adults.

Since driving is an important aspect in the lives of older adults, they have a strong desire to hold onto this ability for as long as possible. For many, it is their only means of transportation. Statistics showing that crash rates dramatically increase for drivers 65 years and older (Department of Transportation, 2000). It is evident that this poses a health risk and an enormous cost to both older adults and society.

Unfortunately, only 10-30% of older adults reported participating in regular exercise, while 50% reported no intention to even begin a regular exercise program (Clark, 1999, Dishman, 1994). One out of five people in the United States is older than 65 and a significant number over 85 have chronic illnesses and functional impairments. It is evident that older adults



### Grip Strength

The grip strength assessment measured the participant's grip pressure using a dynamometer. Three tests were conducted on each hand and the grip strength was recorded in kilograms.

### Activities of Daily Living (ADL)

The assessments for ADL consisted of a questionnaire about the ability to independently perform regular daily activities related to personal care. The questions assessed any required assistance for bathing, dressing, using the toilet, getting out of bed, bladder and bowel incontinence and eating.

Instrumental Activities of Daily Living (I (of )-24 (Daily )-24of The aIDL cssessment mals consisten



focus on strength and balance. These two abilities are related to the parameters grip strength and fear of falling that show the biggest variation between drivers and non-drivers. However, this does not implicate that other factors can be neglected. It is a statistical fact that mental capabilities decline with age. Therefore, keeping the older adults mentally active is crucial. One way of achieving this is to create programs that support a social lifestyle and contacts, for example by organizing social intellectual events. Although not a direct requirement for remaining mobile, cardiovascular training would also be beneficial for maintaining an independent active life. This is confirmed by Schroll (2003) who found that physical activity definitely influences health and quality of life over the life course, showing reduced mortality and lower incidences of myocardial infraction and hip fractures.

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The parameters up and go, total performance, IADL and MMSE show no significant differences across the group. Overall fitness does not appear to be a strong requirement for driving automobiles. The same holds for mental health, as long as people satisfy the minimum cognitive mental capabilities. Further, all participants in this study maintain a high standard of living and reside in a retirement community where multitudes of services are available. Thus, they do not have the need to perform various activities themselves such as cooking, cleaning, grocery shopping etc.

Based on the results one may conclude that fitness programs for keeping elderly people driving should

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## Abstract

FOR the past two years I have been a tutor in a high poverty urban elementary school. Being a student in education and observing student behavior has brought to mind many questions about poverty and its effect on education. This study considers the following questions: (a) What is a working definition of poverty? (b) What do teachers know about poverty? (c) What kinds of influences do teachers feel poverty may have on students? Information from a focused literature review was used to design a pilot survey. The survey as (many )19tionquestions about poverty4 (followis )-24 Õ(study )-may ,study influen-24 (l )-24 s ,study (c po Tc T\* [(literat)]TJ -0,study (of )-24 (influen)]TJ -0,study in





such limitations as having less than a high school education, having a high percentage of single female heads of household, having high rates of unemployment, and receiving low wages when employed (Casebolt & Morris, 2002). This study also sites that the unemployment rate for women is significantly higher than for men; and, when women do find employment, the wages they earn are significantly lower than that of men. These inequities for women create a huge trap for poor families. In fact, the 2000 census revealed that half of all poor families were headed by single women (U.S Census Bureau).

Ambert (1998) found that in 1976, a single parent only needed to work 41 hours per week at minimum wage to be at or above the poverty line. Now they need to work 73 hours a week to make the same status. This is alarming when you consider that mid level jobs are diminishing and many people are left fighting for low wage paying jobs because they simply cannot compete for higher wage paying work because they lack the education (Ambert 1998).

Another cause of poverty may emanate from perpetual generations of poor schooling. Kozol (1991) described school districts in Chicago where thousands of students came to school each day to find a classroom with no teacher in it. In one school district, teachers found relief in the fact that about half of each freshman class drops out of school by their junior year. This is seen as a relief because if all these students stayed in school there would be no way of providing a teacher for them. Some of these school districts were so ineffective that most of the teachers did not care about the students because they believed that none of the students would make it anyway. These schools had funding problems that were so severe that they could not even provide enough teachers to teach all their students, which caused a huge problem for the future because the students, even if they did graduate, received a substandard education. Furthermore, many teachers had minimal hope in the future of their students, which caused the teachers, even when they were present, to not be motivated to teach.

The review of the literature has indicated that money is not the answer to the problems of poverty but that it is a foundational part of educating a child. When school districts lack money, staff, supplies, books, and positive attitudes it creates a factory that produces uneducated children with no hopes or dreams and the poverty cycle continues.

#### Cultural Aspects of Poverty

The term culture refers to the parts of a person's environment that are created by people and are not

naturally occurring. Culture is the ideas, patterns of interaction, behavior patterns, beliefs, arts, institutions, and the way people adjust to the world around them. Each person is shaped by the culture and environment in which they grow up (Cushner, McClelland & Safford, 2003, 36).

Many scholars agree that growing up in poverty, whether urban or rural poverty, can have a negative effect on a child's future (Ambert, 1998; Duncan, 1999 & Kozol, 1991). This makes sense if one considers the types of environments that can exist in poverty situations. For example, in the rural counties of the coal fields of Appalachia and plantations in the Mississippi Delta one may find severe separation where the poor and the rich are separated by crooked politics and racial segregation (Duncan, 1999). In these types of environments the rich often had complete control over the poor, leaving them no way out of poverty. In urban areas such as East St. Louis, Kozol (1991) discovered holes of poverty, including environments where sewage frequently backed up in schools, the soil was filled with lead, the air was filled with chemicals, crime was rampant, jobs were scarce, and children had one of the highest rates of asthma in the country. These are examples of some of the worst situations to which a person from poverty might be exposed. Through my experience in public education, I have witnessed that some of these extremes do exist, even in places where one might not expect to find them.

A poverty area is considered an area where one out of every five houses in a neighborhood is poor (Ambert, 1998). Growing up in an impoverished neighborhood places a child in a situation where he or she may not have access to good social resources. Social resources are support from the community in areas such as positive role models, employment opportunities, positive or neutral contact with police, and supervision of city youth (Ambert). Another social resource that Ambert points out is Social Capital. Social Capital is the degree to which the parents in a community band together to supervise the children in a neighborhood. When social resources are meek or not present, a neighborhood loses social control. Ambert has associated a loss of social control with higher rates of aggression, trash in vacant lots, vandalized property, stripped cars in the streets, groups of teens congregating on street corners, unhealthy friend associations, lower achievement in school, prostitution, high degrees of criminality, and public drug use.

Eamon (2001) points out that neighborhoods flooded by gangs, violence, crime, concentrations of



poor families, living in high crime low quality areas, going to schools filled with deviant peers, stressful life experiences, and pro aggressive behaviors are destructive to youth because these things actively pull a child into antisocial deviant behavior<sup>2</sup>.

Other characteristics that are common to the culture of poverty include the attitude that society owes one something, refusal of charity (pride), constant background noise in the home, punishment being about forgiveness and not teaching change, and a lack of organization in the home (Payne, 1998 68-69).

In addition to what has already been discussed, the following are some statistics that Ruby Payne has found to be associated with poverty. These statistics showed additional problems children from poverty may face. 1.) No matter what the race, a child from poverty is more likely to suffer developmental delay and damage, drop out of high school, and give birth as a teenager. 2.) Children who are in poverty are more likely to live in a one-parent household. 3.) Poor children from the inner city are seven times more likely to experience child abuse and neglect. 4.) Poverty is caused by several factors: parental employment, family structure, and parental education. 5.) Children from poverty do not develop the necessary vocabulary that is used in public school and on various achievement tests.

Hart and Risley (2003) supported Payne's statement on vocabulary development with their study on language in the home, which showed that a lack of language development is predominant in poor families. The study further showed that the lack of language development had a negative effect on the students test scores six to seven years later. Ruby Payne (1998) observed that, in addition to lacking vocabulary, children from poverty learn how to communicate in a highly verbal and gestural manner and as a result they lack knowledge of sentence structure and syntax, which inhibits their ability to communicate in writing.





numbers were highly variable with a mode of 4 and total number of years teaching ranging from 1 year teaching to 37 years teaching. The participants were then asked to describe the type of school in which they taught. Most of our subjects (61%) taught in an elementary school. There were 14% who taught preschool, 48% who taught middle school, 11% who taught high school, 4% who taught at a magnet school, 11% who taught English as a Second Language (ESL), and 1 % who taught special education. These numbers do not add up to 100% because several teachers taught in more than one setting simultaneously or have taught in different settings throughout their years as a teacher. For example, one of our participants was a music teacher who taught elementary, middle school, and high school at the same time. Next we asked for the highest degree completed and found that 65% of the subjects obtained Bachelors degree and that 30% obtained

Masters degrees. Then the participants were asked to list any special endorsements. Various endorsements were listed such as some examples include: special education, ESL, early childhood, music therapy and reading specialist. On various questions throughout the survey the participants were asked to give a personal definition of poverty, provide an institutional definition of poverty, provide the source of knowledge of how they knew which of their students received special services for low income students, and describe any special adjustments they made for students from poverty.

The responses to the next twenty questions were rated using a Likert scale, which ranged from one to ten. One was strongly disagree and ten was strongly agree. The participants were asked to select a number to indicate their level of agreement with the twenty statements that were presented to them. Table 1 shows a summary of the results of the questions asked.

1	Questions Asked I have a lot of experience teaching students in poverty	7	8	10	3	11	Questions Asked Know services available to low income students	6	7	7	3															
2	I a	i	n	c	677	o	m	e	s	07	0	1	T	c	1	9	.	0	0	1	T	c	1	9	.	9

## Discussion

In examining the written responses, it appears that teachers in general defined poverty as some form of lack of financial resources. Several teachers also expressed that they felt poverty was defined as a lack of resources rather than simply lacking finances. While they did show an understanding of deficits in non-financial resources they did not specifically site what those resources are. This information and the review of literature suggest teachers have a marginal understanding of the subject of poverty. The survey revealed that while many teachers had a lot of experience teaching students from poverty, many of them had little personal knowledge of poverty, lacked training in poverty, and were not comfortable with their level of knowledge of poverty when they started teaching. In addition, teachers expressed a desire to have more knowledge on poverty but according to the results, we found that most teachers must seek this knowledge on their own time because it was often not provided through teacher education or the school districts.

The results showed that teachers in general understand that there are differences between students who are from poverty and students who are not. The survey indicated that most teachers believed parent involvement is different for students from poverty and that students from poverty are less likely to graduate. When reviewing the written responses, one can conclude that many teachers were making adjustments for these differences by providing extra materials and allowing students extra time in class for class work.

It must be noted as a positive point that teachers showed a desire to learn more about the areas in which they lack knowledge and were attempting to make adjustments in their instruction that would help meet the different needs of their students. Teacher responses suggested that they believe they are under prepared and under trained when accommodating for the diverse needs that students from poverty may bring to the classroom. I felt that the study showed a need for further research in the area of poverty and how it affects education. It is my hope to eventually see units on poverty implemented into teacher education programs.

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## Two Archaeological Sites in Kaw Reservoir, Kansas

Ingrid Mendoza, McNair Scholar  
David T. Hughes, PhD, Research Mentor

### Abstract

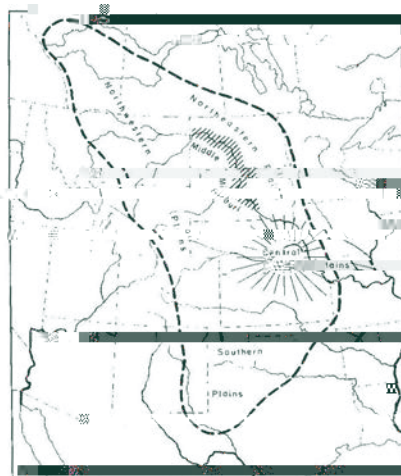
THE two archaeological sites that are the subject of this research are located at the Kaw Reservoir, Cowley County, Kansas. These sites were surveyed and excavated by Wichita State University for the U.S. Army Corps of Engineers in 1980 and again during two summer field schools in 1995 and 1996. Information regarding these two sites is very minimal as reports were not completed, and field notes were of minimal use. Kansas archaeology also has its problems in that sites are minimal and the collections at libraries regarding Kansas archaeology are rare. The purpose of this research is to properly place these two sites into their cultural context and time sequence by analyzing the lithics and ceramic materials. By doing this I have discovered that the sites were both occupied over a series of time producing layers of cultural material dating back to the Archaic and up to the Middle Ceramic time period.

### Two Archaeological Sites in Kaw Reservoir, Kansas

Two archaeological sites, 14CO556 & 14CO557, at Kaw Reservoir, Cowley County, Kansas, were surveyed in 1980 by Wichita State University. A report was filed in 1982 after the first survey and shovel testing was completed requesting that these two sites, 14CO556 and 14CO557, have further excavation done to determine whether they should be placed on the National Register of Historic Places or on the Register of Historic Kansas Places for further preservation and study. Wichita State University conducted two field schools during the summers of 1995 and 1996 and collected several artifacts from each site. It is unfortunate that afterwards reports were not filed, soil samples not were floated and the field notes did not provide enough information regarding the historical background to these sites. It is the purpose of this research to do analysis on certain artifacts, such as points and pottery, in order to find a cultural context and a time sequence.

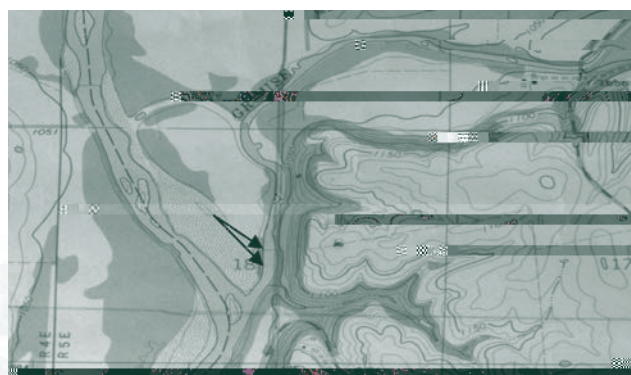
The two archaeological sites 14CO556 and 14CO557 are located in the region called the Great Plains. The Great Plains covers an area of approximately 2 million square kilometers; it stretches 2,300 km north from the Rio Grande to the Saskatchewan River and has a breadth of

approximately 900 km east and west. Its diverse terrain includes such features as flatlands, table lands, dune sands, deep V-shaped gullies, terraced stream valleys and isolated mountain passes (Wedel & Frison 2001:44).



Wood 1998:11

As there is minimal information regarding these two archaeological sites, I have included a summary of Rohn's report from 1982 that provides background information on these sites. Below the map indicates the approximate vicinity of the sites at the Kaw Reservoir.



U.S. Geological Survey Cowley County Map 1981

Site Descriptions per Rohn's report of 1982:

14CO556 is located near Grouse Creek and is separated from 14CO557 by a spring and brook. The boundaries of the site were tested in a semi-gridded set of 12 shovel tests and two test squares, A and B. The site covers an area of approximately 50 meters by 30 meters (Rohn 1982:88). 14CO557 lies above the east bank of





temper and depth at which each sherd was discovered are included in this table.

Out of the eleven specimens used, six were sand-tempered only; four were sand and crushed shell, and one was crushed bone. Six out of the eleven were smoothed cord-roughened; three were cord-roughened; only and one was undiagnostic. In Rohn's report of 1982, he suggested two types of pottery: Riley Cord-Roughened (a Smokey Hill ware) and the other from the Bluff Creek Complex of Harper and southwestern Sumner Counties in Kansas.

The Riley Cord-Roughened pottery can be described as temper being of sand, some mixed with clay and crushed shell. The colors range from slate gray to black, but others are light brown or tan. The surface is usually gray but many have an orange-brown appearance due to the reaction of the clay with the heat. The surface is usually cord-roughened; thickness of pottery ranges from 3.5-15.0mm (Wedel 1959:183).

The Bluff Creek Complex pottery has a variety of tempers the most abundant being sand and the surface being cord-roughened (Rohn 1984:91). Rohn believes that the pottery from 14CO556 is related to both complexes representing a Middle Ceramic component.

Analysis for 14CO557 was done exactly the same at 14CO556. The results are as follows:

What we can tell from this analysis is that this site 14CO557 had multiple occupations beginning from the Late Archaic times up until the Late Woodland times. At this point it is unknown whether this site was continually occupied or seasonally occupied. The earliest points are the Table Rock dating from the Late Archaic, 4000 B.P. We then see a mixture of Woodland type points from very small in size to large. They are the Reed, Scallorn and the Snyders points dating from approximately 1300 – 500 B.P.

As noted before in 14CO556, other lithics such as uniface and biface scrapers are not diagnostic due to the similarities across time and in the Great Plains.

Nineteen specimens were used for this analysis. Temper types ranged from sand only to a mixture of crushed bone and crushed shell. Three sherds were tempered with sand and crushed shell and were Cordmarked. Three sherds were tempered with sand and bone and were also Cordmarked except for one, which was indeterminate. Two were tempered with crushed shell and crushed bone and were Cordmarked. Six sherds were sand tempered and Cordmarked; one was indeterminate. Three pottery rims and three sherds were bone-tempered and were plain, no decoration on the surface. All the pottery sherds, except for the plain ware and bone-tempered,

Artifact	Type	Width	Length	Thickness	Neck Width	Depth	Heat Treated
14CO557/0005	Scallorn	17.16mm	27.20mm	3.69	12.05mm	16cm	No
14CO557/0029	Fresno -Flat Base	16.99mm	26.31mm	3.39mm	0mm	48cm	Yes
14CO557/097	Table Rock Point	17.30mm	30.37mm	5.90mm	10.65mm	94cm Feature 6	Yes
14CO557/0121	Cf. Fresno	12.64mm	19.32mm	2.81mm	0mm	15cm	Yes
14CO557/0122	Scallorn	19.00mm	33.30mm	3.18mm	6.79mm	15cm Square A	Yes
14CO556/557	Reed Side Notched	12.0.161 0 Td (061d)TJ1101.75mmYes274		5.34mm (e) 11.0003 Tce 2.743 -1.10557/0029	e526 (e) 24(6)TJ12.173 0 Td (P) 33(0)TJ10 Td (42 -1.10557/0029)		

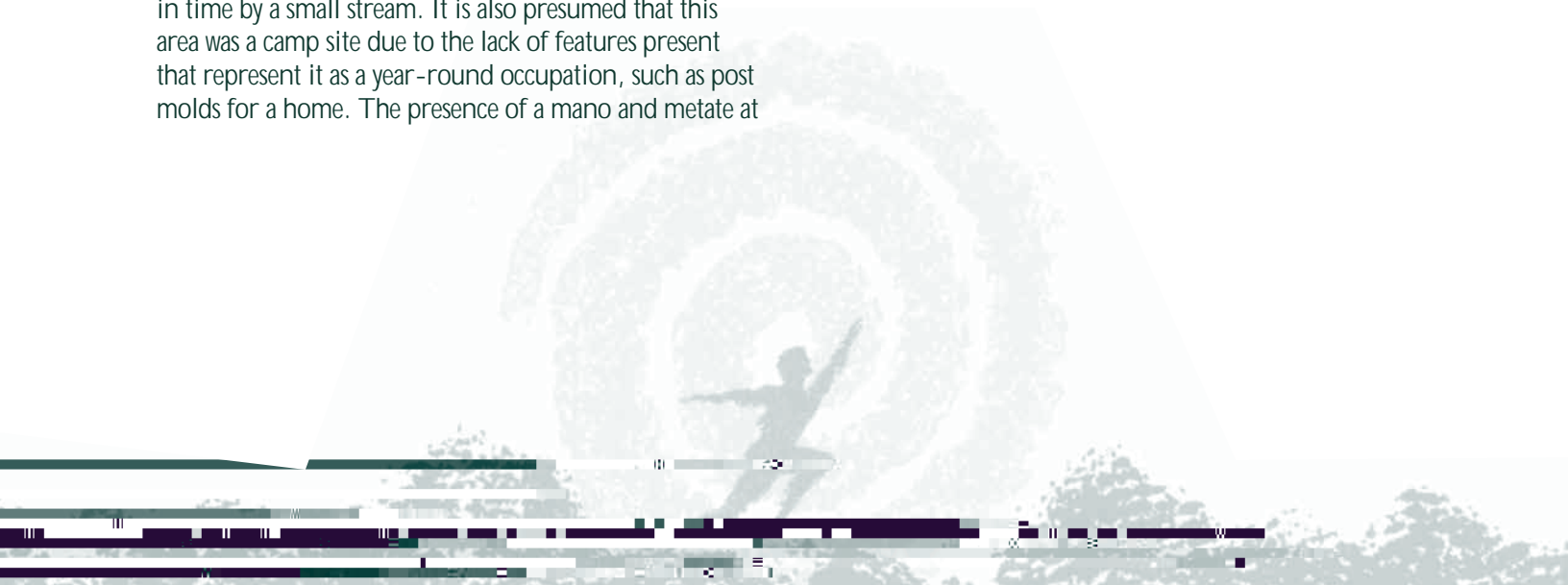
Artifact	Type	Width	Length	Thickness	Depth Discovered	Heat Treated
14CO557/00162	Uniface Scraper	20.36mm	33.57mm	4.25mm	20cm	Yes
14CO557/00263	Scraper	33.20mm	51.28mm	10.31mm	0-10cm	N/A
14CO557/0321	Uniface Scraper	27.69mm	42.69mm	6.71mm	40-50cm	Yes
14CO557/0372	Uniface Scraper	24.30mm	39.91mm	8.99mm	50cm	Yes
14CO557/0202	Scraper	23.82mm	51.85mm	8.32mm	90-100cm	Yes
14CO557/0279	Biface Knife	33.00mm	72.49mm	10.85mm	18cm	Yes
14CO557/0389	Ovate Retouched Flake Scraper	42.60mm	48.98mm	6.50mm	Surface find	Yes



are typical of the Middle and Late Woodland type of ceramics. The plain- and bone-tempered rims and sherds, however, are considered to be from a Late Woodland and Middle Ceramic time period.

In Rohn's report he states that the Cordmarked and the smooth-surfaced pottery point to a Woodland occupation, and that only one sherd resembled that from the Smokey Hill and Bluff Creek Complex. These two complexes were described with the ceramics from 14CO556.

The two sites at Kaw Reservoir, Kansas I believe could be one site as mentioned previously by Rohn, separated in time by a small stream. It is also presumed that this area was a camp site due to the lack of features present that represent it as a year-round occupation, such as post molds for a home. The presence of a mano and metate at



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### Abstract

THIS study explored factors that influence African American high school student success, engagement, and disengagement in classroom and school activities. African American high school students' perceptions of these factors were analyzed. This study was conducted in a Midwest metropolitan school with 14 African American high school students in grade levels 9th to 12th. The findings suggest that the participants share common concerns that include, but are not limited to, African American cultural appreciation within the school, the important components of engaging classroom instruction, and parental participation.

### African American High School Student Performance in Public High School: The Factors That Are Key in Impacting African American Student Success

Research has shown the most significant time for African American students to become motivated to achieve in school is during the transition of adolescence, which typically occurs during the years of high school. At this stage, students make choices that directly impact their future education and career plans (Grant, 2001); therefore, high school has proven to be a very critical period of development, especially for African American students (Thompson, 2002). Thompson reports that high school is problematic for adolescents for two reasons: High school may be biased towards the specific needs of college-bound students; and b) high school gh b(mochool, )-24 (the )ssueponents of biased eer



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that disengagement can result from the student devaluing academic success or discounting the validity of academic outcomes. Ogbu (2003) completed an in-depth study of African American student disengagement in an affluent suburb of Ohio. Ogbu's findings revealed the amount of time and effort African American students invested in their academic pursuits was neither adequate nor impressive. Ogbu's survey asked African American students to explain their disengagement. The following explanations were offered:





Table 1  
Frequency of Age Among Participants

Age	Gender		Total
	Male	Female	
14		1	1
15	1	1	2
16	2	3	5
17	4		4
18	2		2
Total	9	5	14

Note.  $\mu=16.2$  years of age.

Table 2  
Frequency of Class Status Among Participants

Age	Gender		Total
	Male	Female	
Freshman	1	2	3
Sophomore	2	2	4
Junior	3	1	4
Senior	3		3
Total	9	5	14

Table 3  
Frequency of Grade Point (GPA) Among Participants

GPA	Gender		Total
	Male	Female	
Lower than 1.0			
1.0-1.9	1	3	4
2.0-2.9	7	1	8
3.0-3.9	1	1	2
4			
Total	9	5	14

Note.  $\mu=2.44$

Thompson, 2002). The students were asked to report their GPA, the types of grades they generally receive, the types of grades they would like to receive, and to indicate their parents' educational background. In addition, the students were offered a copy of the topics to be discussed and the questions to be presented (Appendix C). During the third focus group discussion, students reviewed three bar graphs



young men see the leaders who were not academically successful but made fast money through a high risk lifestyle. One male student gave an example; Of you saw other people out in the world that didn't go to school and were getting paid, you think to yourself, They're getting paid . . . so I can





college student. In addition, the students expressed that intervention programs within the school were great tools to inspire African American students to go to college.

The students were shown reading, writing, and math assessment scores indicated by a bar graph that compared African American high school student achievement with other ethnic groups in their school district. The assessment scores were used as a tool to gain their perspective on their academic achievement. A majority of the participants expressed that viewing the test scores made them feel "bad." The students said they frequently heard their test scores were low compared to their ethnic counterparts; however, they have never seen them compared on paper. Two students stated they did not feel bad and indicated that the scores did not affect them because they "take care of their business." One student articulated his frustration which was directed at the Board of Education representatives. He asked, "Why do they even look at these test scores and show them at meetings? They don't ever come up with a plan." Other participants offered the following responses:

- ¥ "I think it's frustrating, why can't some students get their stuff together?"
- ¥ "Our test scores wouldn't be that low if we applied ourselves, but we don't because we think that we don't have to because we're Black and that's what people expect anyway."



teacher keeps the class exciting, then I will stay up. It appeared from the focus group discussions that these African American students were not suffering from a lack of sleep, but from boredom.

It was reassuring to know the African American high school students in this study recognized the factors that influenced their success. During the focus group discussion, the students expressed success in high school was very important to their mothers; however, the father figures in their lives were not as engaged in their success. The students understood that their mother would contact teachers or administrators if something went awry in the classroom, which would result in a swift response in correcting the situation. It appeared that these students possessed a healthy respect for their mothers, which encouraged them to have a positive attitude and the motivation to succeed in school.

Most of the participants in this study understood they must attend college to be successful in life. However, at times they felt counselors and administrators did not take a college education for them seriously. This particular school does have several programs and resources in place for low-income and potential first-generation college students. These programs give high school students the opportunity to visit colleges, to job shadow, to attend financial aid workshops, and to participate in community service.

The students involved in the study were from a low-income background and were the first in their families to attend college. They were motivated to succeed in school and to attend college to improve their lives and the lives of their families.





7) Have you attended North High School for all of your high school years?

Yes

No

If no, list other schools you have attended:

---

---

---

8) What is your cumulative grade point average (GPA)?

4.0

3.0-3.9

2.0-2.9

1.0-1.9

lower than 1.0

9) What would be your ideal cumulative GPA?

4.0

3.0-3.9

2.0-2.9

1.0-1.9

lower than 1.0

10) What level of education would you like to complete?



Appendix C

Focus Group Questions

Topic: Factors that impact success:

- 1) Do you receive assistance with your homework assignments? If so, from whom?
- 2) What experiences do your teachers provide that motivate you to want to come to school? If not, what don't they do?
- 3) Describe the ways your culture is appreciated while at school?

Topic: Factors that impact engagement and disengagement

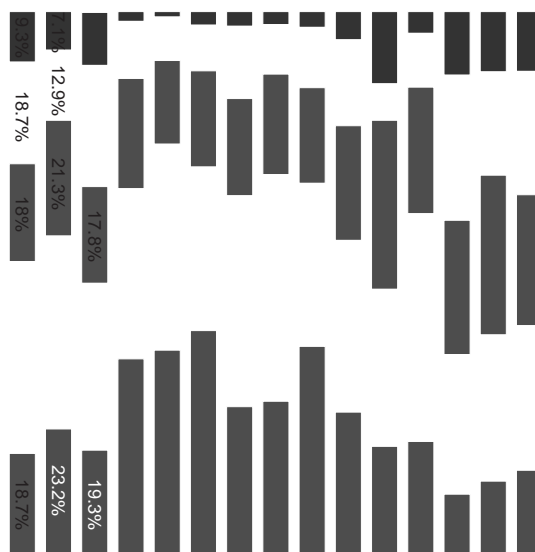
- 1) What are the reasons why African American high school students drop out of school?
- 2) Have you ever contemplated dropping out of school? If yes, why? If no, why not?
- 3) What do you like most about attending your school?
- 4) What, if anything, do you dislike about attending your school?
  - a) How does what you dislike at school impact your success?
- 5) What would you say is one of the most important components of instruction?

Topic: Student Perceptions

- 1) Think about your favorite teacher; why is this person your favorite teacher?
  - a) Does your favorite teacher impact your performance in school? If so, how?
- 2) Think about your least favorite teacher; why is this person your least favorite teacher?
  - a) Does your least favorite teacher impact your performance in school? If so, how?
- 3) If someone is treated fairly by school authorities; what would you say constitutes fair treatment?
  - a) Do you feel you are treated fairly by school authorities?

- 4) In your opinion, how can the public school system better prepare African American students for college?
- 5) How do your parents get involved in your education?
  - a) Based on your response, in what ways would you like for your parents to be involved in your education?
- 6) How important is it to your mother/father that you do well in school? How does this impact your performance?
- 7) How does your parents' involvement or lack thereof, impact your performance?

Appendix D



## Appendix E

Dear Parent,

Your student is invited to participate in a study of African American student performance in public high school. I hope to learn the following:

- ¥ Factors that impact African American high school student success
- ¥ Factors that impact African American high school student engagement and disengagement in classroom and school activities
- ¥ What African American high school students perceive to be the factors that impact their success

Your student was selected as a possible participant in this study because he/she is an African American high school student at the focus school for this research; ultimately, he/she will participate in this study as one of 12 participants. If he/she decides to participate, they will attend all three (3) group discussions that will focus on the purposes stated above. The focus groups will be held during the Institute Study Hall period during the week of April 19, on Monday, April 19, Wednesday, April 21, and Friday, April 23. The focus groups will be held at North High School in the conference room of room 106. Participation time will amount to three (3) hours.

Participants will be provided with a snack during each focus group; the snacks and beverages will be provided by Ms. Wren. In addition, there will be a drawing held for participants who attend all three (3) focus group sessions; three (3) students will be eligible to receive a \$5.00 gift certificate to McDonald's, which will be provided by the group leader. Winners of the gift certificate will be randomly selected.

This research will be completed on a specific population of local African American high school students; as a result, the findings will be generalized to the local high school students. Therefore, the results of the completed research will illuminate issues related to local African American high school student success. The findings may enhance the impact of local intervention programs by providing coordinators with the knowledge and resources to assist African American high school students. In addition, these results will equip parents and teachers, who have an avid interest in African American high school student success, with the knowledge of tools needed to help African American students succeed.

Personal or sensitive information about the subject and the subject's family is requested (i.e. student grade point average and family educational





# A Study Investigating the Relationship Among Stressors, Academic Achievement, and Thinking Styles of Both Traditional and Non-Traditional College Students

Mani Souriya, McNair Scholar  
Linda Bakken, EdD, Research Mentor

## Abstract

ALTHOUGH most college students (traditional and non-traditional) share one common goal of graduation, achieving the goal may be problematic for some students. It is difficult to identify why some college students persevere and others drop out because there are diverse variables associated with college success. The literature indicates that stressors, academic achievement, and thinking styles affect students' success. Differences in thinking styles such as thinking at the abstract level as opposed to thinking at the concrete level may be important factors in the decision to achieve and remain in college. Considering that thinking styles may influence academic achievement and/or stressors, this study addresses the following question: Was there a correlation among thinking styles, stressors, and academic achievement for both traditional and non-traditional students? The results of the current study indicated no significant relationship between thinking styles and academic achievement.

non-traditional students. It was concluded that a significant positive relationship existed between age and GPA, in that as age increases, the GPA increases. Morris, Brooks, & May (2003) suggested that the most significant finding in support of this hypothesis is that non-traditional college students more often endorse a learning goal orientation, utilize task-oriented coping, and report higher grade point averages.

### Thinking Styles

It appears then that stressors and academic achievement are important factors influencing success in school. In addition, Morris, Brooks, and May (2003) indicated that how a student thinks or individual learning styles affect his /her grade point average. Perhaps how students think or learn may predict how well they may perform in college. Price (1998) hypothesized that there would be a correlation between the differences in learning styles, anxiety levels, and coping techniques in traditional (<25 years) versus non-traditional (25 or older) community college students. One approach Price followed in developing an instrument to examine these correlations was Piaget's theory of cognitive thinking, which identifies students' thinking style as concrete, transitional, or formal. Price discovered the following correlations in his study:

1. In analyzing traditional learners, a significant correlation was found between formal learners' high anxiety level and their use of negative coping techniques.
2. Transitional learners displayed a positive correlation between anxiety levels and negative coping skills between the traditional and non-traditional students.
3. Traditional students designated as concrete learner had a significant correlation between concrete learning style and the use of negative coping skills.
4. There were no other significant differences indicated in traditional students learning styles, anxiety levels of coping skills.
5. Non-traditional students who were transitional learners showed no significant differences.

### Purpose and Rationale

Current research indicates stressors, academic achievement, and thinking styles affect retention. It is beyond the scope of this paper to determine the relationships of these three variables regarding students staying in college. However, it is beneficial to determine if these three variables are related to each

other and thus impact students' decisions to graduate. Therefore, the research question for this study will be, "Is there a relationship between stressors, academic achievement, and thinking styles based on type of students (traditional or non-traditional)?"

## Methodology

### Participants

Participation was voluntary and participants were offered extra credit from five undergraduate classes from the college of education. The participation rate was approximately 75%. The convenience sample for this study consisted of 93 college students (78 females and 15 males) from the College of Education. Student-disclosed demographic data were self-reported. Fifty-seven were traditional students and 36 were non-traditional students. The majority of the students were European Americans at a frequency of 81. There were three African Americans, seven Latino Americans, and one Native American. Fifty students reported single status, 38 marital status, and 6 divorced (14 indicated they were parents). Fifty-three percent were juniors, 40% seniors, and remaining were freshman or sophomores, which almost 2/3 (67%) indicated their parents have had some college.

### Instruments

Stressors were measured using Lifestyle Habits Questionnaires from Coppock (1998); this consisted of 30 questions on a Likert-scale to measure the stress level of college students. Thinking styles were measured using the Cognitive test (Fun and Challenging Puzzles), from Bakken (2001) and consisted of 21-item multiple-choice Piaget test. The authors provided data on validity and reliability of this instrument (see Bakken, Thompson, Clark, Johnson & Dwyer, 2001). Scores ranged from 1-10 for Concrete- Operations, 11-13 for Transition-Formal Operations, and 14-21 for Formal Operations. Academic Achievement was taken from the demographics to measure the grade point average of the college students. The Statistical Package of Social Sciences (SPSS) downloaded in the computer was utilized to analyze data.

### Procedure

The participants from five different classes of 300-level educational psychology classes were told that the purpose of the study was to investigate the factors that affect students' success in college. Specifically, the directions included addressing stress factors that college students face and the ways that they think. The

packets were distributed in a timely manner, and participants were informed of what the packets consisted of. Each participant was asked to complete the questionnaire at home (approximately 45 minutes were required) and to bring responses back by the following week.

### Results

The most commonly used descriptive statistic of correlation is the Pearson Correlation Coefficient. Because it is most appropriately used with interval data, the Pearson correlation coefficient was the statistical test used to address the research question: Is there a relationship between stressors, academic achievement, and thinking styles in type of students (traditional or non-traditional)? Table 1 presents the means and standard deviations for thinking styles, stressors, and academic achievement based on type of students.

Table 1  
Means and Standard Deviations for GPA, Stressors, and Thinking Styles (N=93)

Variables	Mean	Standard Deviation
GPA	3.4	.36
Stressors	72.12	5.10
Thinking Styles	17.84	2.48

### Data Analysis

**Correlational analyses.** A Bivariate Correlations, using Pearson's correlation coefficient, revealed no significant correlations among stressors, academic achievement, and thinking styles with type of students.

**T-test analysis.** An independent samples t-test revealed a significant difference between gender and grade point average,  $t(88) = -2.872, .05$ . The mean grade point averages were  $3.09$  ( $SD = .35$ ) for males and  $3.46$  ( $SD = .35$ ) for females (see figure 1).

### Discussion

The results of the present study did not discover a significant relationship between stressors, academic achievement, and thinking styles. This study found that these three variables have no relevance to college students' academic performance. However, there was a significant difference between gender and grade point average: The majority of female students were found to have higher grade point average than male students. The majority of the students scored 17 on the cognitive test, which puts them under the learning category of Formal Operations; this resulted in little variance among the learning styles of the college students. As far as academic achievement, most of the college students possess a 3.0 or above grade point average, which again indicates few differences of academic performance between the two types of college students. The finding of the stressors variable indicates no differences among the college students. Therefore, this study did not find a relationship between stressors, academic achievement, and thinking styles.

### Limitations

One of the limitations of this study is that all participants were education majors, which may not be generalizable to the general population. The study could have included classes from different courses, as only the 300-level educational psychology classes were being examined. The participants were all from Virginia S Sajors, w-66q-16.7N3c T\* [(could )-24 (have )(academic)-24 (clamoy )-24 (is )-24v-24 (did divistat-24 (type(to ) )-24 (wer)16 tnt found types of ge, thir iuT.icp ajors, w-66qnt hithithe Sajorsl, w-66qa , could





# African Americans and the Need for Greater Prevalence in the Newsroom

Martecia Belk, McNair Scholar  
Patricia Dooley, PhD, Research Mentor

## Summary

It is a known fact that the news is a very important aspect of our society. We depend on the news for information, education, entertainment and a host of other things.

Since the news is such an integral part of our world, it is very important that the news is presented by a vast array of people so different stories are allowed the respect and insight that they deserve. For this to happen, newsrooms need to be diversified. Accordingly, African Americans have different experiences and perspectives than do other races and should be considered a valuable resource in the newsroom (Collison, 1998).

African Americans are one of the underrepresented groups in the news media. They need to be more prevalent in the media so stories receive fair treatment, have a different perspective, are not negative and do not single out African Americans (Collison, 1998). Unfortunately, some newspapers only hire a few blacks. Though some African Americans are present in the newsroom, the ratio to other workers is very low (Fitzgerald, 2004). For the most part, the blacks working at these newspapers appear to mainly cover black stories (Fitzgerald, 2003), and their input and insights are often not included in other stories or decisions that affect how the news is presented.

African Americans should not only report black stories; they should report other stories as well (Prince, 2002). Only covering stories that relate to black people can put extra stress on black reporters (Prince, 2002). African American reporters are not supposed to be biased, but hostile feelings can emerge when they cover stories that relate to and can affect them (Collison, 1998). Black reporters are also needed to aid white reporters who are covering controversial, complicated and racial issues (Takahashi, 1992). White reporters need the insight of black reporters to ensure that certain stories do not offend black people (Fitzgerald, 2003). As a result of not having enough African Americans in the news media, the media seems to only be speaking in one voice instead of a multicultural one (Numbers Are Up, 2002).

It is important to have African American reporters because they can help to change the image and

portrayal of African Americans in the mass media (Jackson, 1992). Because newsrooms are obsessed with crime reporting and many crimes occur in the African American community (Fitzgerald, 1992), the images of blacks that are shown by television stations, news media and news reports are often negative (Jackson, 1992). Blacks are portrayed as troubled athletes, jailbirds, drug dealers and a host of other negative things (Jackson, 1992). Furthermore, crime coverage rarely includes factors such as educational neglect, racism and economic inequality (Fitzgerald, 2003); the people involved are shown just as they are, leaving the audience to guess and stereotype their history, family, and general background. Unfortunately, unless they are involved in a violent crime, news organizations rarely cover lower class members of any race (Fitzgerald, 1992).

Since the news is such an important part of our lives, it is very important that we make sure the news is presented in a fair and favorable fashion. Newsrooms need to be diversified so that the audience has the opportunity to get varied opinions on issues and stories that are covered in different angles. The news covers a diverse array of issues, perspectives and events; its workers should represent the many dimensions of life that are covered. There should be almost as many different races of people and people from different backgrounds working in the mass media and the newsroom as there are events that the news covers.

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## Automated Aerial Refueling

Norma V. Campos, McNair Scholar  
Jennifer Henson, MS, Research Mentor  
James Murray, MS, Research Mentor  
NASA Dryden Flight Research Center, Edwards, California

### Summary

THE objective of the NASA Dryden Flight Research Center's Automated Aerial Refueling (AAR) project is to define a dynamic drogue model that predicts the behavior of a hose and drogue configuration. This is intended to be done by isolating the effects of variables such as flight conditions, hose effects, tanker and aFi(16 (.0 (7i -0.00anr(aFi(16 (st-23r)]TJ /T1\_3 1 Tf -0.23 (aFi(16 (.0 (7i .1 Tc 0 -1.Tc 0 -1.TcwFi(16 (.0f-0.00a

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# Islam in North America: A Study of the Moorish Science Temple of America and the Nation of Islam

Dorine Douglas-Bey McNair Scholar  
Anna Chandler EdD, Research Mentor

# M

## Summary

MY research discusses the movements of the Moorish American Moslems and the Nation of Islam. The founders and history of each movement are examined and compared. Furthermore, my research provides a resource for understanding the historical, spiritual, cultural, and political influences of the descendants of slavery.

According to estimates from the year of 2000, there are eight million Muslims currently residing in America. The states with the largest Muslims populations are New York (800,000), California (1 million), and Illinois (400,000), and 85-90% of these Muslim populations are Black. The ethnicity breakdown for the Muslim religion is as follows: Black Americans comprise of 42% of Muslims; Asian Muslims comprise 25%, Arab Muslims make up 12%, and the remaining 21% of Muslims are from Iran, West Africa, Southeast Asia, Eastern Europe, and Caucasians (McCloud, 1995).

## Moorish Science Temple of America

### Movement

The movement of Moorish Science Temple of America (M..S.T. of A.) was founded in 1913 A.D. by Prophet Noble Drew Ali and is present

and safety from the occurrences of racial tension, mutilation, and lynchings by the Ku Klux Klan. The Nation of Islam is the most popular and most documented community of the early period of African Americans.

### Members

There were more than 40,000 members in the NOI during the time of Malcolm X. Today, there are more than 5 to 6,000 followers and between 150,000 and 300,000 people who have joined but are less involved with the movement. The members are to use X at the end of their names to denote fragility of existence in the United States for African Americans. The NOI have real estate and investments scattered across America.

### Beliefs

The Nation of Islam believes THE HOLY QUR-AN, and, although they do not follow the teachings of prophet Mohammad, they believe in Allah and contend that W.D Fard was Allah's messenger to them and that Islam is the religion of Salvation and truth. Members of the Nation of Islam refer to themselves as African American Muslims and also use the name Black Muslim. Though the NOI uses the Muslim title, it deviates radically from the Islamic teachings and most of Elijah Muhammad's teachings are not accepted by Muslims in the East or Moslems in America. The core philosophy of the Nation was characterized by a combination of Messianism and a form of Chiliasm. They believe Muslims should never be the aggressor, but fight in the way of Allah with those who fight against you. They believe the Bible has been distorted. They feel that man has the ability to correct man. They believe that European people are responsible for their condition, have radical point-of-view concerning Europeans, and stress the need for equal justice under the law. The NOI rejects any form of integration under the constitution of the U.S. They are opposed to intermarriages and believe Islam should be taught without suppression or hindrance. (McCloud, 1997, p. 28-29).

### Goals and Objectives

The Nation of Islam desired to build a visible and viable nation at a time when Blacks were struggling with housing and unemployment. The goal was to provide a place of belonging with economical growth development at the time of depression and discrimination to offset the exploitation of Blacks. They also promote businesses and provide a plan for a

growth of nation--liberation seasoned with hatred (a hatred they feel is justified), the intrinsic superiority of the black race, self-respect, and self-sufficiency through business enterprises. They promote the concept that Black men are really gods, and aspire to attain an all-black state of their own.

### Conclusion

Despite their differences, both the Moorish Science of America and the Nation of Islam believe that Allah is God. They both came to give the so-called "Blacks" direction during the time of racial tension and discrimination, although the messages and uplifting acts to the "Blacks" are different. I have provided vital information on two Islamic religious movements in America, and I have provided an understanding on the influences of economical and social philosophical development. I gave reference to the lost identity of the so-called blacks in America and compared significant differences and similarities of the two groups.

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# The Ways in Which Internet2 Can Enhance Undergraduate Research

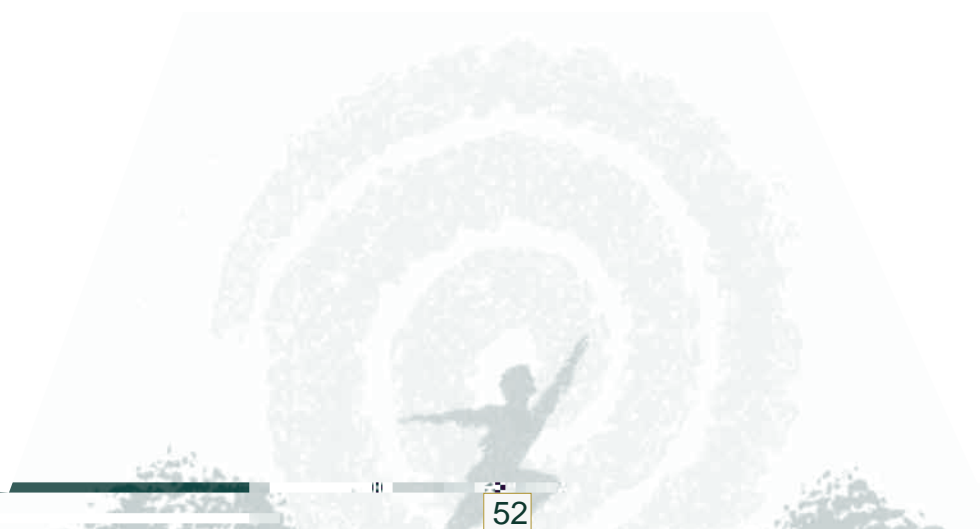
Stephanie KirschMcNair Scholar  
Li Jia, PhD, Research Mentor

## Summary

THE future of the Internet looks bright to those who are looking. Sept. 6, 2001, marked a very important milestone for the Wichita State University Campus. That was the date that the campus was officially turned on to Internet2. That was also the day when Wichita State took its place in the global research community.



# M





novels as David Bradley's *Chaneysville Incident*, Morrison's *Beloved*, and Caryl Phillips' *Crossing the River*. The trend has been to focus on many aspects of slavery, including runaway slaves, newly freed slaves as well as the forced migration of the Middle Passage. Similarly, in literary criticism there has been a corresponding rise in contemporary study of the Middle Passage. Of those critics who study Johnson, some focus has been on the ways in which the Middle Passage reflects and differs from the traditional slave narrative genre and the slave-mutiny genre. In addition, many critics have compared the Middle Passage to Toni Morrison's *Beloved*.

African American culture began with the cruelty, degradation, and inhumanity of the Middle Passage. The severe psychological and emotional aftermath of the Middle Passage undoubtedly affected the African slaves in how they lived their lives and raised their children, in turn affecting the African American

culture as a whole, both past and present. The Middle Passage can be seen as the first stage of African American culture or the foundational experience on which subsequent African American culture was formed. The Middle Passage is a crucial moment in African American history; therefore, there is a gap in the understanding of African American culture if the Middle Passage is not explored. Novels such as Charles Johnson, raise questions about African American culture, how it was first formed, and what today's scholars can learn from the experience. A more comprehensive understanding of African American culture can be formed through exploration of these questions. It can be seen that if we understand the past, we can understand the present better.

Works Cited

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## Different Disciplines Identify Genius Characteristics to Answer the Question: Who is a Genius?

Salyi Vu, McNair Scholar  
Marlene Schommer-Aikins, Research Mentor

WHO or what a genius is can be difficult to define. The concept of genius was evident over 2000 years ago in Greek and Roman literature in connection to God-like individuals with mystical powers/abilities. According to New Webster's Expanded (2001), the word genius usually refers to "a [person] with uncommon intellectual faculties; nature; peculiar character" (p. 116). Many who are creative, inventive or have an uncanny ability to think abstractly have been called geniuses. The purpose of this study is to determine what characteristics are common across disciplines and what characteristics are unique to disciplines. If there are common characteristics among those deemed as geniuses, could these characteristics exist within all of us? In the end, who can be called a genius?

The proposed research population consisted of those who have either taught, or are currently teaching, in a discipline offered by one of the six colleges within Wichita State University. The total number of participants in this study was 18 employees (13 men and 5 women) whose responsibilities included teaching at least one course in their respective disciplines. The main method for gathering information for this study was through phone surveys. The survey was comprised of four main questions. Participants were asked to identify their professional disciplines, how many years of experience they had in their specific discipline, to name someone--if they could--they would consider a genius in their field, and their agreement on a 30-item list of genius characteristics developed from a previous survey Vu had conducted in 2002.

Examination of descriptive statistics indicated that there was no genius characteristic in common among the participants interviewed. Because of the small sample size, we focused on characteristics that were selected most often and combined characteristics with similar frequencies into groups. The top four groups of genius characteristics most common across disciplines are as follows: (1) Dedication/Passion for Field and Inventive (93%); (2) Natural "Gift" or Talent, Insightful, and Curious (86%); (3) Innovative or Creative and Perseverance (71%); (4) Improvises Futuristic in Thought, and Discontent with Current Status of Field (64%).

In order to test whether or not there were genius characteristics unique to disciplines, a One-Way ANOVA (Business vs. Education vs. Engineering vs. Health Professions vs. Liberal Arts and Sciences) for each low frequency characteristic was conducted. Among all of the low frequency occurring characteristics, only five characteristics were found to be significantly different between disciplines. These characteristics included: Formal Education, Published, Encouragement, Capability of Critiquing Other Fields, and Habitual in Daily Routine. The majority of Liberal Arts and Sciences disciplines (8/9) believed that geniuses in their disciplines did not have to have a formal education (overall  $F(4, 9) = 6.429$ ,  $p = .01$ ), be published (overall  $F(4, 9) = 6.429$ ,  $p = .01$ ), or have encouragement from others in their respective fields to be considered a genius (overall  $F(4, 9) = 6.429$ ,  $p = .01$ ). In addition to this majority, the participant from the Health Professions discipline also agreed that being capable of critiquing other fields was not an important trait of geniuses in her field (overall  $F(4, 9) = 5.886$ ,  $p = .01$ ). The characteristic Habitual was found to be significantly different at the .05 level (overall  $F(4, 9) = 3.717$ ,  $p < .05$ ). Both disciplines within the college of Engineering and one Liberal Arts and Sciences discipline disagreed with the other eleven participants. These three participants did not believe that geniuses in their disciplines are habitual in their daily routines.

In addition to the 30-item list provided, participants were also asked if there were any other characteristics not listed that they believed geniuses in their disciplines possessed. Five other characteristics were named. These characteristics included: the ability to talk about the discipline in laymen terms, having "Encourage to do something different" from the accepted norm, being spontaneous and unpredictable, and capable of combining "personality along with technical strength" when working within the field.

In essence, the strongest findings of this study are that having a strong dedication/passion for a field and being inventive are the first things that come to mind when faculty reflect on their own disciplines, which depicts a widespread notion of how many identify



have passion for a field will most likely spend a great number of days, months, and even years working towards a goal that would prove beneficial to that field. Colleagues as well as students in that discipline will undoubtedly hear about this individual's contributions whenever the history of that field is discussed in length. Likewise, those who are inventors can be identified and remembered as geniuses by others because they have left something behind that future generations can see as well as touch.

Despite the limited findings of this research, the study of geniuses and genius characteristics is an important one. Genius characteristics hallmark success and are associated with successful people. Therefore, the data collected could be useful in assisting instructors by providing them with a method for building confidence in classrooms. On a similar note, returning adults and traditional students, who possess similar characteristics, will find encouragement in understanding that they also have the opportunity to be successful.

These findings should be considered cautiously because they were based solely on responses received from volunteers who could be contacted during the summer hours. Another limitation includes the fact that it must not be forgotten that these perceived genius characteristics are based on opinions. Therefore, causal claims cannot be made on the findings of this research.

Future analyses should be conducted to increase the number of educators surveyed to determine if these results can be replicated. A more centralized study focusing on only one college or discipline at a time would be more useful when analyzing genius characteristics for different college types. Other studies including the five additional characteristics named should also be carried out to see if they are considered to be genius characteristics by others.

### References

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# The Effects of Creatine on Anaerobic Power in College-Aged Individuals

Koya Webb, McNair Scholar  
Michael Rogers, PhD, Research Mentor

## Summary

CREATINE is an amino acid, the building blocks that make up proteins. Creatine in the form of phosphocreatine (creatine phosphate) is an important store of energy in muscle cells. During intense exercise lasting less than half a minute, phosphocreatine is broken down to creatine and phosphate, and the energy released is used to regenerate the primary source of energy, adenosine triphosphate (ATP). Power output drops as phosphocreatine becomes depleted, because ATP cannot be regenerated fast enough to meet the demand of the exercise. It follows that a bigger store of phosphocreatine in muscle should reduce fatigue during sprinting. Extra creatine in the muscle may also increase the rate of regeneration of phosphocreatine following sprints, which should mean less fatigue with repeated bursts of activity in training or in many sport competitions. The million dollar question is "Can you get a bigger store of creatine and phosphocreatine in muscle?" The answer is "Yes." Furthermore, the additional creatine may improve sprint performance and lean tissue.

In creatine studies of preoperative and post-operative patients, untrained subjects, and elite athletes taking creatine dosages of 1.5 to 25 g per day for up to a year, the only noted side effect of the amino acid has been weight gain (Balsom 1995). Most studies indicate that short-term creatine supplementation increases total body mass, by 0.7 to 1.6 kg. With longer use, gains of up to 3 kg more than in matched control groups have been reported. The two prevailing theories are that creatine supplementation promotes either water retention or protein synthesis. More research is needed before we can be certain about the contribution each of these processes makes to the weight gain.

Additionally, there have been some claims that athletes training hard in hot or humid conditions experience severe muscle cramps when taking creatine, and the cramps have been attributed to overheating and/or changes in the amount of water or salts in muscle. However, no study has reported that creatine supplementation causes any cramping, or a greater incidence of muscle strains or pulls. Some concern has also been raised regarding the effects of

creatine supplementation on kidney function. It has further been suggested that creatine supplementation could suppress the body's own creatine synthesis. Currently, there is a lack of information available regarding the effects of creatine on sprint performance in college-aged individuals. Therefore, this study sought to determine if five days of creatine supplementation in college-aged individuals would affect sprint cycle performance.

Eighteen (9 males, 9 females) college students ages 20-26 years ( $22.2 \pm 2$ ) were recruited from the university population to participate in the study. A double-blind, placebo-controlled design was used in this study. Subjects were grouped according to sex, divided into ranked pairs based on peak scores obtained during a 30-second cycle ergometer sprint, and randomly placed into a creatine (n = 9) or a placebo (n = 9) group. Using a double-blind procedure, subjects were given a container of powdered grape drink mix containing a five day supply of either maltodextrin (20 grams as placebo) or creatine monohydrate (20 grams per day) (Phoenix Laboratory, Hicksville, NY). Pilot work indicated these mixtures were unidentifiable by color, texture, or taste. The five day dosage regimen was

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