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DISCLAIMER

Food Safety at Makola Shopping Mall: Perspectives from Ghanaian Customers

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Abstract

Food safety at makola shopping mall was explored from the perspective of customers by means of their demographic data, illnesses they had suffered from, types of foods chosen, and factors considered before making food choices. From 20 chosen vendors, 60 customers were obtained by the lottery method (3 customers per a vendor). The findings showed that the age range 18-25 years contained the most customers (35%); those who studies show are relatively inexperienced as regards issues of food safety. Most of those who ate at the mall did so out of some necessity rather than other reasons such as leisure, since 98% of them were employed, 60% were single. A high percentage of them had diseases such as cholera (20%), typhoid fever by Salmonella typhoid (20%). Foods like fufu and banku had patronages of 21.7% and 18.3% respectively; preparation of these involve extensive use of the bare hands by people who may not wash their hands properly. There also exist risks of acquiring diseases through mycotoxins with foods like beans, fufu, banku, and rice (local type) which often contain relatively high percentage of moisture. Patronage of rice and sauce was (50%); these are often served with salads which involve the use of vegetables, for example lettuce which are cultivated using wastewater. Low patronage of some local foods like ampesi and palava sauce, fried plantain and beans may be due to the concerns of adulteration of palm oil with sudan dyes. It was concluded that there were considerable risks associated with the sale of prepared food at the shopping mall.

Key words: Food, Safety, Enterobacter, Bacillus sp, Restaurant

INTRODUCTION

Fast food is quick, convenient, and relatively inexpensive for the amount of food obtained and it appeals to all age groups. However, according to Hedberg, Macdonald and Osterholm (1994), beyond providing nutrients, and gastronomic delights, food is a vehicle for transmission of micro-organisms and their toxic products. Hence the crucial role of consumers in ensuring food safety cannot be overemphasized.

They exercise this role through the choices they make as regards food safety (for example the environment in which a particular food is sold and other considerations and concerns they have which influence their choices) they dictate to a large extent, the attitude of food venders and other relevant entities, in commercial food preparation business, toward food safety. This notwithstanding according to Raspor (2008) food safety means an assurance that food will not cause harm to the consumer when eaten according to its intended use. The food vender therefore has an inherent obligation to ensure that food sold is safe. Hence it is a serious matter when even an unsuspecting consumer contracts a foodborne disease or food poisoning as a result of eating from a fast food restaurant.

The growth of the population of Accra has resulted in a situation whereby some people do not have the time and place to cook hence a large proportion of the population prefer to eat

outside the home. Though there are other reasons why people choose to eat outside their homes the fact still remains that as the population increases the number of consumers will increase. A study conducted in the Greater Accra region, Ghana, found that 75% of all households have at least one woman working (Levin, Ruel, Morris, Maxwell, Armar-Klemensu, Ahiadeke, 1999). This leaves less time for the preparation of food which is reflected in the increases in the consumption of away-from-home foods. However, most of these women are involved in low income jobs which make it an economic imperative that they prepare their own meals at home. This situation is likely to change when the economy of Ghana grows to the extent that the percentage of women in high income jobs increases considerable. There will then be a growth spurt in the demand for commercially prepared food (Veeck & Burns, 2009). The potential for growth in the consumption of commercially prepared foods is also seen in the fact that there are 60,000 street food vendors in Accra with a combined annual turnover of 100 million dollars (Tommlins & Johnson, 2004). Furthermore this potential for growth can be realized in the Korean experience where there was a rapid growth of the fast food industry following the Olympics games (Park, 2004)   .

The growth in commercial food preparation enterprises also leads to the growth in urban food needs. Hence, many people are engaged in production and marketing of foods in cities. In Cameroon, West Africa, 32,0000 households are engaged in the production and marketing of traditional leafy vegetables. It has been realized that those who are engaged in year round agriculture can earn, on the average, more than two times the earnings of those engaged in rainfed agriculture. In the whole of West Africa, 20 million people are engaged in different forms of agriculture and 60% to 100% of the perishables consumed are produced within the cities (Dresched, Graefe, Sonou, Coffie, 2012). In Accra, 280,000 dwellers benefit from urban farming everyday (Probst, Houedjofonon, Ayerakwa, Haas, 2012; Obuobie, Keraita, Danso, Amoah, Rashid, Dreschel, 2006); even more profitable is vegetable marketing

In addition to the provision of fresh vegetables, in urban areas, benefits from irrigated cultivation come from the provision of jobs and income for farmers, traders and input suppliers. It also results in realized reduced transportation costs, traffic and produce savings and less packaging; also recycling of solid and liquid wastewater resource, productive use and enhancement of aesthetic appearance of unused plots and protection of open spaces against desertification (Dreschel, Graefe, Sonou, Coffie 2012).

The food items on the shelves of shops and supermarkets in Accra is said to travel an average of 3,700km by air before arriving, some produce like poultry, rice, vegetable oils travel from as far as Malaysia, Indonesia, India, Japan, Thailand, Brazil and Argentina. Hence there are real benefits that are obtained from urban Agriculture; which results in food being obtained relatively, from the doorsteps. Despite the benefits of globalization which has facilitated the rapid transportation of perishable foods, it increases the potential for exposure to pathogens from other parts of the world, at a very fast pace (Altekruse & Swerdlow, 1996).

One of the drawbacks associated with urban farming is the use of methods and inputs other than the traditional ones which basically makes use of hoes and cutlasses in Ghana. One of such inputs is pesticides which can result in grave repercussions, notwithstanding the benefits. It can cause direct human poison to accumulate as residues in foods and environments or lead to the development of resistant strains of pests. In Ghana, there are already some levels of contamination of pesticides in water sediments and crops in areas of intensive vegetable farming. (Ntow, 2008). According to Carvalho (2006) cheap compounds such as DDT and Lindane which are environmentally persistent and which are prohibited for agricultural use in

developed countries, remain popular in developing countries; these contaminate foods and disperse in the environment.

Another issue associated with urban agriculture is the use of polluted water; which is contaminated with pathogens. Ensink, Mahmood, Dalsgaard (2007) found that in many developing countries, as a result of the rapid urbanization, farmers often use wastewater either directly or indirectly from sewage drains. In a study done in Kumasi, Ghana, it was realized that 70% of all farms in the city used polluted streams, 27% used wells and 30% used wastewater from drains. (Amoah, Dreschel, Henseler & Abaidoo, 2007). In a study on the risks associated with wastewater use in Accra, Seidu, Heist, Amoah, Dreshel, Jenssen, Stenstrom (2008) identified on farm soil contamination as the most significant health risk. This poses health hazards since in Ghana fresh salads have now become part of the diet and it is a common supplement to urban fast foods served on streets, canteens and restaurants; 200,000 people consume such supplements in Accra everyday (Amoah, Dreschel, Henseler, Abaidoo 2007). In their study involving Accra, Agyei-Mensah and de Graft Aikins (2010) observed that infectious diseases are major causes of morbidity and mortality. The poor experienced the double burden of infectious disease and a double burden of infectious disease and chronic disease; urbanization, urban poverty and globalization were key contributory factors.

Yeboah–Manu, Kpeli, Ayeh-Kumi & Bimi (2010) in their study of bacteriological quality of ready-to-eat foods sold on and around University of Ghana campus found that 52% of the foods were contaminated with bacteria above acceptable limits and therefore unsatisfactory for consumption. Nine different bacteria were isolated from the sampled foods, which were: Streptococcus sp, Enterobacter, Bacillus sp, Pseudomonas aeroginase, Staphylococcus aureus, proteus sp Streptococcus, agalactiae, Enterococcus Faecalis, E. coli and Klebsiella Pneumoniae. It is not hard to see a major contributory factor to this level of contamination since studies indicate that irrigation water used in cultivation in Accra is often polluted to such levels and with similar pathogens (Akrong, Danso, & Ampofo, 2012). In his study in Kumasi, Amponsah-Doku, Obiri-Danso, Abaidoo, Andoh, Dreschel, Kondrasen (2011) found that on-farm water and water in which lettuce were kept, to maintain their freshness in the market, were sources of contamination of lettuce.

The proliferation of pathogens as a result of use of wastewater and other factors is a pivotal factor in the transmission of diseases notably, cholera. According to unicef more than 28900 cholera cases were reported in Ghana in 2014; about 70% of these cases were in the Greater Accra region. For the months of January 2015, 366 cases were reported in Ghana. Cholera has been a foodborne disease in Ghana since the 1970s. According to Ofori-Adjei and Koram (2014) cholera in Ghana is largely, an urban problem which is usually due to the unprecedented growth of urban areas and lack of access to clean potable water. Furthermore, according to the above author it has become endemic due to the manner in which the initial outbreaks were handled. It has been noted that, apart from the above, infected food handlers play a crucial role in the transmission of food borne diseases, for example cholera. In Korea, in a study of the cause, magnitude, and route of a cholera outbreak, it was noted that a restaurant was the cause of it and more than one employee contaminated food which was served at the restaurant. (Lee, Lim, Kim, Lee, 2002). Furthermore Islam and Ullah (2010) in their study in Nigeria found (37%) of the restaurants in Benin city to be contaminated with pathogens, notably Bacillus cereus and Staphylococcus aureus. Only (42%) of the food handlers in the above study knew that micro-organisms could contaminate food. This should affect consumers' choice of restaurants and their consideration of food handlers when they are purchasing food.

On March 23, 2014 World Health Organization (WHO) was notified of an Ebola outbreak in Guinea which spread to Liberia and Sierra Leone. By April 8, 2015 barely a year after it started, the CDC reported that there had been a total of 25, 591 cases which had resulted in 10,602 deaths. Such a contagion calls for alertness, of all relevant authorities in the West African Sub-region as far as the commercial food vending is concerned, since according Farrar & Piot (2014) it killed more than all the previous epidemics combined. It affected the entire territories of three countries and it was feared to have the potential of spreading to other parts of Africa. In the light of the above issues it cannot be overemphasized that consumers should be armed with the knowledge to make well informed choices as far as food safety is concerned especially, in urban areas in West Africa.

Perspectives as regards food safety could be deduced from the age, age group, sex, educational level, and other demographic factors since there are differences among their perceptions of food safety. Melkis, Hilmi and Mustapha (2014) noted that there is a significant difference in the perception of fast food restaurant of single and married customers and also customers from different age groups have a significant difference of satisfaction and price of food bought at fast food restaurants (Islam & Ullah, 2010; Goyal & Singh, 2007). Roseman (2007) and Roseman and Kurzynske, (2006) showed that self reported safety perceptions and behavior were statistically different by marital status, location, age, gender, household, level of education, and ethnicity, employment.in the food industry and household income. It was also realized that in general those who perceived higher food safety risks exhibited safer food handling behaviors.

According to Chan (2014), the international community has given substantial but less visible attention to ensuring the safety from infection and contamination of food that is produced, traded and eaten. Dosman, Adamowicz, Hrudey (2001) have observed the complex nature of individual and societal perception of food-related health risks which was observed to be multidimensional with politics and economics interacting with technological factors. According to Van Rijswijk and Frewer (2008) though consumers believe that both food quality and food safety are important they pay more attention to quality than safety when purchasing food. Collins (1997) has noted that consumers are more interested in convenience and savings than in the proper handling and preparation of food. Furthermore, Verbeke, Frewer & De Brabander (2007) have noted that consumers are generally uncertain about the safety and quality of their food and their risk perceptions may differ substantially from that of experts. Hence, according to Wilcock, Pun, Khanona, and Aung (2004) there exists the need for professional assistance for consumers regarding food safety issues. Nonetheless, Fellows (1997) has noted that in the long run the only way a company can survive is if consumers are satisfied that a product meets their expectations. In the final analysis, they are at the end of the food supply chain hence they play an important role in promoting and ensuring food safety (WHO, 2015).

In the light of the following, the study was with the objectives of obtaining food safety perspectives from demographic characteristics of the consumer, the application of their knowledge of food safety through the factors they considered before making their choice to eat at such places. Perspectives of food safety from the food poisoning and foodborne diseases they have had since they started eating away from home.

METHODOLOGY
Sixty customers were obtained through the lottery method from twenty (20) vendors, who were chosen from a list of 100 registered customers, through the lottery method. Hence three customers were chosen from each vendor. Questionnaires were used to obtain responses to

questions. Responses to the questions were obtained through interviews with regard to illiterate customers. Questions asked included: their age, sex, marital status, most important factor they considered before they eat at a restaurant, most serious disease they suffered from since they started eating away from home.

Number of Customers

Range of Number of Customers	Frequency	Percentage %
50-100	9	50
100-200	6	33.3
200-300	2	11.1
300 and above	1	5.6

Number of customers
The number of customers of vendors' ranged from 1750 to more than 3,000 representing average customers ranging from 97 to 126 respectively. Hence, potentially it is a significant source of employment and income. It also provides meals for a large number of people who may not be able to cook due to lack of time, utensils, equipment; cost and convenience. However, such numbers also represent a potential source of transmission of food poisoning and foodborne diseases, for example the spread of foodborne diseases by polluted irrigation water (Dreschel, Graefe, Sonou, & Cofie, 2007).

Sex of Customers

Sex	Frequency	Percentage %
Female	24	40
Male	36	60

Sex of customers
Sixty percent of customers were males and forty percent (40%) were females. Morse and Driskel (2009) found that the frequency of eating at fast food restaurants differs significantly between the sexes. Also this is in agreement with Driskell, Meckna, and Scales (2006). Furthermore Van Zyl, Steya, and Morais (2010) found in their studies that a significantly higher percentage of men than women typically ate at fast food restaurants, at least once a week.

The area selected for the study is situated in a vicinity where there is a high concentration of women, which is obvious to even the casual observer, who engage in petty trading; the percentage of men could have been higher, had it been, in an area where white colour or blue colour jobs were predominant or where the proportion of women to men was more reflective of that of the general population.

Age of Customers		
Age Groups	**Frequency**	**Percentage %**
18-25	21	35
26-34	18	30
35-42	11	18.3
43-50	3	5.0
Above 50	7	71.7

Age of Customers
Eighty-three (83%) of customers fell in the age range of 18-43. Mohr, Wilson, Dunn, Bindal, and Wittert (2007) found that predictors of more frequent consumption of fast food and take-away foods; and to a lesser extent, eat-in foods included lower age (especially under 45 years), relative indifference to the health consequences of one's behavior, greater household income, lesser allocation of time for eating, greater allocation of time for entertainment and exposure to advertising. Rydell, Harnock, Oakes, Story, Jeffrey and French (2008) also noted the motivation for eating at fast food restaurants differs somewhat with age, sex and other factors. Gurudansani and Sheth (2009) noted in their study that 60% of consumers at various food service establishments fell in the age group 18-35 years, the modal age group (the age distribution at makola shopping mall is in a similar vein). This age group is made up of people who are economically active but may not have been able to accumulate enough funds to be able to afford the convenience and other benefits that are associated with preparing their own meals and carrying them to their work places in their own means of transport. They therefore find that it saves time and it is also relatively convenient for them to purchase food from such places.

Marital status of customers		
Marital status	**Frequency**	**Percentage**
Single	36	60
Married	20	33.3
Divorced	1	1.7
Widowed	0	0
Separated	1	1.7

Marital status of customers
The results showed that 60% of respondents were single, while 33% were married. Studies have shown that marital status influences patronage of commercially prepared foods (Dave, An, Jeffrey, Ahluwalia, 2009), the ratings of attributes for restaurants selection (Rauf & Butt 2012) fast food preferences (Ozcelik, Akan & Surucusglu, 2007). It came to light in the study of

Kroshus (2008) that per capita expenditure on commercially prepared food varied by marital status and gender: Households headed by unmarried men spent more than their married peers. Households headed by never married men spent more than those headed by never married women on commercially prepared foods. Households headed by divorced or separated men spent more than those headed by divorced or separated women. It can be deduced from this study that women and the married are less likely to eat at fast food restaurants than men and the unmarried.

Status of Employment	Frequency	Percentage %
Retired	1	1.7
Employed	54	90
Students	5	8.3

Employment Status of Customers

Most (90%) of those who ate at the place were employed in one way or the other. Roberts (1995) has observed that in these days of ever changing lifestyles and ever increasing demands on the consumer's time and energy, the consumer is left with little time. Rydell, Harnock, Oakes, Story Jeffrey and French (2008) have also noted that the motivation for eating at fast food restaurant appears to differ with employment status and other factors such as age, sex and education.

Further to this, Van Zyl, Steya, and Marais (2010) have found that it is not just the fact that one is employed which determines one's inclination to patronize fast food; it is also determined by one's type of employment and specifically according to their studies, by one's socio-economic status.

Most important reason considered by customers for patronizing food

Reason	Frequency	Percentage %
Fatigue	2	1.7
Time factor	23	38.3
For change in taste	5	8.3
Cannot cook	2	3.3
Convenience	21	35.3
Save money	1	1.7

Most Important Reasons for Eating Food

The reason which constituted the modal one was time factor (38.3%), next was convenience (35.30%), followed by change in taste (8.35%); inability to cook, saving of money and fatigue

in decreasing order of importance. Glanz, Basil, Mailbach, Goldberg and Synder (1998) in their study found that respondents chose taste as the most important consideration which influences their food choice, followed by cost. In this study 8.3% choose a change in taste as the most important reason for eating at the place.

The fact that only 1.7% of the respondents choose saving money, may not necessarily mean that it was not important, it may rather be an indication of a sense of hopelessness on their part as respect this factor, since Omemu and Aderoju (2008) also found that in certain instances, volume and prices of foods purchased by vendors are considered more than freshness and cleanliness when purchasing raw materials. This may be as a result of the importance that consumers place on the price relative to other consideration.

Rydell, Harnock, Oakes, Story, Jeffery & French (2008) in their study noted that consumers who chose quick and easy to get foods as reasons for patronizing fast foods comprised 92% and 80% respectively. Morse and Driskell (2009) have also shown that the predominant reasons for eating at fast food restaurant were the facts that consumers had limited time; they enjoyed the taste; they were able to eat with family and friends; it was inexpensive and economical. In consonance with the above study, time factor predominated (38.3%) among the list of reasons for patronizing fast foods; similar reasons like cost and convenience were also chosen in the study.

Most Important Factor Considered by Customers before Patronizing		
Factors	**Frequency**	**Percentage %**
Nutrition	11	18.3
Environment	9	15%
Quality of service	8	13.3%
Price	7	11.7
Deliciousness	5	8.3
Aroma	5	8.3
Appearance of vendors	5	8.3

The most important factor considered by customers before patronizing fast foods.
The study found that the environment was chosen by the largest number of customers as the most important factor they considered before choosing a place to eat from. It is prudent for customers in developing countries to rank the environment very high in the list of factors for consideration since often places where foods are sold in Sub-Saharan Africa and other tropical countries have a poor environment which do not meet the expectations of hygienic standards of most customers. Ghosh, Wahi, Kumar & Ganguli (2007) found that samples of foods from food stalls in New Delhi, India were highly infested with Staphylococcus aureus and Shigella spp. The vendors lacked access to portable water and toilet facilities; and they operated under poor hygienic conditions. The foods sold were potential vehicles for food borne diseases. Nutrition, environment, quality of service, price and deliciousness is the list in decending order

of the most important factor considered by customers before patronizing foods. Glanz, Basil, Maibach, Goldberg and Synder (1998) found that the following factors influence what customers ate: taste, cost, convenience and weight-gain. OIsen, Rheinlander, Bakang, Takyi, Konrandsen & Samuelson (2008) also noted that in Kumasi, Ghana, selection criteria such as aesthetic appearance of food stands, appearances of food vendors; price and accessibility of food were prioritized instead of food safety.

Roberts (1995) has also noted that prevention and control of food safety risks at consumer level represents the weakest link in the chain of food protection systems, knowledge and practices in food handling have not kept pace with cultural and scientific changes. Gurudansani & Sheth (2009) have identified a paucity of consumer knowledge as far as food safety is concerned. It came to light that notwithstanding the fact that most of them had a positive attitude towards hygiene, most of them did not know about the carriers of typhoid, gastroenteritis and amoebiosis. According to Raspor (2008) consumer behavior and attitudes towards food safety have shown that their levels of understanding, motivation and trust need to be cultivated.

Most serious ailment suffered by customers since they started eating away home.

Ailment	Frequency	Percentage
Never suffered from any disease	21	35%
Diarrhea	6	10%
Typhoid	12	20%
Stomach upset cholera	6	20%
Cholera	12	20%
Diabetes	1	20%
Hypertension	2	3.3%

Most serious ailment suffered by customers
It is noteworthy that 70% of the respondents suffered from foodborne diseases, food poisoning or stomach upset i.e typhoid, 20%, Diarrhea, 10% cholera, 20% and stomach upset 20%.

Cholera is a violent infection of the intestinal tract especially, the small intestines which results in the passage of rice-water stools containing flakes of mucus and desquamated epithelial cells. Dehydration, collapse and toxemia are marked features of it. It can results in death in ten hours after the onset of the symptoms. It is caused by bacterium vibrio cholera. Hence it is worrying that 20% of respondents have suffered from it. Studies have raised concerns about the safety of commercially prepared foods for example 26% of samples of ready-to-eat foods from street-food sellers were contaminated with Bacillus Cereus (Umon & Odoba, 1999). In Brazil, a similar study found that 35% of the samples were unsuitable for consumption and Bacillus cereus posed the greatest percentage risk among the pathogens. (Hanshiro, Morita, Matte, Matte, Toires 2005) . The relevance of food workers is also seen here in that a study showed that

many of the food workers were asymptomatic shedders or their family had infected members and/or used improper hygienic practices. The most frequent scenario included worker causing an outbreak by directly infecting patron, infected worker facially contaminating food leading to outbreak (Todd, Greig, Bartleson & Michaels, 2007).

Foods Patronized by customers

Food	Frequency	Percentage
Fufu and goat light soap	13	21.7%
Rice/ fried rice and chicken sauce with or without salad	30	50%
Banku and okra sauce with meat	11	18.3 %
Ampesi (plantain/yam) and palava sauce	3	5%
Gari and boiled beans with red palm oil with or without Fired plantain	2	3.3&
Snacks	1	1.6%

Foods patronized by customers

Dave, Ann, Jeffrey and Ahluwalia (2009) found that the frequency of fast food intake was significantly associated with the percentage unhealthiness of food. In consonance with this relatively healthier foods like ampesi and palava sauce had patronages of (5%) and (1.7%) respectively, while fried rice had a patronage of (50%). Salads contained green leafy vegetables and other vegetables which have a higher risk because of the likelihood of contamination from pesticides, and other chemicals (Ntow, 2008) and micro organisms (Amoah, Dreschel, Henseler, & Abaidoo, 2007; Adu-Gyamfi & Nketsia-Tabiri 2007). Because salads involve multi-ingredients, and vegetables are usually uncooked they often pose a high food safety risk. A study on the outbreaks of forborne disease showed that in general salads were the foods most frequently involved in larger out breaks. The foods were contaminated with nor virus, Salmonlla, Shigella and Streptococcus spp (Todd, Greig, Bartleson, & Michaels, 2007).

Most typical traditional Ghanaian foods carried the risks of extensive use of the bare hands during processing, examples are banku, fufu, tuo-zaafi, akpler (Kordylas, 1991). This may lead to the transmission of micro-organism and oral-fecal parasites (Ayeh-Kumi, Quarcoo, Kwakye-Nuako, Kretchy, Osafo-Kantanka, Mortu, 2009). These foods are also almost invariably eaten with soups which have been found to be contaminated with high levels of E. coli; they are usually prepared a day before consumption hence improper heating is a cause of microbial

multiplication (Mensah, Yeboah-Manu, Owusu-Darko, & Ablordey, 2002) The need for caution on the part of customers is seen in the fact that a study conducted by Todd, Greig, Bartleson, and Michaels (2007) into food outbreaks where food workers have been implicated in the spread of foodborne disease showed that the most frequently reported factor was bare hand contact with the food followed by improper washing of the hands. The low patronage of some local dishes for example, boiled beans, red palm oil, gari and fried plantain and palava sauce (Mayhew & Penny, 1988) and ampesi may be due to the use of red palm oil which many customers may fear could have been adulterated. (Di Anibal, Odena, Ruisanchez, & Callao, 2009).

CONCLUSION

The results showed that (60%) of the customers were men and 40% were female. Meer and Misner (2000) have shown that women scored significantly better than men on food safety parameters and practice test parameters than men. Those within the age range 18 to 35 constituted (35%) of consumers. Studies have shown young consumers' knowledge to be insufficient as regards food safety(Sanlier, 2009) and older ones above the age of 50 perform better than younger ones (Meer and Misner, 2000; Miles, Brenan, Sharon, Kuz, 2004) since they would usually have acquired through experience or other sources knowledge on food safety and practices. Those older than 50years were (11.6%) and will therefore, be a good influence on the others.

Ninety percent of customers were employed, 8.3 were students, (60%) were single, these categories of people have many reasons why they will eat at fast food restaurants like time factor, inability to cook, lack of utensils and equipment to cook; these therefore are the ones most likely to relegate food safety to the background rather than make it a priority.

The patronage of certain local foods like fufu, banku, had implications for food safety risks associated with microorganisms and aflatoxins because the methods of preparation which involve extensive use of the bare hands in mixing and turning. Fried rice is usually served with salads which involve the use of vegetables which are cultivated by the use of wastewater. The patronage of some relatively safe ones like palava sauce and gari and beans were small (5 %) and (3.3%) respectively, because of customer's concerns of the use adulterants in palm oil. Twenty percent have suffered from cholera and also from typhoid fever (Salmonella typhi) these are foodborne disease which have serious consequences and implications for health.

On the whole there is the need for customers to be aware of food safety risks associated with eating at the place which is considerable given the above food safety perspectives.

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Looking at Stratification in Education Through a Modern Day Prism

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Abstract

The purpose of this research is to investigate the perception of community members' family status and its impact on education, personal wealth, income, job opportunities, generational inequality, illiteracy, technology, free or reduced lunchprogram, and child's attendance at a high poverty school. These implications will be discussed through the theoretical perspectives of Max Weber's Theory of Stratification. A survey design was used to collect and analyze the data. Two hundred twenty two participants elected to participate in this study. The results revealed that there were statistically significant differences between community members' family status and income level. Furthermore, there were statistically significant differences between the community members' education level and their association with a friend or relative with a criminal background.

Key Words: Social Stratification, Inequality, Resource Distribution, Theory of Stratification

INTRODUCTION

The purpose of this research is to investigate the perception of community members' social status within the stratification system and its impact on income, level of education, health, generational inequality, access to educational resources and community viability. The phenomena will be investigated through the theoretical perspective of division of labor and Theory of Stratification. The division of labor sheds light on the clear delineation of wealthby grouping individuals as haves and have nots. The theory of stratification further expands on the division of the classes by wealth to include one's social status, power and class as defined by Max Weber as the upper class, white-collar workers, middle class, and the manual working class. The educational system has faced many challenges throughout history, many of which still plague it today. A persistent challenge that school districts face nationwide are related to how school are funded and the types of resources available to the students they serve. The growing problem is that all schools are not funded equally even though they may share the same school district. In fact, schools are almost guaranteed to be funded differently based on the tax revenues generated in a given region of the district. Communities with a concentration of low socioeconomic status are more likely to have the largest population of students eligible free or reduced school lunch. Most notably, areas that have an economically challenged tax base tend to be economically challenged in educational resources as well, doubly compounding the problem. The resulting problem presents itself as inequality in distributing resources and funding across the district.

Theoretical Perspective of Social Inequality
No other theorist continues to be as relevant to classism and social inequality as Karl Marx and Max Weber and their description of wealth and separation of the classes. Marx's work on the

separation of the classes and the division of labor was the foundation that classism and socioeconomic status would be understood: a division of the haves (wealthier class) and the have nots (poor working class). Weber was most notably known for his contribution of theory on the difficulty of upward mobility. There is no denying that even now the global society is still struggling with social inequality and oppression of the lower classes. This striking argument was posed in the mid-1800s and resonates as though it was proposed just yesterday. Likewise, there also is a startling similarity of the struggle of gender and racial inequality. Belkheir, et al. (1994) noted that there is a distinctive intersection between race, sex and class dynamics that is inseparable.

While racism is certainly a contemporary sociological phenomenon, Weber was ahead of his time in agreeing with W.E.B. Dubois assertion that the problem of the 20th century will be one along color lines. However, heagreed with Marx by primarilyfocusing on classism, division of the wealth into the haves and the have nots, and the suppression of the poor lower classes for the betterment of the wealthier upper classes. Where there was a major difference was the subtle attention paid to race and ethnicity. In discussing this intersection of race and class, Willheim (1970, 1983) states that while it is connected to social inequality, it "is an independent cause for...continued oppression" (p. 65). Willheim posits that racism cannot be reduced to a byproduct of capitalism. Paralleling these findings are those of George (2006) who stated that the groups historically facing discrimination has improved while "the overall economic situation of the nation's lower half has worsened" (p. 429). Most striking is that gains of sixty-five percent and sixty percent for African American and white women respectively still has not erased inequality of earnings between men and women. George proposes that the gap in the lower socioeconomic levels from their upper level counterparts can be attributed to desegregation and African Americans with greater skill sets were more likely to move out of low-income neighborhoods leaving behind less skilled individuals. He proposed that as individuals exit lower levels and enter higher levels of socioeconomic status, someone takes their place in the lower levels. Nadrag and Nadrag (2014) posit that there are four major stratification systems: slavery, caste, estate, and class. While many different countries use one the first three forms of stratification, the U.S. uses a class system that is defined by economic stratification. Class membership is not defined by law or custom as with estates defined by obligation and rights. Instead, it is more fluid where the boundaries between the classes are not clear. Inequality occurs when one or more classes have greater access to resources and wealth over the other classes. Rekker, et al. (2016) indicate that low socioeconomic status families are more likely to live in poor and unstable neighborhoods. These neighborhoods, in turn, are less likely to have a strong enough tax base to support the growing needs of the schools in its districts.

Still Separate, Still Unequal

A historical examination of education in this country would not be complete without discussing the disparities of race and class. These forms of disparities date back as far as the Civil War, if not before. Education was considered a privilege in this country, not a right.In most cases,it was reserved for privileged whites and their children. The ideal of equality in education is still somewhat ambiguous and vague even today. Let history remind us that no matter what level of government we discus (federal, state, and local government)there will be someform of disparity that was promoted against the poor and people of color. History also reminds us that public education did not come to the south until after the Civil War. It was also a well noted fact that while African Americans were denied the right to a quality education, poor whites were as well. After the Civil War and during the reconstruction period, the south was ordered to develop a public education system. This idea of having a public education system that served African Americans and poor whites right along with privileged whites was not something that

set well with the status quo. During this time, that states were responsible for their own funding. However, not all groups were funded the same.It was done internally and intentionally by elite whites.

The majority of public school funding comes from a local tax base; by that definition alone, not all tax bases are created equal. This concept is still relevant even today. Schools belonging to the same school district but located in different areas of the district does not guarantee that they all will receive the same funding and resources. Consequently, the amount will vary due to the amount of tax revenues generated in that specific area. That means that one school could rival a university based on the types of accessible resources available to them. A perfect example is the form and level of technology a school has at its disposal i.e. computers, smart boards, laptops, tablets, computer labs, technology training, etc. However, in that same school district you have a school that seems to be in a third world country because of how it is funded. There has also been a lengthy discussion on weather a school environment has more of an impact on a student than their intellectual abilities and family.Kozal(1991) indicated how recourses were applied unequally.He posits that regardless of a person's intellectual abilities or family, their educational environment can indeed impact the student if they do not receive the same resources as privileged students. He also discussed racial disparities as related to the structure of funding and division of resources. Moreover, Kozol(2012) examined the south and what privileged whites would do to keep their children from a school that had African American students. They would put their children in private schools, and in the north, they would remove their children from inner city schools and enroll them in suburban schools where quality resources were much more available.While these strategies may seem new, they date all the way back to the Reconstruction Era. Many elite whiteswanted to maintain the separate but equal split, but blacks had earned the right to vote and challenged the status quo. However, as soon as federal troops were removed from the south during integration, it became business as usual where white elitists were able to regain their political positions by ultimately undoing what little progress had been made. We should also be reminded as we picture the south as being unjust to blacks that the north was filled with individuals who embraced the south's belief.

Even with the historical win of Brown v. The Board of Education,there were many states who were not complying with newly established laws of the land. However, there was new legislation enacted that eventually bought about the change that many were seeking:the first being the Civil Rights Act of 1964 and then the Elementary and Secondary Actof 1965. What made these two pieces of legislation so powerful is that both had teeth with an establishment of an enforceable penalty for failing to follow the court's ruling. The Civil Rights Act made it illegal for anyone to discriminate against another individual based on their color. If the federal government found this to be so, they could withhold any federal funding. The second was the Elementary and Secondary Education was also responsible for funding elementary and secondary schools and whenever stateswere not in compliance those resources that they would normally receive would be held until they complied with federal guidelines.

METHODOLOGY

A survey design was used to collect and analyze the data. Two hundred thirty eight out of three hundred participants elected to participate in this study. The instrument entitled "Gallo-Amos Community Perception Instrument" was used to collect the data. The data was used to examine education level and its impact on income, criminal background and one's agreement with the

necessity of education programs within the prison system. The One-Way Analysis of Variance and the Scheffé Multiple Comparison Test were used to analyze the data.

RESULTS

A survey design was used to collect and analyze the data. Two hundred and twenty out of four hundred participants elected to participate in this study. The instrument entitled "Gallo-Amos Community Perception Instrument" was used to collect the data. The data was used to examine family status and its impact on education, personal wealth, income, job opportunities, generational inequality, illiteracy, technology, free or reduced lunch program, and whether their child attends a high poverty school. The One-Way Analysis of Variance and the Scheffé Multiple Comparison Test were used to analyze the data.

The descriptive statistics of the participants revealed there were one hundred fourteen (51%) male participants and one hundred six (48%) female participants. The racial demographics revealed that while there were five categories to choose from, only three were selected. One hundred twelve (51%) participants identified themselves as African American, eighty (36%) Hispanic and twenty eight (13%) white. Similarly, age has seven categories, however, the participants self-reported age in four categories. There were thirty six (16%) participants who were between the ages of twenty and thirty; one hundred nine (50%) were between thirty one and forty. In addition, forty- three (19%) participants reported their age as forty one through fifty, and thirty two (15%) said they were fifty one through sixty.

Regarding the participants' level of education, one individual reported having less than a high school education (.5%), fifteen (6.8%) reported graduating from high school or earning a GED and thirty two (14.5%) had some college. On the other hand, ninety seven (44.1%) participants completed their associate's degree, forty six (20.9%) said they completed their bachelor's degree and twenty nine (13.2%) reported earning their master's degree. Relative to the annual incomes of the participants, fifty one (23.2%) of them reported their incomes less than $20,000, and sixty six (30%) revealed their income as being between $20,000 and $30,000. Additionally, fifty six (25.5%) participants identified their income as $31,000 to $40,000, thirty three (15%) indicated their income was $41,000 to $50,000 and fourteen (6.4%) reported their income over $51,000.

Table 1:Analysis of Variance Summary Table of the Impact of Personal Wealth on Family Status

	Source of Variance	Sum of Squares	*df*	Mean Square	F	Sig.
	Between Groups	57.211	4	14.303	8.856	.000
Personal Wealth	Within Groups	347.239	215	1.615		
	Total	404.450	219			

*Significant at the .05 Level

Table 2: Scheffé Results of Personal Wealth by Family Status

Mean 1 (Poor)	Mean 2 (Working Class)	Mean 3 (Middle Class)	Mean 4 (White Collar Worker)	Mean 5 (Upper Class)	Observed Mean Differences	p
3.39	3.45				-.062	.999
3.39		2.80			.589	.225
3.39			4.39		-1.002*	.016*
3.39				4.00	-.608	.643

Presented in Table 1 are the Analysis of Variance results pertaining to the perceptions of community members regarding the impact of family status on personal wealth of the

participants. As revealed in this table, statistically significant differences were found among the community members with regard to family status (F = 8.856, df = 4/219, p>.05) at the .05 level. Since the Analysis of Variance indicated significance but did not reveal where the differences were, the Scheffé Test was used. Further data analysis using the Scheffé Multiple Comparison Test revealed that the community residents' family status as having been effective in increasing personal wealth for those who identify themselves as white collar (See Table 2).

Table 3: Analysis of Variance Summary Table of the Impact of Income on Family Status

	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	94.571	4	23.643	32.248	.000*
Income	Within Groups	157.629	215	.733		
	Total	252.200	219			

*Significant at the .05 Level

Table 5: Analysis of Variance Summary Table of the Impact of Education on Family Status

	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	123.453	4	30.863	50.030	.000
Education	Within Groups	132.633	215	.617		
	Total	256.086	219			

*Significant at the .05 Level

Presented in Table 3are the Analysis of Variance results pertaining to the perceptions of community members regarding the impact of family status on income of the participants. As revealed in this table, statistically significant differences were found among the community members with regard to family status (F = 32.248, df = 4/219, p>.05) at the .05 level. Running the Scheffé (Table 4) revealed that community residents who identified themselves as being upper class upper class perceived their family status impacted their level of income more than their poor, working class, middle class and white collar counterparts. No other mean differences were found.

Analysis of Variance (henceforth called ANOVA) results reveal that there was a significant difference among the groups related to the impact of education as it relates to family status. Table 5 indicates that statistically significant differences were found among the community members with regard to family status (F = 32.248, df = 4/219, p>.05) at the .05 level. Scheffé Multiple Comparison Test (Table 6) indicated that all community residents regardless of status indicated that they perceived their family status impacted their level of education.

Table 6: Scheffé Results of Education by Family Status

Mean 1 (Poor)	Mean 2 (Working Class)	Mean 3 (Middle Class)	Mean 4 (White Collar Worker)	Mean 5 (Upper Class)	Observed Mean Differences	p
3.12	3.88				-.761	.000*
3.12		5.02			-1.900	.000*
3.12			4.97		-1.852	.000*
3.12				4.21	-1.097	.000*

Table 7: Analysis of Variance Summary Table of the Impact of Job Opportunities on Family Status

	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	23.028	4	5.757	5.164	.001*
Job Opportunities	Within Groups	239.699	215	1.115		
	Total	262.727	219			

*Significant at the .05 Level

Table 8: Scheffé Results of Job Opportunities by Family Status

Mean 1 (Poor)	Mean 2 (Working Class)	Mean 3 (Middle Class)	Mean 4 (White Collar Worker)	Mean 5 (Upper Class)	Observed Mean Differences	p
3.75	4.02				-.270	.757
3.75		4.45			-719	.017*
3.75			4.48		-.740	.047
3.75				4.71	-.969	.059

Table 9: Analysis of Variance Summary Table of the Impact of Generational Inequality on Family Status

	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	33.066	4	8.266	7.583	.000*
Generational Inequality	Within Groups	234.371	215	1.090		
	Total	267.436	219			

*Significant at the .05 Level

Likewise, ANOVA results reveal a significant difference among the means as regards to the impact of job opportunities on family status (F = 5.164, df = 4/219, p>.05) at the .05 level. See Table 7 for these results. Table 8 shows that individuals that identify themselves as middle classperceive that their family status has impacted them being offered opportunities for jobs more than individuals who self-identified as poor, working class, white collar worker, and upper class.

Table 9 presents the ANOVA results for the impact of generational inequality on family status. There was a significant difference among the means (F = 7.583, df = 4/219, p>.05) at the .05 level. Scheffé Multiple Comparison Test (Table 10) shows that those who self-identify as poor and upper class perceive that their family status has impacted inequality through more at least one generation in their respective families.

Table 10: Scheffé Results of Generational Inequality by Family Status

Mean 1 (Poor)	Mean 2 (Working Class)	Mean 3 (Middle Class)	Mean 4 (White Collar Worker)	Mean 5 (Upper Class)	Observed Mean Differences	p
3.49	2.68				-.808	.002*
3.49		3.43			-.747	.005
3.49			2.94		-.258	.854
3.49				3.86	-1.175	.007*

Table 11: Analysis of Variance Summary Table of the Impact of Illiteracy on Family Status

	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	123.453	4	30.863	50.030	.000*
Illiteracy	Within Groups	132.633	215	.617		
	Total	256.086	219			

*Significant at the .05 Level

Similarly, ANOVA (Table 11) results reveal a statistical difference on the impact of illiteracy on family status (F = 50.030, df = 4/219, p>.05) at the .05 level.The Scheffé (Table 12) indicated that all community residents regardless of status indicated that they perceived their family status impacted whether someone in their family could not read or write. No other mean differences were observed.

Table 12: Scheffé Results of Illiteracy by Family Status

Mean 1 (Poor)	Mean 2 (Working Class)	Mean 3 (Middle Class)	Mean 4 (White Collar Worker)	Mean 5 (Upper Class)	Observed Mean Differences	p
3.12	3.88				.761	.000*
3.12		5.02			-1.900	.000*
3.12			4.97		-1.852	.000*
3.12				4.21	-1.097	.000*

Table 13: Analysis of Variance Summary Table of the Impact of Technology on Family Status

	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	51.666	4	12.916	14.997	.000*
Technology	Within Groups	184.316	214	.861		
	Total	235.982	218			

*Significant at the .05 Level

Table 13 also shows ANOVA results with a significant difference in the impact of technology on family status (F = 14.997, df = 4/219, p>.05) at the .05 level. The Scheffé (Table 14) reveal that individuals who self-report as white collar and upper class perceive that family status has impacted their level of access to technology over their poor and middle class counterparts.

Table 14: Scheffé Results of Technology by Family Status

Mean 1 (Poor)	Mean 2 (Working Class)	Mean 3 (Middle Class)	Mean 4 (White Collar Worker)	Mean 5 (Upper Class)	Observed Mean Differences	p
3.16	2.63				-.526	.060
3.16		2.63			.006	1.000
3.16			3.94		-1.309[*]	.000*
3.16				3.57	-.941[*]	.021*

ANOVA results in Table 15 show a statistically significant difference among the means in regards to the impact of free or reduced lunch program on family status (F = 4.767, df = 4/219, p>.05) at the .05 level. Scheffé reveals that individuals that self-reported as being middle class and white collar perceived that family status impacted whether their child participated in the free or reduced lunch program more than individuals that identified themselves as poor or upper class.

Lastly, Table 17 presents ANOVA results of the impact of a family's child attending a high poverty school (F = 40.773, df = 4/219, p>.05) at the .05 level. The final Scheffé results indicate that all the groups perceived that family status impacted whether or not their child attended a high poverty school regardless as to self-identification.

DISCUSSION

There were several noteworthy findings in the present study, the first of which pertains to the perceptions of community members regarding the impact of family status on personal wealth of the participants. Community residents' perceived family status as having been effective in increasing personal wealth for those who identify themselves as white collar more than individuals who self-identify in other categories. These views are consistent with those of Kaplan and Rauh (2013), Orfield and Lee (2005), and Author (2014). The aforementioned authors indicated that there is a relationship between individuals with higher levels of social

statusand personal wealth. For the purpose of this study, personal wealth is identified as disposable income and personal savings.

Another finding is related to community residents who identified themselves as being upper class upper class perceived their family status impacted their level of income more than their poor, working class, middle class and white collar counterparts. These findings are aligned with those of George (2006), Belkhir, et al. (1994), Bonica, McCarty, Poole and Rosenthal (2013) and Nagrad and Nagrad (2014). The researchers indicate that individuals who identify as upper class are more likely to stay gainfully employed and utilize social connectionsto maintain their status. This phenomenon can be attributed to social networks of individuals of the upper classes being more effective in helping one to maintain social status.Moreover, individuals' social status can be more effective in driving one's level of income more than level of education.

The participants of the present study from all levels of family status indicated that family status was instrumental in increasing their levels of education. These findings were not consistent with those of Boundless (2016), Miller and Epstein (2011), Nagrad and Nagrad (2014), andRekker, et al. (2015). These authors posited that level of education is instrumental in guiding the family's level of income and family status. Likewise, individuals from all levels of family status perceived that it was instrumental lowering illiteracy in their family. These findings were in contrast with those of Stinson (2011) and Walters (2001) in that the lack of income and access to resources to the parents equals a lack of resources to the children making it more difficult to equally educate all children.

Another surprising finding of the present study are the results that participants who self-identified as middle class are more likely than individuals who identified as poor, working class, white collar and upper class to perceive family status impacted their access to job opportunities.

An interesting finding revealed from the present study is related to generational inequality by family status. Respondents who self-identified as poor and upper class perceived that their family status was instrumental impacted whether inequality impacted them or their family for more than one generation over their middle class and white collar counterparts. Rivas-Drake, Hughes and Way (2009), Wiener and Pristoop (2006) and Rothstein (2014) indicate that social status has a lasting effect on whether or not families have equality in resources available to them.

Additionally, respondents who self-identified as upper class and middle class perceived that their family status was instrumental in increasing their level of access to technology. These findings parallel those of Kang (2016) and Zickuhr and Smith (2012) where parents who make less still have less access to technology in the form of the internet and computers. While the digital divide is lessening, it is still apparent to those who are in the lower levels of income stratification.

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Twitter Analysis of Tweets that Emerged after the #Wacoshooting

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Abstract
This study analyzes the tweets that emerged following the Waco biker incident of 2015. Findings indicate individuals used Twitter to take a stand on the highly publicized incidents surrounding the shootout. Thousands of tweets emerged with popular hashtags to identify the case such as #wacoshooting, #wacobikers and #wacothugs, #Ferguson, #whitebikers, #blacklivesmatter and #Whiteprivilege. Responses to the Waco shootout were polarizing with individuals weighing in on Twitter to show support or scorn for the bikers, city officials, law enforcement and attorneys. Themes of race surfaced in tweets about the event as it occurred in the midst of the #Blacklivesmatter movement. Twitter users compared bikers to the movement, using tweets and graphics to illustrate various points. The Branch Davidian incident also provided an important backstory to the biker incident. Images of the fiery burning of the Branch Davidian compound, which occurred decades earlier, were still on people's minds as evidenced by tweets that characterized the incident as "just another Waco tragedy."

INTRODUCTION

On May 17, 2015, gunshots turned a motorcycle club meeting into a scene of chaos in Waco, Texas, that made international headlines. Nine men were killed and 20 were injured in the brief shootout that was halted after police intervention (O'Neill, Lavandera & Morris, 2015). In the aftermath of the chaos, police arrested 177 bikers and charged them with engaging in organized crime, with bail set at $1 million each. This caused outrage from some members of the public, especially those who supported the bikers and claimed police overreacted to the shootout and did not provide truthful information to the media and public. After recovering 480 weapons, however, police officers believed they responded in the best interest of public safety.

Right after news of the shootout surfaced, Twitter was afire with tweets linked to various issues. Other bikers stepped forward to defend biker clubs as organizations like any other hobby club (O'Neill, Lavandera & Morris, 2015). Questions of corruption and a police cover up also emerged as individuals questioned why so many bikers had been jailed and why the video had not been released. Race was also a prominent theme. Tweets referred to #blacklivesmatter and compared #ferguson to the #WacoShooting. Shaun King tweeted: "I'll wait (and wait and wait and wait) to hear someone on the news call what just happened in Waco 'white on white' violence." Matt Pearce of the Los Angeles Times responded, "do we even know the race of the bikers yet?" In response, activist Deray Mckesson tweeted: "If they were black gangs, we'd

certainly know by now." (Kohn, 2015). The Branch Davidian incident provided an important backstory to the biker incident. Images of the fiery burning compound, which occurred decades earlier, were still on people's minds, as evidenced by many of the tweets that emerged. People characterized the incident as "just another Waco tragedy." An AP article characterized Waco in this manner following the biker clash (AP, 2015):

From a series of Ku Klux Klan lynchings nearly a century ago to a massive twister in 1953 that tore through downtown to the Branch Davidian siege in 1993, Waco's downtown streets, a mix of historic mansions, public buildings, dilapidated houses and empty spaces where nothing was rebuilt, reflect a city perpetually recovering from its last disaster.

The events surrounding the Waco biker incident are particularly significant in today's new media environment. The influx of user-generated content following the incident offers the opportunity to study how citizens framed the event. Twitter provided a platform to retrieve and analyze fragments of public opinion to in turn develop overarching themes that people were beginning to make in regard to the shootout.

To analyze the Twitter content that emerged following the shootout, this study applies computational and machine-learning techniques. While social media platforms such as Twitter provide a possibly large fountain of data for us to analyze, the sheer size and frequency of this information makes analysis difficult. In the past few years, there have been a few scholars working on building computational tools to automatically analyze tweets (e.g. Blei, D., Ng, A., & Jordan, 2003; Hong & Davidson 2010, Yang, Ghoting, Ruan & Parthasarathy 2012; Goonetilleke, Sellis, Zhang & Sathe, 2014; Yin & Wang 2014; Zangerle, Schmidhammer & Gunther 2015). The incorporation of computational techniques towards analysis has mutual benefits: on one hand, the tools allow analysis of a much larger scale. On the other hand, having a real-life study allows computer science scholars to provide feedback on the emerging computational methods for validation and for improvement.

LITERATURE REVIEW

To help guide this study, we look to three streams in the literature: (1) media framing in general, (2) frames and social media and (3) mass media stereotyping of bikers. Framing refers to "the process through which individuals or groups make sense of their external environment" (Boettcher, 2004, p. 332). In his landmark study, Entman (1993) discussed how journalists embed frames within a text and thus influence thinking. He defined the term by noting that "to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation" (p 52).

Studies generally support the idea that journalists and editors select, package and disseminate news, mediating it through organizational processes and ideologies (Watkins, 2001). The basis of framing theory presumes the prevalent media will focus attention on newsworthy events and place them within a sphere of meaning. Frames often emerged in metaphors, exemplars, catchphrases, depictions and visual images (Gamson & Lasch, 1983). In this incident, representations of race, the Branch Davidian standoff and bikers emerged as people struggled with how to perceive the incident.

Biker Frames and Stereotypes

Previous studies indicate bikers are framed in a dichotomous manner—either as thugs known as "one-percenters" or as "just average people." One-percenters, or outlaw bikers, are "radical" individuals who partake in illegal activity (Kontos & Brotherton, 2008). Among the first biker gangs were the Hells Angels, founded in Fontana, California, in 1948. Movies often depict Hell's Angels as participating in the outlaw culture (Hollandsworth, 2015). Some outlaw motorcycle clubs can be distinguished by a 1% patch worn on their jackets or vests—which signifies that 99% of motorcyclists were law-abiding citizens and the remaining one percent were outlaws. The Bandidos refer to themselves a one-percenter biker club, according to the New York Daily News.

These representations date back to World War II, when veterans returning from overseas started buying motorcycles with their severance pay (Ross, 2015). For men who were used to the friendship of wartime, the lifestyle was a natural fit. Some accounts indicate biker gangs served a function like churches, social clubs and families, allowing members to belong to something larger than themselves. Veterans who felt isolated from the mainstream American culture found security in the company of their peers. (Ross, 2015).

Following the shooting in Waco, citizens framed bikers as gang members or law-abiding citizens. Some individuals asserted that Waco authorities unfairly labeled all bikers who were at the Twin Peaks restaurant in an attempt to frighten citizens and bolster claims of criminal activity. However, most of those arrested claim to be law-abiding people who are members of veteran and Christian groups. Waco police officers defended their decision to arrest every biker at the scene, many of whom were carrying weapons and charged them with engaging in organized crime in the capital murder case (Tsiaperas, 2015). Police said a simmering "turf war" exploded when one gang showed up "uninvited" to the Confederation of Clubs.

According to news reports, seven Cossacks and one Bandido died on the day of the Waco shootout at the local Twin Peaks Restaurant, which closed its doors days later (Schiller, 2015). The other person to die was not affiliated with either the Cossacks or Bandidos. The Bandidos are the "largest and most powerful motorcycle group in Texas," according to the Department of Justice. Established in 1966, today they have more than 2,000 members across the country, and they claimed in a police report that the Cossacks were not invited to attend and showed up anyway (O'Neill, Lavandera & Morris, 2015). The Waco biker conflict may have stemmed from Cossacks members refusing to pay Bandidos dues for operating in Texas and for claiming Texas as their territory by wearing the Texas bottom rocker on their vests (Ford, 2015).

"The Bandidos are the biggest motorcycle gang in Texas, and they do not allow other motorcycle gangs to enter the state. They will allow other motorcycles clubs to exist, but they are not allowed to wear that state bottom rocker. If they do, they face the onslaught of the Bandidos," Falco told CNN's Sara Sidner (Ford, 2015). The bottom rocker refers to a state name on the back of a biker's vest. According to Falco, it can indicate where someone is from, as well as claim territory for that club (Ford, 2015).

TWITTER AND FRAMES

When looking at the framing of an incident, it is worth looking beyond traditional media as audiences are increasingly relying on social media for news. In recent years, Twitter has become a source of breaking news in which anyone can share information in 140 character tweets, or follow news and mark their own stories with hashtags to make them more searchable. Twitter has become an inexpensive and convenient way for journalists to gather

news and information (Broersma & Graham, 2013). Twitter often triggers news stories and plays a role in what is covered.

A small body of literature suggests that individuals use Twitter messages to frame issues. Most of these studies are concerned with identifying frames related to a particular event, often examining dominant frames used in the discussion of a theme and in many cases, researchers look at how individuals are discussing an issue (Choi & Park, 2014). As with traditional media, journalists tend to rely on six dominant frames in Twitter conversations: conflict, human interest, economic impact, responsibility, morality and technology (Waiske, 2013). Theoretically, Twitter, as any other communication venue, allows individuals and groups to use frames to emphasize particular considerations over others (Meraz & Papacharissi, 2013). "The Internet has accelerated the circulation of ideas, facilitated vast social networks, and altered economics of media by enabling the distribution of free content" (George-Palilonis, 2012, p. 7).

Citizen journalists, have taken to publishing on the web as well, many times using traditional reporting as a jumping off point for publics, to discuss their stories and many cases, defend their points of view. This entire engagement, from private network to public conversation, creates a real-time feedback loop for journalists, one that couldn't exist before the Internet and emerging world of social media. (George-Palilonis, 2012, p. 9)

Twitter was relevant to this study as tweets not only employ framing devices but can also be shared easily, even among those who are not in connected through the social network. This means that frames can spread quickly, and that many frames are likely competing with one another. Ampofo, Anstead and O'Loughlin (2011) describe how hashtag use allows the development of many-to-many communication, even among those who are strangers. On Twitter, an individual contributes to or views a larger conversation that goes beyond those in his or her own network. Many hashtags, or frames, may originate from elites, but other studies have found that most Twitter users are not engaging with traditional elites and are instead getting political information indirectly from others (Nielsen & Schroder, 2014; Nielsen & Vaccari, 2013).

Tweets posted following the Waco biker incident are noteworthy as mass media messages influence the construction of the racialized condition in which we live. It is often through media images that people negotiate identities, ideas, and relationships with other people (e.g., Hall, 1980; Enriques, 2001; Ono, 2009). Furthermore, media analyses built upon historical theories are important in any media environment because mass communication sends viewers, readers, and listeners' hidden messages that suggest a story's importance. Media ultimately suggests people's value and their place in a hierarchy within social structures. The differences in people's culture, race, religion, class, and gender influence how they write stories, what they share and post on social media platforms as well as how they perceive media coverage of various issues. This is significant, according to Gans (1979), because the majority of journalists come from an upper-middle- to upper-class background, which he asserts most often offers a distinctly white, male perspective. Likewise, Dates & Pease (1994) assert that the norm in this country is that the perspectives of white, mainstream men generally create the lenses through which America, whether peripherally or directly, views race, and itself.

When looking at frames, it is worth looking beyond traditional media as audiences are increasingly relying on social media for their news. Social media provide hope as offer a

platform for alternative voices. Black Twitter, for instance, offers an outlet for Black people to express their ideas and opinions publicly (Williams, 2015). This is important as Twitter has become a necessary platform for dissent, discussion, breaking news in the last three years. "Black Twitter," has created an online culture of black intellectuals, trendsetters, and talking heads giving voice to many of the issues that 20 years ago would have remained far away from the mainstream radar (Williams, 2015). He adds:

The murders of Trayvon Martin and Mike Brown, the reality of street harassment, the racial crisis brewing in the Dominican Republic—these are all stories that became of major importance because Black Twitter made sure the world understood what was happening. And with popular hashtags like #YouOKSis and #BringBackOurGirls becoming recognized all over the world, it's impossible to ignore how Black Twitter has been able to affect change and raise awareness.

While African Americans still access the internet at lower rates than the general population, those on the internet are more likely to use social networks such as Twitter, according to 2012 surveys from the Pew Research Center (Perrin & Duggan, 2015). However, the digital gap separating African Americans from other ethnic groups for the Internet is narrowing (Perrin & Duggan, 2015). Also worth noting according to a 2015 Pew study, the percentage of African Americans online who use Twitter is higher than the population overall with 28% of Blacks reporting they use it compared to 20% of white respondents (Duggan, 2015).

The Twitter platform is important to study as it has become an inexpensive and convenient way for journalists to gather news and information (Broersma & Graham, 2013). Twitter often triggers news stories and plays a role in what is covered. Broersma and Graham (2013) argue this new practice alters the balance of power between journalists and sources as Twitter triggers news coverage and reporters increasingly gather information online and embed it in journalism discourse as the Twitter platform can alter critical discourse on controversial themes.

Building on this review of the literature, this study addresses the following questions:
RQ1: What types of frames emerged in Twitter coverage of the Waco shooting?
RQ2: What was the "tone" of the tweets of the Waco shooting?

METHODS
We used a mixed-methods approach to look at individual tweets to assess the presence of frames (Diagram 1). Using the keywords "Waco Shooting," 5,000 tweets were collected via Twilert up to one year after the incident. Twilert is a Twitter search tool that collects, stores and sends users email alerts of tweets containing any keyword they choose. We chose to study the Twitter platform because tweets were commonly shared across social media platforms. They also provide a snapshot of what Americans cared about during the incident.
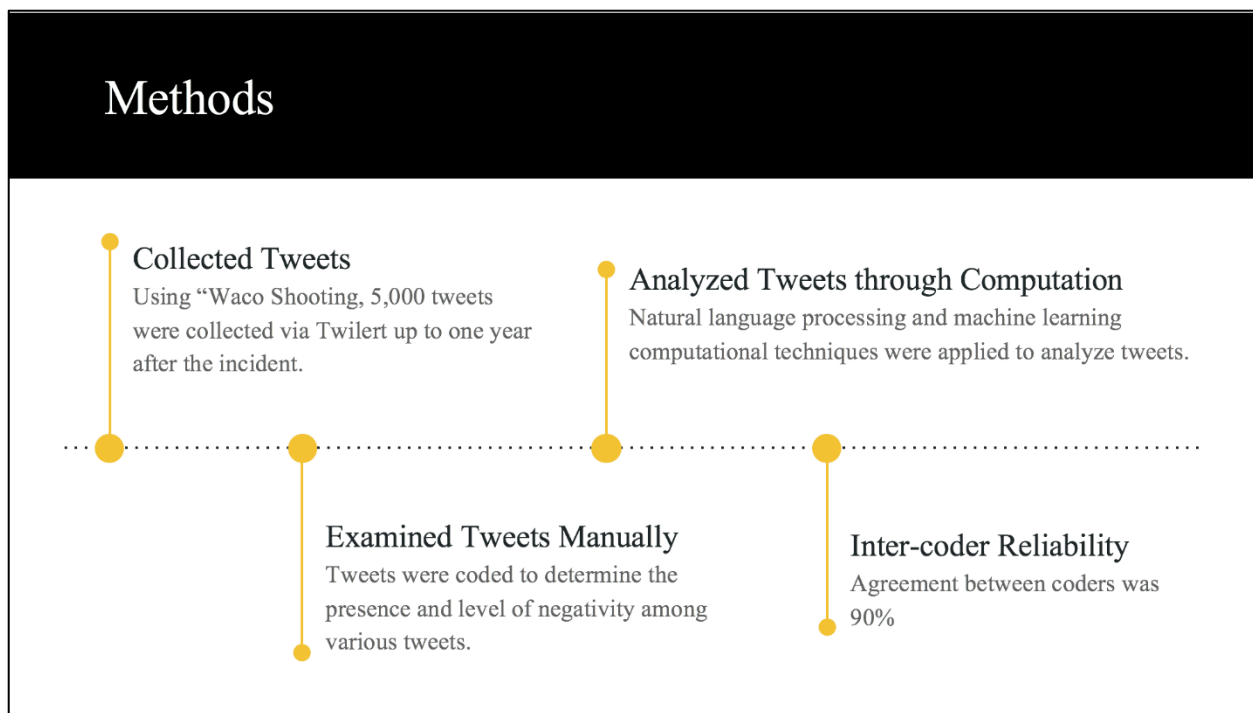
Diagram 1: Visual representation of methods used for this analysis.

For this particular study, the content analysis provided the framework for understanding the way in which citizens framed the Waco biker incident. The textual analysis revealed the underlying social messages embedded within the tweets. Using both content and thematic analysis for this study offers a look beyond the surface of citizen framing of the incident together, they reveal the underlying messages and narratives about the incident. First, an initial analysis was conducted to determine the primary frames that were present in the study sample. Six graduate students coded approximately 500 tweets, which was ten percent of the sample. Secondly, we applied computational techniques—specifically natural language processing and machine learning—to analyze the tweets. To determine inter-coder reliability for content, researchers used Cronbach's alpha, which measures how well a set of variables measures a single construct and reliability or consistency. Percent agreement was 90% for themes.

The initial textual analysis revealed the following themes: 1) bikers are just another social club (just regular people), 2) bikers are menaces to society such as rapists, molesters, criminals, 3) cover-up/corruption/bad cops, 4) bikers were treated better than recent Black victims vs. biker were treated worse than recent Black victims, 5) this is another Waco tragedy, 6) white-on-white crime, and 7) whiteprivilege vs. #Blacklivesmatter.

Next, the researchers applied computational techniques to examine the tweets to discover the dominant themes in our sample. We used this approach as computational techniques enable us to analyze a large number of tweets efficiently. Also, the results an be sent back to us to interpret to ensure what the techniques make sense. In this case, we applied techniques from the field of "theme modeling" (Biel, 2013) to discover the themes/themes in the tweets. First, we preprocessed the tweets by removing retweets and duplicates. We also removed a list of stop words (preposition, pronouns, articles etc.) from each tweet. Since all of the tweets are about the Waco shooting, we further removed the terms "Waco," "shooting," "#wacoshooting" from the data set. We also noticed the term "bikers" appeared in a very large number of tweets,

so we removed it from the tweets to allow the method to highlight other less frequent but possibly more important terms. After these processes, we ended up with 2,702 tweets.

We then applied a computational method known as Latent Dirichlet Allocation (LDA) (Biel, Ng & Jordan 2003) to discover the themes for the tweets. The method assumes that the set of tweets is associated with a set of themes represented by the probability that each tweet corresponds to each theme. Different themes were presented by different terms modeled by the probability that each word is used by each theme. LDA was used to analyze the input set of tweets and to discover the themes by estimating the probabilities. After that, each theme is represented by the set of words most associated with it, and each tweet is associated with one or more themes. This methodology allowed us to group the tweets into themes that closely resemble the frames identified in the initial examination by the students and primary researcher. The LDA analysis added a quantitative component to the study and identified some themes that were not included in the initial textual analysis such as "bikers were held forever with no official charges," "references to the McKinney pool party" and "financial references to President Obama giving police officers a raise for killing bikers."

FINDINGS AND DISCUSSION

Sociopolitical Background

The deaths of Michael Brown and Eric Garner were still fresh on people's minds as were images of the fiery burning of the Branch Davidian compound, which burned decades earlier. These factors combined to provide to the perfect foundation for this critical analysis of the framing of the 2015 Waco biker case. In response to the Waco biker clash, citizens merged race-related events, biker stereotypes with memories of previous Waco tragedies to characterize the incident. Immediately following the event, #wacothugs and #whiteonwhitecrime trended on Twitter with columnists around the nation debating the differences in how the bikers were portrayed in comparison to Black men recently killed by White police officers. Individuals commented that the incident was not used to discuss other issues about families, poverty and crime, media critics, columnists and civil rights activists. For instance, radio and TV commentator Roland Martin pointed out on Facebook that the mainstream media refused to talk about #WacoThugs. He noted that there were "No panel discussion on their childhood? Fatherless homes?" (Holland, 2015).

In Waco, the words used to describe the participants in a shootout so violent that a local police spokesman called the crime scene the bloodiest he had ever seen included "biker clubs," "gangs" and "outlaw motorcycle gangs." While those words may be accurate, they lack the pathological markings of those used to describe protesters in places like Ferguson, Mo., and Baltimore. President Obama and the mayor of Baltimore were quick to use the loaded label "thugs" for the violent rioters there. That the authorities have not used that word to describe the far worse violence in Waco makes the contrast all the more glaring" (Blow, 2015).

Blow (2015) adds that the words "outlaw" and "biker," while pejorative to some, still evoke a certain romanticism in America. They conjure an image of individualism, adventure and virility. There's an endless list of motorcycle gang movies. He adds that while a search for "motorcycle romance" on Amazon yields thousands of and depictions; characterizations of the term, 'thug life,' are limited and often racialized" (Blow, 2015).

Citizens also used the context of the #BlackLivesMatter movement to frame the incident, which occurred while the deaths of Michael Brown and Eric Garner, two Black men killed by White police officers, were fresh on the minds of many Americans (Bruinius, 2015). The conflict in

Waco raised questions about perceptions and portrayals of crime in America, considering the heated reaction that police gave the earlier protests (Holland, 2015). Many journalists and citizens asserted that a double standard exists with respect to the Baltimore/Ferguson incident and the recent Waco biker shootout. There was a perception that bikers involved in the Waco, Texas, shootout were treated differently because they are white. Journalists, columnists and citizens posed the frequent question what if they had been black?

Other individuals noted that the tone of the rhetoric the media used to describe this event were in stark contrast to the language used to describe the protests over the killings of black men by police officers. For instance, Bruinius (2015) highlighted photos showing the gang members sitting at their ease, texting, near police officers in the immediate aftermath of a shooting that a local police sergeant called "the worst crime scene, the most violent crime scene I have ever been involved in." He added that some individuals have asked if that would have been the case if the rival gangs had been in some big city, "dressed in gang colors and hoodies, having brass-knuckled, stabbed, and shot at each other–and police." Bruinius (2015) also noted that media coverage featured little talk about whether subcultures of violence and masculinity are bred in the type of restaurant where the shootout took place that features waitresses with ample cleavage and barely-there shorts.

Would that have been true if it had happened at a hip-hop gathering or an urban strip club? To many, such attempts to compare the melée in Waco with the civil unrest in Baltimore or New York or Ferguson, Mo., strains reason and evidence. What happened in Waco was in no way a riot. It was a deadly bar fight, plain and simple (Bruinius, 2015)..

In her examination of the Waco biker shooting, Stranahan (2015) compared coverage of the bikers and Black Lives Matter activists, including tweets and graphics to illustrate her point. The author states, "One of the biggest takeaways from the incident may be the nationwide media blackout on what could be the biggest story of police misconduct in 2015." Stranahan (2015) adds there is racial media bias when reporters select certain stories to pursue and how they choose to write them. Kutner (2015) describes the different ways media framed the event using words such as "riot." The author alluded to inequalities in the way the media covers events where race is a factor. Holland (2015) provides this summary of the prevailing images of similar incidents in comparison to the Waco biker shoot out.

Protests in Baltimore and Ferguson, Missouri, over police killings of black men were of police in riot gear, handcuffed protesters, tear gas and mass arrests. The main images of a fatal gun battle between armed bikers and police in Waco, Texas, also showed mass arrests — carried out by nonchalant-looking officers sitting around calm bikers on cellphones.

Our Analysis
The most popular category was Theme 10 (Table 1), which frames members of the Waco police department as hiding the video footage and other information regarding the shooting (403 tweets, 14.9%). Many tweets stated, "no video. DA unable, needs to release the video from CCTV and dashcams." Also common was Theme 9, which emphasized that the Waco Biker shooting was the most violent crime scene ever (369 tweets; 13.7%). Tweets stated the Waco shooting Waco biker gang shootout involved Bandidos and Cossacks and the Waco shooting latest chapter in bloody history of Bandidos biker gang Waco shooting.

Table 1:Themes for the #Wacoshooting hashtag

Themes	Frequency	%
Theme 10: Waco Police what are you hiding in the no video.	403	14.9149
Theme 9: The most violent crime scene ever	369	13.6566
Theme 4: There is a double standard in white-on-white violence	365	13.5085
Theme 6: Cops killed innocent #bikers	299	11.0659
Theme 5 : Cover-up and corruption/ police brutality/ cronyism	276	10.2147
Theme 2: Texas Legislature set to relax Texas gun laws	255	9.4375
Theme 8: Refers to the McKinney Pool Party	195	7.2169
Theme 7: Obama gives 14 cops a raise for killing bikers in WACO	185	6.8468
Theme 1: Bikers held forever no charge	183	6.7728
Theme 3: Within the context of other shootings or events	172	6.3657
Total	2702	100.0003

The next most popular category was Theme 4, which highlighted that there is a double standard in white-on-white violence (365 tweets; 13.5%). One posted stated, "Reality Check? You never see a #Ferguson or #Baltimore Thug mugging a biker member!" Twitter users also compared representations on MSNBC, CNN and Fox news. They made references to racism and stated some journalists had no problem labeling blacks as "thugs" when its black-on-black crime. Theme 6 includes the theme of cops killing innocent bikers with 299 tweets (11.1%) falling in this category. Illustrating this theme, one tweet stated, "#OBAMA's "Call's it COLD BLOOD MURDER, Worse than what he did in #Iraq for #BUSH #Baltimore." Another tweet stated, "where were the #BlueLivesMatter people after the Waco biker incident. Do "blue lives" only matter 2 u when threatened by unarmed black people?"

Theme 6 closely aligns with Themes 1 and 5, which include references to cover-up and corruption/police brutality and cronyism (276 tweets; 10.2%). Members of the law enforcement team who handled the Waco biker case were depicted as crooked, corrupt or "bad cops." Tweets frequently focused on the idea that police officers were covering up information that they did not want to share with the public. They also focused on cronyism or the idea the the police officers helped the bikers because they were related or friends. In addition to focusing on police officers' tweets also characterized attorneys and judges and the court system as tampering with evidence. The idea of a "court conspiracy" emerged early in the case.

Diagram 2: Photo included in a tweet that refers to white privilege

For instance, one post that Twitter users frequently retweeted was, "Waco First Satire Safe Zone #coverup #corruption #PoliceBrutality #murder #NorthKorea #TwinPeaks."

Theme 2 included the theme of the Texas Legislature and Texas gun laws and NRA issues with 255 tweets (9.4%) falling in this category. For instance, several tweet focused on the idea that scientists overwhelmingly reject the idea that NRA's guns make our society safer. One post in this category joked, "Wondering if the @NRA can tell us which gang was the good guys with guns and which gang was the bad guys with guns. #Texas." Other tweets emphasized the statistics surrounding the case: "192 arrested; dozens of guns confiscated. Meanwhile, #txlege set to relax #Texasgun laws." Later, dialogue turned to the Texas Senate. Posts state the Senate "passes bill allowing #opencarry of #handguns days after #SECEDE." Other Twitter users pondered how the Waco shooting might impact the open carry debate.

Other common themes include the idea that President Barack Obama gave police officers a raise for killing the bikers who died in the shootout. A total of 185 tweets (6.8%) fell in this category. Also common was Theme 1, which focuses on the idea that bikers were held forever with no formal charges. Twitter users discussed the length of time the bikers spent in jail. For instance, several commenters stated, "Guantanamo Comes to #WACO" (183 tweets; 6.8%). Commenters used hashtags such as #CivilRights #Lawsuit #BikerLivesMatter and #injustice. One tweet about a biker who was arrested linked to an article about a civil rights lawsuit he filed. He says he was illegally swept up in a police dragnet.

Theme 3 frames the event within the context of other shootings or events (172 tweets; 6.4%). Many citizens and media outlets characterized the events that erupted at Twin Peaks as the most violent bloodshed Waco had experienced since the tragedy of the Branch Davidian standoff in 1993. Theme 8 was closely related to Theme 3; however, it referred to the McKinney pool party, characterizing it as a #NEOLIB SETUP (195 tweets; 7.2%). One post states, "WHY did #SOROS pay protestors to FLY to #McKinney Why #ISRAEL not fly anybody to? #Waco170." Theme 7 focused on the financial aspects of the incident and focused on the expense of the case. Tweets included, "#FederalReserve promises to 'Cover' #Waco for $340M USD false arrest losses #JadeHelm" and "@AnonymousNTX #Israel owned #FBI/ #BATF/ #DHS promises to 'Cover' #Waco for $340M USD false arrest losses." Twitter users also used it as an opportunity to characterize President Obama negatively. For instance, one popular tweet stated Obama was going to give 14 police officers a raise for killing Waco bikers.

CONCLUSIONS

This study applies computational and machine-learning techniques to analyze the tweets that emerged following the Waco biker incident of 2015. Responses to the Waco shootout were polarizing with individuals weighing in on Twitter to show support or scorn for the bikers, city officials, law enforcement and attorneys. Thousands of tweets emerged with popular hashtags to identify the case, such as #wacoshooting, #wacobikers and #wacothugs, #Ferguson, #whitebikers, #blacklivesmatter and #Whiteprivilege. Themes of race immediately surfaced as the incident occurred in the midst of the #Blacklivesmatter movement. The "white privilege" frame, or the idea that bikers are getting away with criminal activities that black people could not get away with in society, was common (Diagram 2). Twitter posts questioned why the media had not fixated on 'guilty whites,' 'thug dads,' 'absentee parents,' and poverty. Some citizens concluded the media framed White crimes and drug use by the bikers who were arrested in a favorable manner. Tweets focused on the number of weapons that were recovered in the case and idea the media and society in general played down the criminality of

the Waco shootings. Twitter users also pondered why very little background information about the men had been released by the media.

This study is noteworthy as tweets not only employ framing devices, but individuals can easily share them, which means frames have the potential to spread quickly. It also indicates Twitter provides a great platform to retrieve and analyze fragments of public opinion to in turn develop overarching themes that people were beginning to make in regard to the shootout. In this project, we explored the interaction between human expertise and computational methods in order to improve them and to make the process more useful and adaptable. These techniques allow a significantly larger number of tweets to be processed in a very short time. Findings indicate individuals used Twitter to take a stand on the highly publicized incidents surrounding the shootout. As with any other study, there were limitations with this analysis. By focusing on one social media platform, the findings cannot be generalized to other social media platforms. Worth noting is YouTube was chosen for its reputation as a medium for leading the way in online news. This study looked at a relatively small timeframe of tweets, as it was mainly concerned with the crisis immediately following the event.

Future studies could utilize a longitudinal approach, and determine if online public opinion changes greatly over time. Also of interest would be survey or focus group approaches that examine the uses and gratifications of users. We did not interview the individuals who posted the content we analyzed; therefore, we did not get a sense of the uses and gratifications of the users of social media platforms under analysis. We also experienced limitations in our computational methods. First, computational techniques rely on certain assumptions about the data to work. For many of them, there is a lack of comparison of data with real-life applications, as gathering data and the right human expertise to judge the results can be expensive. Furthermore, they enable a larger number of analyses to be performed and allow data to be looked at various ways. On the other hand, these methods are not perfect. One limitation is the challenge of using the LDA to determine the number of themes. Having too few themes means that various themes are grouped together and having too many may lead to some themes being fragmented. In our study, we ran LDA, ranging from six to 10 themes, to determine the best number of themes.

Secondly, LDA does not distinguish between the various meanings of a word, treating them all the same. LDA takes single words as a unit of study, where potential phrases that have specific meaning are broken up, and they can provide other insights. Finally, in this study, we try to remove duplicate tweets. However, there are still some "near-duplicates" tweets that differ by one to two words, or maybe a different hashtag. We will explore some more advanced near duplicate removal techniques in the future to find out if they affect the results.

Even with these limitations, study findings are significant as they add to the literature on social media and citizen frames. Findings are important as perceptions and stereotypes of groups often become the dominant viewpoint whether they are accurate or not. Study findings also illustrate the impact the #BlackLivesMatter movement has had on society. Citizens used the same narratives that are used daily to characterize Black people killed by White police officers. Scholars must continue to explore social media and the dynamics of marginalized groups. Such analyses may provide valuable insight into the changing fabric of popular culture and the evolution of social media platforms.

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An Study On How Teaching Efficacy Is Influencing Affective Organisational Commitment Of Secondary School Teachers In Mashonaland Central Province Of Zimbabwe .

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Abstract
In Zimbabwean secondary schools, performance of school pupils accelerated in a declining manner since 1984 to date. Although much has been done to improve conditions of the teacher since the teachers are at the helm of students learning, students' performance has continued to decline. Despite training obtained from teachers colleges, what is contributing to their effectiveness has not been well researched. Affective organisational commitment of secondary school teachers in Zimbabwe still remain an inadequately researched area. Prior research has indicated that teaching efficacy determine teacher performance. Whereas teachers could be motivated by employers, the gendered outcomes of their teaching efficacy to their performance and level of affective commitment in Zimbabwean secondary schools has not been adequately investigated. The primary purpose of the study was to make a critical analysis of teaching efficacy factors influencing secondary school teachers' affective organisational commitment in Zimbabwe. Stufflebeam(1971)'s Context Input Process and Product decision facilitation model of evaluation approach was used to analyse the factors. The approach specified the imbalances in each phase of evaluation focusing on teaching efficacy factors and how they contributed to affective organisational commitment of secondary school teachers. The study used qualitative data gathering methods to generate data from 26 participants purposively sampled. The sample included 12teachers,3Heads of departments,2 Deputy heads, 4 School heads, 4 Provincial Education inspectors, and 1 Deputy Provincial Education Director. using Semi structured face to face interviews and focus group discussions were used as data gathering instruments in order to triangulate the evidence obtained. Generated data was analysed using NVivo to come up with three themes. The study established that factors such as professionalism, teacher competence, age, teaching experience, recognition, staffing of teachers, subject specialisation, centrality of passion within the teacher and lack of ownership of educational policies determine teacher efficacy of secondary school teachers and their level of affective organisational commitment hence impacting negatively on pupils' and schools' performance. The study recommended that Educational planners need to stay abreast of the formal and informal impulse of teacher commitment by providing support, constant supervision, staffing of teachers, staff development workshops, chat platforms and continual refocusing of selection and recruitment policies in teachers' colleges. Future researchers might wish to expand this study to Private schools to determine whether results presented here reflect the general situation in all schools, since this study was conducted in schools owned by Public Service Commission only.

Key words: teaching efficacy; affective organisational commitment; school performance

TEACHER EFFICACY AND THE DEVELOPMENT OF AFFECTIVE COMMITMENT.
DESCRIPTION AND CRITIQUE OF SCHOLARLY LITERATURE

In today's education society, student motivation and academic performance are assumed to be the result of the teacher's diligence and hard work. Rotter (1966), propose that teachers who motivate students and boost academic achievement even among difficult students were considered highly efficacious. Bandura(1977)'s theory identified teacher efficacy as a type of "self- efficacy" –the product of a social cognitive process in which people form beliefs about their own capacity to perform at a given level of competence (Henson, 2001; Goddard, Hoy, and Hoy, 2000). The works of these theorists have developed into various viewpoints about teacher abilities and effectiveness in educating students.

According to research, the characteristics of efficacious teachers are:
- Better organization
- A willingness to try new ideas to meet students' needs.
- Being less critical of students whenever they make mistakes,
- More positive about teaching,
- A reluctance to refer students to special education services,
- More likely to implement positive classroom management strategies

(Henson, 2001; Pinkston-Miles, 2003; Scharlach, 2008).

Therefore, teachers with high levels of self-efficacy are linked to high student achievement; these teachers have the ability to work hard under difficult circumstances and to motivate students to attend school and do well (Gordon, 2001; Lin & Tsai. 1999; Muijs and Reynolds, 2002).

DEFINITION OF TEACHER EFFICACY

Teacher efficacy is a belief in one's ability to perform tasks or activities (Penny, 2007). A teacher's efficacy belief is a judgement of the teacher's capabilities to achieve designated learning goals and bring about desired outcomes of student engagement and learning even among those students who may be difficult or unmotivated (Hoy, 2004; Moran and Hoy,2001; Henson, 2001). Teachers' efficacy beliefs relate to their behaviour in the classroom. Efficacy affects the teachers' efforts they make, and invest in teaching. Teachers with strong sense of efficacy tend to exhibit greater levels of planning and organization and are more open to new ideas, willing to experiment with new methods to better meet the needs of their students (Hoy, 2004). Teacher efficacy has proved to be powerfully related to many meaningful educational outcomes such as teachers' persistence, enthusiasm, commitment and instructional behaviour as well as student outcomes such as achievement motivation and self-efficacy(Moran and Hoy, 2001). Cubukcu, (2008:149) define self-efficacy as "a person's judgment of his or her capabilities to organize and execute courses of action required to attain designated types of performances". Thus according to Richardson (2011) self-efficacy is the response of a person to the question, "Can I do this task well?" Research shows that people who are highly efficacious have the ability to show higher levels of effort and are resilient in their efforts, even in difficult and challenging situations (Gordon, 2001; Roberts, Henson, Tharp, and Morenzo, 2000; Scharlach, 2008).

It can be deduced from the above different definitions of self-efficacy that the teacher who possesses high efficacy characteristics is able to step into challenging roles with the confidence and ability to change the students' opinion about school and learning, while at the same time cultivating a strong desire within the student to learn (Richardson, 2011). These types of pedagogical strategies help students to become motivated, focused on learning, and succeed

academically (Henson, 2001). This definition of teacher-efficacy, which the literature supports, was used in this study.

PHILOSOPHICAL CAMPS OF TEACHER EFFICACY

Two levels of teachers' efficacy are mentioned in the literature: a humanistic level, and a custodial level (Richardson, 2011). According to Gordon (2001:13), a highly efficacious teacher with "a humanistic approach towards control, is more likely to possess beliefs that emphasize an accepting, trustful view of students" and empower students to work harder as well as take more responsibility for their action. Similarly Robertson (2011), states that a teacher with a custodial approach, expresses beliefs that emphasize the maintenance of order, distrust and students develop a moralistic stance towards deviant behaviour. On the other hand students are considered as being irresponsible and untrustworthy, lacking in respect and obedience, and in need of firmness, strictness, and punishment (Gordon, 2001; Lin and Tsai, 1999).

BENEFITS OF TEACHER EFFICACY

Teacher efficacy has been linked to student outcomes in a number of studies (Gordon, 2001). In each case, they have shown that students whose teachers scored high on efficacy did better on standardized tests than their peers who were taught by teachers with lower efficacy scores (Henson, 2001; Gordon, 2001; Lin, 1999; Muijs and Reynolds, 2002). Thus there is a direct connection between student academic achievement and a teacher's sense of efficacy (Goodwin, 2010 and 2011). Teachers who lack high efficacy qualities have low expectations of students, cast blame on students when things don't go as planned, and have a negative outlook about student learning and their behaviour (Ferguson, 2003; Gordon, 2001; Scharlach, 2008). Therefore, literature seems to support the idea that efficacious teachers have more positive and effective results in the classroom (Robertson, 2011).

SUBJECT SPECIFIC EFFICACY

Since in secondary schools teaching is based on subject specialization, it was paramount in this study to discuss on subject specific efficacy. Teachers' academic skills can have considerable impact on student's achievement (Peske and Haycock, 2006). High efficacy teachers are more likely to support positive student attitudes in the classroom (Henson, 2001; Rimm-Kaufman, and Sawyer, 2004). According to Roberts, et al. (2000), a teacher may feel very comfortable in his or her ability to achieve student learning in one subject area and may not have the same degree of confidence to do so in another. Teachers may feel efficacious in delivering certain curriculum to certain students in specific settings, and they may feel more or less efficacious doing so under different circumstances (Goddard, Hoy, and Hoy, 2000). Teacher efficacy may grow with time and experience (Ross, 1994). Teacher efficacy constantly changes. Most often, it improves with time and experience, but sometimes it diminishes and gets worse, especially with teachers who may be disillusioned with their jobs or may be getting ready to retire(Ross, 1994).

TEACHER BELIEFS AND EFFICACY

Teachers' beliefs are related to teacher efficacy (Henson, 2001; Scharlach, 2008). Researchers report that pre service and in-service teachers' beliefs influence their teaching behaviours (Cagle, 1998; George and Aaronson, 2003; Gordon, 2001; Lin and Tsai, 1999: Henson, 2001; Maxton, 1996; Scharlach, 2008). Beliefs about children who are prone to struggle academically can influence the decisions and practices of new teachers (Lin and Tsai,1999; Scharlach, 2008). New teachers may not have the experience in dealing effectively with struggling or difficult students. They may not have high expectations or the degree of stamina required to develop

them. As a result, the teacher's actions and expectations may prohibit the students from rising above their expectations. Thus the students may achieve no more than what was expected by the teacher. This negative aspect is what Cagle (1998) describe as the "self-fulfilling prophecy." This happens when students give back to their teachers what they perceive is expected of them. Hence this approach can have positive as well as negative implications for students in the classroom. Hill, Phelps, and Friedland (2007), demonstrate in their study how new teachers' beliefs affect their expectations for students. A lesson on the historical event of the Amistad uprising revealed the assumptions that pre-service teachers held cultural diversity in urban middle schools. What the pre-service teachers encountered in this educational setting was very different from what they expected to find. The pre- service teachers found that in the urban schools, students were knowledgeable, hardworking, enthusiastic, and well behaved (Richardson, 2011). Could this also be similar to secondary school teachers in Zimbabwe? Teacher beliefs can also have adverse effects on students' ability to learn in an environment where they may not feel comfortable. Research do indicate that when students study a topic which they are able to relate ,they become immersed in their learning, and demonstrate engagement and productivity (Richardson, 2011). It appears, for students to become engaged in meaningful learning, they must see the relevance of the material to their lives and their surroundings (Fry and DeWit, 2010 and 2011). Teachers therefore need to be sensitive to students' culture and learning styles when developing lessons (Ladson-Billings in Hills, Phelps, and James Rhem www.ntlf.com), emphasize the importance of making positive connections with students through relationship building to avoid the self-fulfilling prophecy. When teachers expect students to do well and show intellectual growth, they generally do (James Rhem www.ntlf.com). Similarly Cagle (1998), emphasize that, how teachers believe the world is and what they honestly think, can become. In a study carried out by Skiba and Leone (2002) some teachers were made to believe that certain students in their classrooms were gifted, when they really were not. As a result, the students were treated as if they were gifted by their teachers, and the students rose to their teachers' expectations and performed like gifted students (Cagle, 1998; Cooper, 1979; Jacobson, 2007; Maxton,1996;). In this study, the teachers' misconceptions about the students' abilities were based on teacher-formed beliefs rather than on internal efficacy and expectations.

Basing on the above literature it appears teachers have various attitudes to their working organisations. These attitudes are often defined in terms of job satisfaction, job involvement and commitment. Of particular interest to this work is teacher efficacy. According to Bandura (1977; 1986, and 1997), Teacher efficacy has its roots in the social, cognitive and self-efficacy theory which they proposed and   self-efficacy represents the recognition that in order to function competently one must possess the necessary skills to use effectively and be confident. Bandura (1977; 1997), identified four sources of efficacy beliefs namely; performance accomplishment, vicarious experience, verbal persuasion and physiological and emotional state. Bandura(1997) argues that teachers' expectations are raised because of their perception that teaching has been successful from (accomplishment or mastery) through massive work. Efficacy belief lowers if teaching has been a failure and prompts the feeling of future failure unless clues of potentially successful strategies are revealed in the failure(Hoy, 2004).

Vicarious learning experiences are the second domain where persons derive expectations to complete tasks through the use of observation of others completing the task. Observers believe that they intensify and persist in their efforts (Bandura, 1997). Pajares (1997) opines that an individual's life course and direction is often influenced by a significant model. In the teaching profession the experienced teachers can be role models for the novice teachers and students they teach. The third domain, verbal persuasion is the use of conversation and collaboration to

reach a level of self-efficacy (Bandura, 1977). Students' evaluation of their teachers teaching can be a form of verbal persuasion for better or worse. Persuaders play an important role in the development of the individuals' self-beliefs to the extent that persuasive boosts in perceived self-efficacy lead people to try hard to succeed(Bandura, 1997).Persuasive boosts promote the development of teaching and learning skills and a sense of personal agency that is self-actualization which is the belief that the teacher can perform the task(Bandura, 1997). Employees depend on their physiological state in making judgment about their capabilities. They interpret their stress reaction and tension as signs of vulnerability to poor performance. Teaching efficacy in this circumstance can be raised by improving and increasing teachers' capabilities (Bandura,1994). Teacher efficacy's importance is its cyclical nature effort and persistence which brings about greater performance and ultimately culminates in higher efficacy. Without teaching efficacy the teacher lacks confidence to perform tasks hence leading to low performance in imparting knowledge and skills to pupils.

The confounding nature of these findings may not be unconnected with different perspectives on the conceptualization and operationalization of efficacy construct. Bandura (1997) conceptualized teacher efficacy as the teacher's capacity to influence student learning (general teaching efficacy), whilst (Rotter, 1996 and Mclaughlin, Bass, Pauly; Zellman, 1997) view it being grounded in two sets of beliefs namely (1) the belief in one's own ability to influence student learning (self-efficacy) and (2) beliefs about teachers group abilities to influence student learning (general efficacy). Research shows that teacher efficacy is affected by the support, structure, and efficiency by which the teacher is capable of controlling success experiences for students (Erdem and Demirel, 2007). As such, "teacher efficacy" may be viewed as both an outcome and as a moderating variable relative to implementing innovations, that is as teacher efficacy increases, the perception of responsibility for and capacity to effect outcomes also increases, thus reinforcing the strength and direction of teacher-student interactions (Guskey and Passaro,1994). Evidence of how teacher efficacy is developed in the educational context is provided through a variety of studies about the relationship of improving teaching learning outcomes for students and teachers. It is noted that in classrooms where teachers possess a high level of efficacy, there appears to be a facilitative influence upon cognitive performance of students, which may be associated with improvement in teaching skills and concurrent elevation of self-efficacy on the part of teachers(Bandura,1997).

Prior research on comparison of teachers with high and low efficacy reveals that high teacher efficacy is associated with greater teacher-student interaction characterized by greater emphasis upon positive reinforcement of student learning (Gibson and Dembo, 1984). Tschannen-Moran, Hoy, and Hoy (1998) note that various measures of teacher efficacy construct are found to be related to student achievement (Anderson et al., 1988; Amor et al., 1976; Ashton, 1985; Ashton and Webb, 1986; Berman et al., 1977; Gibson and Dembo, 1984; Ross, 1992), motivation (Midgley et al., 1989), and students' own sense of efficacy (Anderson et al., 1988). Deducing from literature teachers' sense of efficacy appears to be related to behaviours that affect student learning. These include teachers' willingness to try new instructional techniques (Allinder, 1994; Berman et al., 1977; Guskey, 1984; Rose and Medway, 1981; Smylie, 1988; Stein and Wang, 1988), teachers' commitment towards students (Ashton et al., 1982; Gibson and Dembo, 1984; Rose and Medway, 1981), and their persistence in trying to solve learning problems (Gibson and Dembo, 1984). Teachers' sense of personal teaching efficacy is related to their level of planning and organization (Allinder, 1994) and their practices – for example, the use of more effective, hands-on science techniques (Enochs et al., 1995; Riggs et al., 1994). Teachers' sense of preparedness and sense of self-efficacy seem to be

related to their feelings about teaching and their plans to stay in the profession and   linked to their enthusiasm for teaching (Allinder, 1994; Guskey, 1984) and their commitment to teaching (Coladarci, 1992; Evans and Tribble, 1986). Perhaps not surprisingly, teachers' sense of their ability to influence student learning appears related to their stress levels (Parkay et al., 1988) and attrition from teaching (Glickman and Tamashiro, 1982). Basing on findings and sentiments expressed by authorities in other contexts different from Zimbabwean context , this study intended to find out factors affecting teaching efficacy of secondary school teachers' which are determining their affective organisational commitment and contributing to school performance.

RESEARCH QUESTION

The study was guided by the following research question:
How is teacher efficacy of secondary teachers influencing their affective organisational commitment?

Purpose of the study

The primary purpose of the study was to make a critical analysis of teaching efficacy factors influencing secondary school teachers' affective organisational commitment in Zimbabwe. Stufflebeam(1971)'s Context Input Process and Product decision facilitation model of evaluation approach was used to analyse the factors. The approach specified the imbalances in each phase of evaluation focusing on teaching efficacy factors and how they contributed to affective organisational commitment of secondary school teachers.

METHODOLOGY

The study used qualitative data gathering methods to generate data from 26 participants purposively sampled. The sample included 12teachers,3Heads of departments,2 Deputy heads, 4 School heads, 4 Provincial Education inspectors, and 1 Deputy Provincial Education Director. using Semi structured face to face interviews and focus group discussions were used as data gathering instruments in order to triangulate the evidence obtained. Generated data was analysed using NVivo to come up with three themes

Research Findings

Pertaining to whether teachers' teaching efficacy ascertained their affective commitment, the following themes emerged from the findings.

Theme 1:Professionalism and educational outcomes.
Theme 2:Teacher Competence and teachers' performance.
Theme 3: Teacher competence and pupils performance

DISCUSSION

Theme 1:Professionalism and educational outcomes.
The study showed that key informants are well acquainted with what they are expected to do as they believe they have been trained and were taught how to do the work. This emerged from Key informants that "Professionalism entails doing work, how it should be done, we have been trained as teachers and as such we are expected to do work as we were taught"

This concurs to literature from Penny (2007); Hoy(2004); Moran and Hoy (2001) which underscores that teacher efficacy is the belief and judgment of their capabilities to achieve designated learning goals and bring about desired outcomes of student engagement and learning in the classroom.

Key informants who are Heads of departments, Deputy heads, School heads, Education inspectors and the Deputy Provincial Director   underscored the following elements as key in the attainment of the learning and education outcomes particularly in relation to professionalism:

i.   Acquire some relevant training to perform duties or functions
ii.   Qualified in the subject area
iii.   Have requisite qualifications and;
iv.   Specialize in a certain subject area.

Similarly these findings are of significance to prior research which suggests that the personality confidence level and teaching strategies embraced by the teacher should be taken into consideration (Richardson, 2011).

Further, interview commentary describes professional as someone who is qualified to do a certain job, being a subject specialist, delivering content matter as required to enable students pass and professionalism as doing work as it is expected.

The study revealed that teacher competence and subject mismatch is eminent in schools. Teachers who specialized in for example commercials are seen teaching Arts subjects and Arts teachers teaching science subjects revealing inadequate assistance given to students for them to perform well hence this compromise quality and reveals lack of subject specific efficacy resulting on hindering development of affective organisational commitment. These findings contradicts with literature from Peske and Haycock ,(2006); Henson, (2001);Rimm-Kaufman and Sawyer,(2004);which stipulates that subject specific efficacy   based on subject specialization denotes teachers' academic skills to support positive student attitudes in the classroom and enhances student performance and development of affective organisational commitment.

Theme 2:Teacher Competence and teachers' performance.
Lessons learnt from participants on teacher quality, indicate that some teachers are only job seekers because of unemployment being experienced in the country as it emerged from key informants that

To a greater extent we feel that some are not teachers by choice/0r calling, they are job seekers. These school or college leavers join teaching by circumstances because today outputs of colleges and universities have increased but the avenues for other jobs are very few and don't exist. They end up joining teaching so we have to try our best to assist them while they are still trying to earn a living –(Yes, with my colleagues we sometimes question ourselves, is the teacher being produced today the same as the one produced yesterday. Sometimes there is a bit of lowering of standards at colleges or universities. I'm not sureuuuu…, you find that the teacher is less knowledgeable about things you think a teacher should know and you wonder what went wrong. Even their competences when you analyse their official documents like Schemes of work and lesson plans, the lesson plans are not well constructed, there is no coherence, the topic is too broad, the objectives are not very clear, they don't match what they are intended to achieve. You ask "were you not trained to do these things? then they say "we thought it was okay". Then you feel there is need for them to be competent, unfortunately because of lack of staff development are not being carried out often because of lack of adequate time, at the end the competences are not well developed and this ends up affecting the children.

Most interesting was the participants' growing concern on lowering standards at colleges and universities when training teachers due to teacher competencies. Some of the teachers as observed were unable to perform required and expected tasks despite having been trained. Study participants identified lack of confidence, lack of motivation intimidation and inadequacy of nurturing of trained teachers. These findings contradicts with literature from Penny, (2007) that professional values and the expectancy of success are essential for achievement. Teachers have to be sensitive to students' culture and learning styles when developing lessons since pupils become immersed and demonstrate engagement and productivity when they are studying a topic clearly spelt out which they could relate, Richardson, 2011;Fryand DeWit, 2010 and 2011.This is linked to Stufflebeam1971's Input and Process evaluation.

Theme 3: Teacher competence and pupils performance.

Results from the study showed that participants who are inspectors, teachers and school heads agreed that teacher competence is vital especially in pupils' performance. Ideally sentiments on teacher competence that were expressed from face to face interviews also emerged from the focus group discussions conducted that teacher competence is a challenge and this has caused poor academic results of pupils, low standards and learning outcomes.

From the findings, as revealed in the discussion, it was clear that among the participants in this study the attributes of teacher efficacy were essential to improved student achievement.

RECOMMENDATIONS

From the findings the study therefore recommends that:
- Teacher retention need to be maintained with strong momentum taking into cognisance various long service certificates awards and also incorporating various methods in teaching.
- Human resource department in the education system need to recommend to teachers' training expertise required so as to fully implement its staffing policy concerning teachers to teach in areas of their expertise.
- There is need to formulate policies on induction and staff developing the teachers through short courses on classroom management
- Educational planners need to stay abreast of the formal and informal impulse of teacher commitment for continual refocusing of selection and recruitment in teachers' colleges to consider age in an effort to beef up teaching with elderly teachers so as to enhance learning outcomes for pupils as well as ensuring effectiveness of inputs and mechanisms that deliver education.

Further research

Since the study was conducted in schools owned by Public Service Commission, it may be worthwhile to investigate private schools to determine whether results presented here reflect the general situation in all schools.

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Socio-Linguistic Referential Construction of Leaders in Kenya's 2008 Post-Consultation Discourse: Coalition Governance in Nascent Democracies

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Abstract

The general objective of this research was to gain understanding of the discursive referential construction. The paper aimed to enhance the existing studies on political discourse by investigating referential strategies used to institutionalise ideologies in coalition governments in nascent democracies. The objective of the study was to define referential strategies employed by Mwai Kibaki and Raila Odinga as principals in Kenya's 2008 coalition government and to construct and negotiate their ideological perspectives in governance. Four written texts were purposively sampled and accessed from the electronic data searches. The study was anchored on Critical Discourse Analysis approach. The results indicated that linguistic choices are ideologically and politically motivated in a consistent process of representation.

Key Words: Referential Strategies, Kenya, 2007 Post-election Discourse, Critical Discourse Analysis

INTRODUCTION

The National Accord and Reconciliation Act (2008) sanctioned the existence of the 2007 Grand Coalition government in Kenya. The Accord was anchored in the Portfolio Balance on the basis of power-sharing between the main parties viz: the Party of National Unity (PNU) and the Orange Democratic Movement (ODM). Mwai Kibaki was the former President holding the term from 2002 to 2007 in the then National Rainbow Coalition Government (NARC) while Raila Odinga was a cabinet Minister in the same NARC Government. The NARC coalition was the one which took over power from former President Daniel Toroitich Arap Moi. However, later, Raila Odinga broke away from the NARC Government due to misunderstanding over the Memorundum of Understanding (MoU) which according to Raila Odinga, was not honoured by Mwai Kibaki. It should be noted that before the formation of the Grand Coalition Government in Kenya in 2008, the earlier types of government were firstly, single party government (from 1963 to 1992), followed by multi-party government in the 1990s and a coalition government in 2002 (which also collapsed).

More importantly, the main aim of this study is an attempt to investigate how the two principals employed referential strategies to negotiate contentious issues of national concern and specifically, the Portfolio Balance (PB) and in one way or another sustaining the agreement.

Discursive strategies are systematic ways of using language located at different levels of linguistic organization and complexity. Reisigl and Wodak (2001:44-85) distinguish five different strategies, namely: nomination/referential, Predicational strategy, perspectivation, argumentation, and intensifying/ mitigation strategy to bring out strategies of Self and Other presentation. The strategies of Self and Other presentation, described by Reisigl and Wodak (2001) when applied to the analysis of discriminatory, racist and stereotypical discourse generally try to delineate the scheme of analysing discursive strategies which contribute to the positive self and negative other presentation. Referential strategies, the focus of this paper, are linguistic tools with which persons and groups are identified (Reisigl & Wodak 2001). They encompass the linguistic tools via which individuals and groups are named and referred to (Richardson 2007).

Analyzing these strategies is based on three assumptions: referring to social actors in a certain way is a matter of choice (Reisigl & Wodak 2001), the way social actors are referred to carries value judgements (Richardson, 2007) and referential strategies "establish coherence relations with the way that other social actors are referred to and represented" (Richardson 2007: 50). Referential strategies function as a 'basis for the argumentation schemes of the text' (Reisigl & Wodak 2009, 114); they are taken-for- granted starting points for argumentation. In other words, categorizing social actors via nominations is introduced as given and shared background information which conceals to a large extent the political and ideological interests served by this categorization. Ideologies conceal the way the socio-political world really works, camouflaging who most gains and who most loses from particular practices and programmes (Sloterdijk, 2003). Ideologies may not only control what we speak or write about, but also how we do so. Most theorists agree that there is no single definition of ideology as the term encompasses many different meanings and functions. Oktar (2001:314) defines ideology as "…presentations of who we are, what we stand for, what our values are and what our relationships with others are." This is particularly useful for this study and through referential strategies aims to reveal the role ideology plays in the formation of US and THEM groups in society. This study paid attention to how language is used to exploit this division and make the two leaders belong. Fairclough (2003: 18) state that ideologies "…are representations of aspects of the world which contribute to establishing and maintaining relations of power, domination and exploitation." Reisigl and Wodak's (2001) strategy of nomination, was used to tease out the ideological positioning in the texts. Fairclough (1989) says that, how the political voices are structured in relation to each other- which for example, tend to have the last word, will reveal who is exerting power. Therefore, texts are often sites of struggle in that they show traces of differing discourses and ideologies all contending and struggling for dominance.

Within texts, the analysis of how social actors are nominated can be valuable in understanding how their representations are used across texts. Social actors can be nominated through use of their name, which may also include additional honorific titles, such as Honourable or Sir. In addition, within the social actor network there are two key types of categorization for defining social actors: functionalization and identification (Van Leeuwen, 2008: 42-45). Van Leeuwen (2008: 43) states that the English language allows speakers to make a choice between functionalization and identification and that the implementation of this choice in discourse is of critical importance in discourse analysis for understanding the ways in which identity can be shaped throughout a text. Functionalization manifests when social actors are referenced through activities and the things they do, such as occupations or roles. Because of this type of usage, government officials are always functionalized and so are Kibaki and Odinga. Identification transpires when social actors are designated not through what they do, but in

terms of what they inexorably are. Additionally, identification can be divided into three types: classification, relational identification and physical identification. Classification refers to the ways in which social actors are defined by the differentialities between classes of people within a given society or institution. Relational identification refers to social actors via their personal relationships, kinship or work relations. Physical identification refers to social actors via their physical characteristics to uniquely distinguish them within a specific context.

Available literature indicate that little attention has been paid on the use of language by the coalition leaders as a way of resolving contentious issues of national concern. This is informed by the fact that language interrogates power and ideology. This paper examines referential strategies in the discourse of Kibaki and Odinga as principals in Kenya's 2008 Coalition Government negotiation for Portfolio Balance with a view to generalize the linguistic and discursive strategies used in this representation, and try to work out the political relevance of these nominations in the context of a grand coalition government in Kenya. This study thus sought to identify the referential strategies utilized by Kibaki and Odinga and determine how the nominations are used to construct their images.

METHODOLOGY

The study adopted a descriptive research design to investigate the referential strategies of Kibaki and Odinga. The data gathered for the purposes of this study were extracted from the former President's and former Prime Minister's website and the Public Communications Office of the Government Spokesperson. The discourses in texts focused on the instance of the Formation of the Grand Coalition Government in Kenya in 2008, specifically the Portfolio Balance. Permission to use these texts for this research was sought and granted by the National Council for Science Technology and Innovation. In total, four texts were purposively sampled for a Critical Discourse Analysis. Purposive sampling was used to sample four texts from the post-election negotiation discourse using electronic data searches. In addition, the National Accord (2008) was also considered as a related text to the four aforementioned texts. Therefore, in this study, all the four texts including the National Accord were referred to as the post-election consultation negotiation texts.

This study was anchored in the theory of Critical Discourse Analysis with major theorists as Fairclough (1989, 2003) and Reisigl and Wodak (2001). Since CDA sees discourse as both produced and shaped by ideology, it stresses the essential linguistic characteristics of social relationships, structures and the power distributed among them. Therefore the use of Fairclough's three levels: text, discursive practice and social practice. The data was modified by numbering the sentences for easier referencing during analysis. Thereafter, referential strategies were analysed based Fairclough (1989, 2003) and Reisigl and Wodak (2001) Discourse Historical Approach (DHA). One principle of DHA is that numerous genres and spaces as well as intertextual and interdiscursive relationships are studied. The historical orientation permits the reconstruction of how recontextualisation functions as an important process linking texts and discourses intertextually and interdiscursively over time. This made explicit the nature or progress of the negotiations and the broader intertextual meaning relations and ideologies that connected the texts. In analysing the four texts under study, it was possible to observe the shifting social and historical situation that was recreated as the negotiations unfolded.

CDA is both theory and method. It examines the role of discourse in the social constitution of power relations and structures of domination in contemporary society hence the use of the theory in this study. In this study, CDA was used because it brings out the social issues that are

a characteristic of the country's political conflicts. CDA is suitable for investigating why the participants say what they say and how they say it and the underlying intentions. It also helps reveal to what extent the social actors' statements, claims, assertions, and denials are the product of their own individual and social political ideologies and how these are negotiated when confronted with opposition. It is a useful tool in the analysis of the texts because it allows for the realization of the interdependency of language and ideology, socio-cultural practices and socio-cultural politics. For CDA, language is not powerful on its own; it gains power through the use of powerful people who make use of it. In texts, discursive differences are negotiated and governed by differences in power which are themselves in part encoded in and determined by discourse and genre.

RESULTS AND DISCUSSION

Referential/ Nomination Strategies

These are strategies that identify how persons are named or referred to linguistically in discourse and in so doing discursively represented and positioned as, for example, part of in-groups and/or out-groups. The devices used for this strategy mostly fall into membership categorization e.g using biological, naturalizing and depersonalizing metaphors or using synecdoche (totum pro pars or pars pro toto respectively). The following Table 4.1 presents a summary of this strategy as employed by the two leaders in the four texts under study.

The main social actors in the four texts under study are Kibaki and Odinga. Referential strategy of Genericisation is used by both Kibaki and Odinga. Genericisation either identifies classes particular to that group leading to inclusiveness/legitimization or identifies classes of the Other leading delegitimization. Kibaki and Odinga speak in their roles as the leaders of their respective political parties, hence the referential terms of Party of National Unity (PNU) for Kibaki and the Orange Democratic Movement (ODM) for Odinga. These positions institutionally entitles them to put forward their case about the interests of their parties and themselves. This was made explicit by the use of the referential strategies of pronouns 'I' 'we' and 'our' as forms of pronominalization.

Raila Odinga says:

It is becoming clear to our party that your side is reluctant to honour the spirit and principles of the National Accord and Reconciliation.

I therefore wish to let you know that the following issues must be resolved in the course of our further consultations on the formation of the Government.

The use of "our" shows collective decision in the quest for the equal power sharing between the Orange Democratic Movement (ODM) and the Party of National Unity (PNU). Whereas "I" indicates individual responsibility of Odinga to ensure that he and his party ODM gets its share of power as agreed upon in the National Accord.

Kibaki in response to Odinga's quest says:

I have accorded this matter my personal attention and highest priority throughout.

I realize the importance of this matter to all Kenyans and the anxiety it is causing and it was my personal desire to have this matter concluded today.

Yesterday, I and Hon. Raila Odinga promised in a joint statement that we would convene today to have the matter concluded.

This is because we were of the view that the remaining few matters relating to the formation of the cabinet could have been resolved today.

The use of the pronominal "I" construct Kibaki as taking charge of the situation as the president to make sure that the portfolio stalemate is resolved. In addition the use of "we" is a show of collective decision between him and Odinga to resolve the issue. Therefore the inclusive use of "we" and "us" and "our" as forms of Genericisation indicate collectivism ideology which show that the principals are operating as a coalition. Further the use of "I" show individual responsibility and commitment and it was used by Kibaki and Odinga as a Genericisation strategy to serve the ideology of legitimating self and delegitimatizing the Other.

Relational identification is another significant referential strategy used by both Kibaki and Odinga. Kibaki constantly refers to Odinga using the official nomination "Honourable" and Generecisation "the ODM".   Further, it was observed that whereas Odinga used functionalization to address Kibaki, on the contrary, Kibaki was evasive in addressing Raila Odinga by use of the same throughout his discourse, and instead resulted in using official nomination and Generecisation. This difference is significant because Odinga's discourse is denied involvement in the power sharing deal as an equal partner leaving Kibaki in control of the message as the president and thus the sole decision-maker.

Kibaki states:
The ODM should understand clearly with no uncertain terms that the Executive Authority of the state is vested in the President. The assumption that these powers are irrelevant as a result of the National Accord and Reconciliation Act is irresponsible, reckless and distortion of the facts and the law.

Greater progress will be made through working together as coalition partners and not through confrontational public shows. ODM should now move from confrontational and activist politics of the opposition into responsible politics of governance.

I invite Hon. Raila Odinga to engage constructively so that we can conclude the formation of the government.

Evasiveness is used by Kibaki to background Odinga's quest for equal sharing of power. This enables him to delineate Odinga from political involvement as a Prime Minister. The backgrounding of Odinga as the premier enables Kibaki to indirectly attack Odinga's belief in confrontational politics which are a characteristic of the opposition and thus do not befit Odinga as a Prime Minister. Such representations that omit his status as the Prime Minister are clearly employed as an attempt to entwine Odinga within the representations of a political loser, hungry for power.

On the other hand, Odinga refers to Kibaki through functionalization using the term "the President" and "excellency".

Odinga says:
We have always acted in good faith and conveyed to your Excellency that the Grand Coalition would be one government. ...

The President and I promised the nation yesterday that we would finalize arrangements for the Grand Coalition government, including the naming of the Cabinet.

The National Accord and Reconciliation Act is already in force. It must be understood that ODM and PNU are equal partners in the Grand Coalition.

Odinga utilizes functionalization as an acknowledgment of Kibaki's office. Though his function is suppressed by Kibaki not making reference to his public office, Odinga utilizes functionalization to depict Kibaki as one who was reluctant to share power despite the official enactment of the National Accord which sanctioned the power sharing deal. The functional nomination juxtaposed with the personal nomination of "I", puts Odinga to a similar rank with Kibaki thus equal partnership.

Functionalization is also manifested in the roles social actors play. Odinga utilizes generecisation and specification as functional identities of social actors. For instance, the social actor "Ambassador Muthaura" is functionally correlated with the Party of National Unity (PNU) side and the president to signify the powers of the former as the Head of the Civil Service and Secretary to the Cabinet then. Ambassador Muthaura was charged with supervising and co-ordinating the ministers, a role which was to be relinquished to the Prime Minister upon the sanctioning of the Grand Coalition government. However, this seems not to be the case as Odinga states thus:

The following day, 3rd April, President Kibaki and I met for two hours and made numerous concrete agreements on Portfolio balance that I have just mentioned, which enabled both of us to say publicly that the Cabinet would be announced yesterday (Sunday).

On Saturday, I received from Ambassador Muthaura a letter unilaterally indicating that the cabinet to be announced would be formed on the basis of an enclosed list of ministries and their allocations that we had rejected on 2nd April! The agreements we reached in our 3rd April meeting were nowhere to be seen. We were therefore unable to reach any agreement in the six hours of talks yesterday.

Today, in response to a letter I had written to President Kibaki, we received a reply from Ambassador Muthaura's side reneging on our previous agreements, as well as the spirit and the letter of the Accord. In PNU's interpretation, the Constitution grants the President exclusive executive power to run this country on his own, and that these powers supersede all the provisions of the Accord.

Odinga utilizes the nomination of Ambassador Muthaura to construct Kibaki and his party as representing and propagating single party dominance ideology irrespective of the Grand Coalition government being in place. Further the role of the premier as illustrated in Clause 4 (National Accord 2008) which lays down the functions of the PM among which is co-ordination and supervision of the affairs and execution of functions of government by various ministries and appointment of Ministers and Assistant Ministers in the coalition government was still being done by Ambassador Muthaura. Being the closest ally of former President Kibaki, Muthaura could have indirectly been involved in making decisions for the former President as concerns the formation of the cabinet. The presupposition is that Kibaki as the president then was unilaterally making decisions and monopolizing power and disregarding the spirit of the National Accord.

Moreover, relational identification is utilized by Odinga to construct the social actor "George Saitoti" as another close political ally of Kibaki. Odinaga says:

> *… We accepted PNU's insistence on a bloated 40 member cabinet. On 1st April, President Kibaki's emissary, Hon. George Saitoti gave me a proposed list of 40 ministries and how they should be divided.*
> *… in response to a letter I had written to President Kibaki, we received a reply from Ambassador Muthaura side reneging on our previous agreements, as well as the spirit and the letter of the Accord.*

By utilizing the nomination of George Saitoti, Odinga presupposes breach of protocol by Kibaki and dissemination of single party dominance.

Impersonalization by Abstraction is another significant referential strategy utilised by both Odinga and Kibaki. Abstraction involves utilizing social actors via a quality that is assigned to them by and in the representation. For instance, Odinga employs the synecdoche "Grand Coalition" as an abstraction which serves to remind Kibaki about the agreement of power sharing.

The failure to form the Grand Coalition Government is in fact a continuing breach of the Act and the constitution.

We have always acted in good faith and conveyed to your Excellency that the Grand Coalition would be one government. The positions PNU is taking claim to imply that we are forming a government with two cabinets.

On the contrary, this is a Grand Coalition of two equal partners sharing executive power on a 50-50 basis.

Odinga uses abstraction to show to construct an identity of a change from single party dominance to a coalition where power is shared. On the contrary, Kibaki also uses the expression "this matter" as a synecdoche that backgrounds the formation of the Grand Coalition government. Kibaki says:

I have accorded this matter my personal attention and highest priority throughout.
I realize the importance of this matter to all Kenyans and the anxiety it is causing and it was my personal desire to have this matter concluded today.

Yesterday, I and Hon. Raila Odinga promised in a joint statement that we would convene today to have the matter concluded.

The backgrounding by Kibaki presupposes the single party ideology. Therefore, Kibaki uses abstractions to represent his believe in single party dominance, whereas Odinga utilizes impersonalization through abstraction to construct an identity within the texts that is similar to his goal of forming the Grand Coalition Government. Odinga also accounts for his unique status as the initiator of change by the use of the synecdoche "Grand coalition government" to explain what Kibaki is not and thereby define what he, Odinga is.

Odinga says:

Our party is deeply concerned that the stalemate over the formation of the Grand Coalition Government is increasing uncertainty and anxiety in the country. It is escalating the mistrust that we as leaders were expected to eliminate by the establishment of the Grand Coalition.

The National Accord and Reconciliation Act is already in force. It must be understood that ODM and PNU are equal partners in the Grand Coalition. ...

With cries of jubilation and Happy New Years, (sic) Kenyans on 28th February began to breathe freely again as the National Accord brokered by Mr. Kofi Annan was signed by President Kibaki and myself. The terror and fear they had been living under the hands of mobs, militias and government forces was finally over. A few weeks later, Parliament unanimously entrenched the Accord into the Constitution and Laws of Kenya.

But since then Kenyans have observed with growing dismay and anxiety that not a single concrete agreement has been achieved on any aspect of the new coalition government. Our nation is a drift and without direction, and with each passing day, our problems are mounting.

To overcome this terrible impasse and another looming crisis, our side has gone many extra miles and made an extraordinary number of concessions. Against the strong wishes of our supporters and indeed of all Kenyans, we accepted PNU's insistence on a bloated 40 member Cabinet. I agreed also to cede some of the most crucial ministries…. as Finance, Defense, Internal Security and Justice and Constitutional Affairs.

Thus the symbol "Grand coalition government" is employed in place of Odinga. By focusing on what he as change represents, Odinga is able to make his intended actions seem more accepted and not subject to scrutiny.

Having identified the participant positions and roles, it is worth mentioning that a clear demarcation can be observed between US and THEM which depended on the point of view of the speakers. Furthermore, the choices in the pronoun use in nominalization suggest an US versus THEM representation. US/WE is associated with positive elements and THEM/THEY with negative elements.

The data revealed that Mwai Kibaki uses similar pronominalization strategies as those of Odinga to delegitimize the actions of the Other and legitimize those of self. However, it can also be observed that while Raila Odinga uses the pronoun "we" more often, Kibaki employs the pronoun "I". This can be analysed to indicate that Kibaki asserts his authority and personal involvement in the use of the pronoun "I" while Odinga may be falling back to his party to seek for support and also spread responsibility in relation to the decisions so far made on the issue of the Portfolio Balance.

In summary, the referential strategies of Odinga about PNU party confirm the fact that during the formation of the Grand Coalition Government, political parties controlled their leaders' decisions and even demanded accountability from them. Furthermore, a political party moulds the leaders who in turn are expected to fight for the welfare of its members (Masime and Oesterdiekhoff (2010). This appears to be the reason why the former President could not overlook the push from his PNU party about the formation of the cabinet. This is not restricted to PNU party but also to ODM party. The use of the pronominals "we" and "our" attest to the

inclusiveness of the parties. In a similar way, the referential strategies used by Kibaki reveal the division between "US" and "THEM" which is strongly exploited as a means to unite the PNU side. For instance, Kibaki states:

Since the signing of the Accord, the Government Coalition has embraced the Spirit of Partnership with ODM and most of the initiatives that have been taken, especially in regard to the Accord have been undertaken on consultative basis between the two parties (2PB 4.4.)

Kibaki also mentions the allegations laid against the Government Coalition as:
Government Coalition has been surprised by the statement made by ODM in regard to the implementation of the National Accord Act and the related Constitutional Amendment. The ODM in their statement allege that the Government Coalition is dragging its feet in the formation of the cabinet (1PB 4.4).

It is expected that the PNU had to legitimate its actions and in doing so, delegitimate those of the ODM. Therefore, the representation of the Other group (PNU) is maximized by emphasizing on its negative activities and the speaker constructs them using expressions such as untrustworthy, tardy, irresponsible, reckless, distorts the law, and engage in activist politics.

CONCLUSION

From the findings of this study, it is concluded that Mwai Kibaki and Raila Odinga, employed referential strategies that were void of innuendos as they negotiated on the issue of Portfolio Balance. In addition, the language as a negotiating tool was mitigated and highly restrained in terms of expressions that could be classified as forms of hate speech. In addition, the two leaders used language that was mindful of the other and revealed rational arguments that could be justified using the legal documents, particularly, the National Accord and the Constitution of Kenya (2010), persuasive language encoding tolerance and optimism and also reassurance for continued political support notwithstanding the competition for power. A conclusion can therefore be made that despite a contested, competitive relationship between Mwai Kibaki and Raila Odinga, a respectful, reasonable, mindful, mitigated use of language during negotiations and as a result averted conflict leading to successful negotiations. This is also an indicator that possible future political differences between coalition partners would be reconciled amicably. It can therefore be concluded that positive use of language to negotiate political differences is important for the success of any coalition government. Further, with the formation of new coalition governments in Africa, for example, the signing of the Agreement between President Salva Kirr and his former Deputy President Dr. Machar, in the Republic of Southern Sudan, in February, 2014; the role of language as a medium through which power is appropriated, negotiated, deployed or distributed cannot be overemphasized.

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The Role of Women in Food Production and Poverty Reduction in Rural Communities in Cross River State

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Abstract

Women play significant roles in the development of the rural economy. The study examines their role in food production and poverty reduction in rural communities in Cross River State. The research design adopted for the study was survey research design. The population comprised of Agricultural extension workers and rural farmers in the southern senatorial district of Cross River State. The local government areas used in the study included, Akpabuyo, Bakassi, Calabar Municipality, Calabar South, Akamkpa and Odukpani. A sample population of 360 was systematically drawn from the sample area. Data obtained was analyzed using Mean and standard deviations. The result obtained showed that access to land, capital, and equipments significantly impacts on the level of food production and poverty reduction by rural women. Also, access to primary health care services significantly impacts on the level of food production and poverty reduction by rural women. Based on this conclusion, the study recommends the need to improve access to land and other economic resources so as to enhance the productive capacity of rural women.

Keywords: Women, Food Production, Poverty Reduction & Rural Communities

BACKGROUND TO THE STUDY

Women play significant roles in the development of the rural economy. Scholars have come to terms with the fact that giving women an equal say in decision-making processes in rural development institutions improve their access to resources, factors of production such as land and capital, and to markets. Sessay and Odebiyi (1998) found that rural Nigerian women play an important role in food production and nutrition of their families with the women providing up to 80% of the food crops but the United Nations Development Programme (UNDP) (1997) has found that these rural women faced much constraints. Anyakoha and Mbanefoh (2000) found that these rural women who face enormous challenges and constraints in their role as providers of household nutrition security are under-rewarded resulting in poverty, environmental degradation, lack of appropriate technology, education and health (Imonikebe, 2010).

UNDP (1997) observed that poverty has been a longstanding issue in rural areas and Olayemi (2002) remarked that poverty in Nigeria has been described as an essential rural phenomenon because a disproportionately high percentage of the poor live in rural areas. Anyakoha et al (1997) reported that technological supports are male-oriented and gender biased. They emphasized that such technological support by government cannot promote women's contribution in household nutrition security.

For agricultural growth to reach its potential, gender disparities must be addressed and effectively reduced. FAO (2011) estimates that closing the gender gap in agriculture would generate significant gains for the agricultural sector: If women had the same access to productive resources as men, they could increase yields on their farms by 20–30%. This, in turn, could raise total agricultural output in developing countries by up to 4%, potentially reducing the number of hungry people by 100-150 million.

Rural women, the majority of whom depend on natural resources and agriculture for their livelihoods, (World Bank, 2010), make up over a quarter of the total world population (FAO, 2000). In developing countries, rural women represent approximately 43 per cent of the agricultural labour force, (FAO, 2011) and produce, process and prepare much of the food available, thereby giving them primary responsibility for food security. Bearing in mind that 76 per cent of the extreme poor live in rural areas (World Bank and IMF (2013), ensuring rural women's access to productive agricultural resources empowers women and contributes to decreasing world hunger and poverty (FAO, 2011).

However, there are factors which affect the abilities of rural women to perform at their maximum. Many rural women farmers have poor health status. This could be due to heavy farm work, childbearing and rearing and poor nutrition. The rural areas in Nigeria do not have good roads and social amenities such as potable water, health care services and electricity. Anyakoha and Mbanefoh (2002) stated that where there were no motorable roads, women trek very long distance and this usually wore and tore the women down gradually. Mbanefoh (1994) observed that rural households do not often have enough to meet their basic needs. As such they spend 80% of their income on food leaving little on housing, health and education. Anyakoha and Mbanefoh (2000) concluded that the lives of poor rural households revolve round a continuous struggle for food and a continuous threat of seasonal food shortages or price increase which makes food hard to be obtained.

This paper seeks to examine the contributions of women in food production and poverty reduction in Cross River State. It will identify specific challenges facing these women the integrated strategies that will be significant in improving their present social and economic state.

STATEMENT OF THE PROBLEM

In developing countries, among the poor, rural women are the poorest and more vulnerable. Empirical evidences suggest that women in rural areas are more adversely affected by poverty than men (Daman, 2003). The incidence of poverty among rural women is on the rise in most of the developing countries. The issues of gender bias and equity point to the double burden women have to bear - that of being poor and being a woman. Further strategies and programmes for development had largely overlooked the question of gender equity. Projects aiming to reduce poverty view the poor rural women as the recipient of benefits of development, instead of active participant and still poor rural women have the least access to basic needs such as food, health and education (Daman, 2003).

At least 70% of the world's very poor people live in rural areas in developing countries (IFAD 2011). Their livelihoods usually depend either directly or indirectly on agriculture, with women providing, on average, more than 40% of the agricultural labor force. This female labor ration ranges from approximately 20% in Latin America to 50% in Eastern Asia and Sub-Sahara Africa (FAO 2011). In Nigeria, the women population in the rural communities provides

most of the needed labour in food production. Notwithstanding, they are the most vulnerable to related health challenges and poor economic life (Anam, 2014).

Again, food production remains insufficient to the growing Nigerian population because most of these rural women do not work with modern farming equipments. On this note, this study seeks to answer the following questions,

1. Does access to land, capital, equipments have any significant impact on the level of food production and poverty reduction by rural women?
2. Does access to primary health care services have any significant impact on the level of food production and poverty reduction by rural women?

OBJECTIVE OF THE STUDY

The paper seeks to examine the role of women in food production and poverty reduction in rural communities in Cross River State. It will identify specific challenges faced by the women and further highlight useful recommendations that will be significant in improving their capacity.

METHOD AND SOURCE OF DATA

Survey research design was used to examine the role of women in food production and poverty reduction in Cross River State. The population comprised of Agricultural extension workers and rural farmers in the southern senatorial district of Cross River State. The local government areas used in the study included, Akpabuyo, Bakassi, Calabar Municipality, Calabar South, Akamkpa and Odukpani. A sample population of 360 was systematically drawn from the sample area. Questionnaire was used for data collection. It had a 4-point scale of strongly agree, agree, disagree, strongly disagree representing 4, 3, 2 and 1 respectively. The copies of the questionnaire were administered to the respondents by the researchers and research assistants.

They were retrieved immediately after completion on the same day. The responses to each of the questionnaire items were arranged in frequency distribution tables and percentages mean responses, and standard deviation of the items were computed and the results clearly stated and discussed.

LITERATURE AND THEORETICAL FRAMEWORK

Traditionally, and especially in the African setting and other developing countries, women are primarily responsible to meet the basic needs of their families. Women mainly produce food for household consumption and local markets, whereas men more often work in agricultural wage labor and cash crop production (Anam, 2014). Generally, women are responsible for food selection and preparation, and for the care and feeding of the children, and therefore play a key role in defining the coping strategies of poor households to ensure food security and to reduce risk. Women normally spend a higher share of their income than men on providing food, health and education to the family. Additionally, they expend a lot of time and hard work in procuring water and domestic fuel.

For instance, in Lesotho women spend more than twice as much time as men and boys in fetching water and gathering firewood. Alongside the above described responsibility for reproductive tasks, women are also engaged in productive tasks such as agricultural work, raising cattle, seed management, planting, as well as the processing and marketing of agricultural products. In livestock farming, women feed the animals, clean the stalls and

compost manure. When raising poultry, sheep, goats or rabbits, they are responsible for breeding and tending to the animals' health. It is women who cultivate the kitchen gardens, and who sustain the family when harvests are poor.

However, in most African traditional societies, women have been regarded as fragile and should be subordinate to the man but they can play very important role for the betterment of the society. Across the country, women create innovative, comprehensive programs to meet the needs of their communities. Women have established themselves as leaders in the community development process and acquire the skills that have brought positive changes to their communities. As effective builders of social capital, women leaders play key roles in establishing and maintaining important relationships and networks in their communities.

Women are often faced with challenges of racial, culture, economic and political barriers that exist in the community development process and in many cases overcoming those barriers becomes their motivation. While their comprehensive approach has influenced the evolution of the community development field, women's contributions have been neither widely acknowledged nor explicitly credited. Studies that examine the role of women associations in development provide deeper insights into women's thinking about community development, the barriers they perceive to women's leadership and the kind of efforts that should be made to facilitate and promote their status and roles in the field (Kalu, 2006 & Chinendu, 2008).

The activities performed by women are often unpaid. War, disease, HIV/AIDS and the migration of male family members to urban areas or foreign countries are forcing more and more women to take on additional roles that were originally performed by men, with many assuming sole responsibility for agricultural production. Given the importance and variety of their tasks, women are important bearers of knowledge related to the sustainable use of natural resources, including strategies for adapting to climate change and conserving agrobiodiversity (Ditcher, 1992).

In addition, women have limited access to natural resources. Women's access to agricultural land and the use of natural resources such as water or trees is dependent on the rights of husbands or male kin. Inheritance laws continue to be religiously based. Muslim women are entitled to inherit from their father half the share of their brothers as a form of insurance against marital breakdown and to ensure visits to the parental home. These factors seriously cripple women's capacity to effectively contribute to community development (Momen and Begun, 2006).

Zeller and Meyer (2002) acknowledge that one of the strategies adopted by women in generating income is by daily and monthly contributions. This is done at their association level. When this money accumulates, they convert it into business by giving it out as credit facilities or loan. Sustainable credit facilities create new opportunities to save and invest in income activities, and help individuals or households to build up or acquire funds for all kinds of investments (Zeller & Meyer, 2002). In most cases, these contributions and issuing of credit facilities leads to the establishment of micro finance banks.

Most rural women do not have access to good medical health services (Anam, 2014). They are exposed to a lot of poor sanitary conditions. Inadequate access to safe water and sanitation leads to various health problems of people. Water and vector-borne disease like diarrhea, dysentery, typhoid, worm infestation, polio, malaria, hepatitis and other parasitic infections are

too common in Nigeria and cause numerous deaths. In rural areas, about 69,000 children below the age of five die of diarrhea every year because of inadequate sanitation (HO, 2990), which is easily preventable by improving sanitation and creating awareness to practice hygiene such as simple hand washing, with soap GoB, UNICEF and ICDDRB (2008) reported that less than 1% of Bangladeshis wash their hands with soap before they eat and fewer than 17% wash their hands with soap or ash after defection.

According to WHO and UNICEF (2006), about 22% of the population of the country is still exposed to drinking water which does not comply with WHO standards. On the other hand, surface water is usually polluted and requires treatment. Many parts of the country have arsenic contamination in the ground water (UNICEF, 2006; UNDP, 2000). Still the government claims that about 90% of people have access to safe water (BBS 2008). The place of sound health cannot be underestimated when discussing issues of effective food production and poverty reduction.

However, in spite of their important and diverse contributions, women in agriculture and rural areas have less access than men to productive resources. Gender inequality is present in many assets, inputs and services: e.g. access to or control over land, financial services, productive resources, and extension or marketing services. For example, men represent 85% of agricultural landholders in Sub-Sahara Africa. In Ghana, Madagascar and Nigeria men own more than twice the units of livestock compared to women. Similar gaps exist in access to fertilizer, mechanical equipment, new technologies, extension services and credit (UNDP 2012).

Several studies have shown that gender inequality related to food security is exacerbated during crises: Women tend to become the "shock absorbers" of household food security, e.g. skipping meals, to make more food available for other household members. Moreover, women are often underrepresented in rural organizations and institutions, and are generally poorly informed regarding their rights. This prevents them from having an equal say in decision-making processes, and reduces their ability to participate in collective activities, e.g. as members of agricultural cooperatives or water user associations. Due to the above factors, among others, female farmers produce less than male farmers. This situation imposes costs on the agriculture sector, the broader economy and society, as well as on women themselves. Gender inequalities result in less food being grown, less income being earned, and higher levels of poverty and food insecurity.

Gender equality is clearly recognized as a human right on an international level. Over the past several years, UN member states have entered into a number of commitments. The Rome Declaration on Food Security, resulting from the FAO World Food Summit in 1996, affirms the obligation to promote the equal rights and duties of men and women regarding food security. The Millennium Development Goals underline the fact that, without gender equality, it will be impossible to reduce by half the number of people who suffer from hunger by 2015 (Khan & Rahaman, 2014). Regardless of the level of development achieved by the respective economies, women play a pivotal role in food production and in rural development in most countries and in Nigeria in particular.

THEORETICAL FRAMEWORK

The sustainable livelihood approach is used in this study. The concept was first introduced by the Brudtland Commission on environment and development as a way of linking socio-economic and ecological considerations in a cohesive, policy relevant structure. The 1992

United Nations Conference on Environment and Development (UNCED) expanded the concept, especially in the context of Agenda 21, and advocated for the achievement of sustainable livelihoods as a broad goal for poverty eradication. It stated that sustainable livelihoods could serve as an integrating factor that allows policies to address development, sustainable resource management, and poverty eradication simultaneously (UNDP, 1997). Livelihoods are studied and analyzed because these provide holistic information that can reveal how, and why, people survive (or fail to survive) difficult times so as to reduce vulnerability. Many development agencies have adopted the livelihood concept as central to their development strategies and activities with further minor modifications (Gupta 1992). Most of the discussion on sustainable livelihood so far has focused on rural areas and situations where people are farmers or make a living from some kind of primary self-managed production.

Within the context of women contribution to community development, the approach significantly explains the maintenance or enhancement of resource productivity on a long term basis. The concept of "sustainable rural livelihoods" is increasingly central to the debate about rural development, poverty reduction and environmental management. The livelihood approach is founded on a belief that people. Especially rural women require a range of assets to achieve positive livelihood outcomes. The ability to move out of poverty is critically dependent on access to assets (Warner 2006) and this explains the need to improve the capacity of rural women to enhance improve food production and poverty reduction in their communities and country at large. Access to resources indicates that individuals, household or groups are able to use these, and access gives them capability to build their livelihood (Bebbington, 1999).

RESULTS AND DISCUSSIONS

Two research questions were stated to guide this study. Data were obtained with the aid of a research questionnaire administered to rural women across the State. Data obtained were analyzed using Mean and standard deviations. The result is as shown below,

RESEARCH QUESTION ONE

Does access to land, capital, equipment have any significant impact on the level of food production and poverty reduction by rural women?

Table 1: Mean and standard deviations of access to land, capital, equipment and its significant impact on the level of food production and poverty reduction by rural women

VARIABLE	MEAN	STD. D.	N
LAND, CAPITAL, EQUIPMENT	17.99	1.41	360
LEVEL OF FOOD PRODUCTION AND POVERTY REDUCTION	18.01	1.26	360

The table indicates a significant relationship between access to land, capital, equipment and the level of food production and poverty reduction by rural women. The implication is that access to land, capital; equipment by rural women in Cross River State has a significant impact on the level of food production and poverty reduction. Upon this result, concerted efforts must be made by the government to increase their level of access to land so as to boost food production in the state and country at large.

RESEARCH QUESTION TWO

Does access to primary health care services have any significant impact on their level of food production and poverty reduction by rural women?

Table 2: Mean and standard deviation of access to primary health care services and its impact on the level of food production and poverty reduction by rural women

VARIABLE	MEAN	STD. D.	N
ACCESS TO PRIMARY HEALTH CARE SERVICES	18.98	1.44	360
LEVEL OF FOOD PRODUCTION AND POVERTY REDUCTION	19.13	1.36	360

The table indicates a significant relationship between access to primary health care services and the level of food production and poverty reduction by rural women. The implication is that when rural women have access to good medical attention, it will improve their capacity to perform. The government must therefore make concerted efforts in providing well equipped health centers in rural communities in the state and nation at large.

CONCLUSION

It is an obvious fact that majority of women in the rural areas in Nigeria are involved in food production. They face a lot of challenges and constraints, which adversely affect their level of food production. Some examples of such constraints are illiteracy, poverty, lack of application of appropriate technology. Capacity development is the key to improving women's performance, i.e. their knowledge of legal matters and their general education can substantially contribute to raising women's access to natural resources, means of production and improved access to health care delivery services.

To increase food production and compensate the effort of rural Nigerian women farmers it is the position of this paper that the health condition of rural women must be given due attention with easy access and affordable medical services. They must be provided with modern farm inputs. This will include adequate use of fertilizers, pesticides, insecticides, herbicides, improved skills of developed countries, provision of infrastructural facilities, transport/communication networks, and storage facilities to improve the marketing system. In addition there must be application of appropriate technology in food preservation. This can be achieved through the use of extension workers to train and retrain rural farmers on modern technology.

Imonikebe (2010) noted strongly that technology alone does not make a change. Not all new technologies save time or empower rural women. In fact, some technologies add to women's burdens by making tasks more demanding (e.g. extra weeding required when fertilizer is used, or the need to process more output). The mere introduction of a new technology alone is not able to simultaneously boost agricultural yields and reduce ingrained gender biases, since relationships between women and men are dynamic and complex. Men often move in and take over when a new technology results in a more profitable crop or when a new processing machine increases income. Policies thus need a gender perspective to ensure that technologies are developed and applied in ways that prevent an automatic takeover of the technology by men.

RECOMMENDATIONS

The study recommends as follows,

1. The need to uincrease access to land, capital, equipment so as to improve the level of food production and poverty reduction by rural women in rural communities
2. Improve access to primary health care service delivery in rural communities. Improved health status of rural women will mean improved agricultural activities
3. Provision of literacy programmes for rural women. Improved literacy level will guarantee enhanced capacity and social economic development of the rural economy.
4. Encourage mechanized farming system in rural areas. This will require providing rural farmers with enabling farm equipments and training them on how to use the equipments.
5. There is also need to provide farm subsidies to farmers. This will improve their productivity. An enabling marketing policy by the government will not only encourage production but further improve socio economic activities within the rural economy.

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