

# Headmasters' Leadership Styles and their Significant Impact on the General Performance in Schools: Using the Basic Schools in Adansi-South District in Ghana as a Study

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## Abstract

The main concepts and definitions of leadership and its styles differ in many ways. Thus; from one individual or position to the other. The word "leadership" is used in different circles of human endeavours, for example, in the political, business, academics, social and institutional spheres. In the early on, leadership was seen as a personal trait. The degree to which the individual exhibits leadership traits depends not only on his characteristics and personal abilities but also on the characteristics of the situation and environment in which he finds himself (Messick & Kramer, 2004). This study was conducted on the motivation that no country develops and succeeds better than the quality of the leaders who manage the educational system. This means that for a country to be successful, it depends largely on the quality of leadership that the school managers offer in the schools they manage in the development of skills and potential of the students for the country. The study employed a qualitative research method in the work. The data was collected from Adansi-South District in Ashanti Region in Ghana. Random purposive sampling procedures were adopted with a sample size of forty (40) respondents including heads of schools, teachers, and students. Data were collected through interviews, documentary reviews, and observations. They were analyzed through the use of content analysis technique and other renowned data software such as Excel, and SPSS 22 in the data computations. The findings and policy suggestions at the end of the research concluded that the autocratic leadership is useful if something has to

be achieved in the short term and democratic leadership style is usually the most preferable in most situations. Participation leadership style is the most useful because it has a long term effect on employees in a more positive way. School heads who normally applied unreasonable laissez-faire and autocratic leadership styles failed in their schools' goals, visions and missions implementations due to lack support and cooperation.

**Keywords:** leadership, leadership styles, learner performance, management

## 1. Introduction

Academic performance is a major area of concern in education delivery in Ghana, most especially the study area. Stakeholders like parents, teachers, students, policymakers and society at large are anxious to see excellent performances from learners in their academic works. Even though, there are not enough frameworks and resources, yet everyone expects that the standard of performance should be high at all times, and for poor academic performance, the Heads of the schools are mostly held responsible. Education is a vital strategy for the development of society (NSUBUGA, 2008). This strategy requires careful planning at every stage of its development especially in the development of the human capital. Human resources determine the pace of economic and social developments through the principal mechanism of formal education. Education empowers access to the productive nature of man, not only in social and economic terms but in terms of imparting “values, ideas, attitudes and aspirations important for natural development” (NSUBUGA, 2008).

Many people tend to believe that a leader implies one person dominating another person or group of people, however, a leader is one who unifies and embodies the opinion of the people to any desired goal. Leadership is a key factor to improve the condition of any department and is also the same in school aspects. Functional schools and outstanding performance do not exist without effective leadership styles. Strong leadership implies that a supporting principal can foster participation for teachers, can develop clear goals and policies and hold people accountable for results, can be persuasive in building alliances and solving conflicts, can be inspirational and charismatic and encourage professional development and teaching improvement (Taylor & Francis, 2006).

Also, many researchers have noted that the instructional leadership role of the principal is one key element in a conceptual framework that recognizes the importance of the school's social and environmental milieu in determining student achievement (Bossert et al, 1982). A similar study also asserted that principals' roles are related to establishing school climates and cultures that are conducive to the inclusion of students with diverse learning needs and providing teachers with supports to be successful are critical. (Jackson, Harper & Jackson, 2002). “Leadership is the capacity to balance big issues and small ones, to respect genuinely those who differ, to avoid compromising larger objectives for short-term gains.” “...it is the curious blend of leading and following, provoking and calming, disturbing and stabilizing, but always in a posture of movement, generating new strength and capacity along the way.” “...the exercise of influence.” (The Phi Delta Kappan, Vol. 67, No. 1, 1985, pp. 17-20).

A school leader is the person who can encourage people within an organization or firm they lead to realize their visions, goals and missions. Leadership is an intentional social influence process exerted by one person in a group (Bateman & Scott, 2002). Therefore, leadership could be understood in the school circles as a process of influencing teachers and students through teaching and learning—imparting of knowledge, skills, values, customs, ideas, etc—in harmony, under the supervision of a head in a socially proactive environment. Effective educational leaders help their schools to develop or endorse visions that embody the best thinking about teaching and learning. School leaders inspire others to reach ambitious goals

and aspirations in life. Gabriel and Farmer's study (as cited in Task Force on Developing Research in Educational leadership, 2003) found out that one of the most important responsibilities of any leader, therefore, is to establish a vision and invite others to share in its development.

### *1.1 Purpose of the Study*

The purpose of this study was to find out whether heads of schools determine school goals, clarify and simplify pathways, visions, missions and reward performance to achieve the desired students, learning environments and outcomes among others. It is said that the measurement of a functioning school is known or measured by the achievements and performances of the students.

## **2. Literature Review**

### *2.1 Conceptualization of Leadership and Management*

Bass theory on leadership states that there are three basic ways to explain how people become leaders. The first two explains leadership development for a small number of people. Thus;

- Some personality traits may lead people naturally into leadership roles. This is the trait theory.
- A crisis or important event may cause a person to rise to the occasion which brings out extraordinary leadership qualities in an ordinary person. This is the Great Events Theory. The third one explains how:
- People can choose to become leaders. People can learn leadership skills. This is the transformational leadership theory. It is the most widely accepted theory.

### *2.2 Educational Leadership*

The definition of "leadership" is associated predominantly with the army, and also in the economic and political fronts. Usually, leadership concepts are synonymous with the military, politics, economics and national administrations. Kissinger, one of the greatest American statesmen, said "a leader's mission is to bring his people from the place where they are to a place where there have never been." For this to happen, it requires a good leadership drive. Therefore, educational leadership is relevant for the success of an education system in a country the same way it is for that country's economic and political management. The fruits of educational leadership can only be realized after a long-term investment, it harvests out of a continuous experimental knowledge; experience and demands longevity and forbearance. Who is a leader? What is leadership? Definitions are numerous. Many people suggest that there are over 650 definitions, this clearly therefore suggests that there are divergent views of agreement and dissatisfaction at the same time. A comprehensive research on leadership indicated that after four decades of research studies on leadership, it produced a baffling mass of findings and that, the endless accumulation of empirical materials did not provide a direct understanding or definition of leadership (Stogdill, 1974). After thirty-five (35) years on, another study featured in an article and said that there is no single acceptable definition, no

final dominant paradigms for the research of leadership, and there is small understanding over the best strategy for its development (American Psychologist, n.d.).

### *2.3 Leadership and Management Defined*

Leadership is not only a man's activity, it can be found in the animal kingdom as well, it ranges from low-level non-cartilaginous skeleton animals such as ants to higher level vertebrates like mammals and amphibians. Through scientific study and experimentation that were carried out, it was observed within the animals natural habitat that "there exists a clear hierarchy of leadership and the leadership grants privileges to those who have it" (Bass, 1990). Also, leadership is an essential element of parish life, which calls forth gifts of visioning, planning, empowering, and evaluating for the service of the community (Fullan, 1998). Leadership is the ability to lead, including inspiring others is a shared vision as Wehrich and Koontz (1997) demonstrated. Leaders are expected to have clear vision and mission statements for the institutions they administer, and they should be able to communicate these visions and missions statements to their employees or the ones they lead. They ensure that the atmosphere within their organizations encourage the ability to take risks, acknowledgement, rewards and empower other people to emerge as competent leaders. The idea of management started with Frederic Taylor (as cited in Hatch, 2006). Taylor wrote about scientific management, explaining that scientific management is when rules, norms, and regulations are set for people to follow. This helps to facilitate work in any organization. He was looked upon as the father of scientific management and is commonly referred to as the father of Taylorism. Management is the attainment of organizational goals in an effective and efficient way through planning, organizing, staffing, directing and controlling organizational resources as has been demonstrated (Laub, Spillane, Halverson, & Diamond, 2006). The daily instructions issued for efficient and productive management and maintenance of an organization is the task of management. Management and leadership are two distinctive concepts but complement each other in terms of systemic actions and usage. Each has its own special functions and roles to play. Leadership neither replaces management nor management replaces leadership, they complement each other. Strong leadership with weak management does not forge the growth of an organization.

**Table 1.** Differences between Leadership and Management

Leadership	Management
Influence the relationship	Authority relation
Leaders and followers	Managers and subordinates
Intend real changes	Produce and sell good and / or services
Intended change reflect mutual purposes	Goods or services result from coordinated activities

Source: Leadership for the twenty-first century Rost (1993:149)

Influence relationship versus authority relationship is an important distinction because these differ due to the use of coercion (or not). In Rost's view, "influence" means that coercion should not be used, but he believes that "authority" will use it regularly to get things done. Leadership relationship is "multi-directional." Leaders are not the same as managers, but that followers can be managers, so as subordinates. (Rost, 1993:149 & Ryan 2007:2).

#### *2.4 Elementary forms of Leadership Styles*

Leadership styles are the strategic and methodical ways employed by leaders to encourage the ones they lead. Leadership styles should not be a "one size fits all" process. Leadership styles should be selective and adaptive to fit organizational, situational, groups, and individuals needs. It is therefore important for leaders to have a better understanding of the various leadership styles to remain dynamic and productive leaders as technology and knowledge keep increasing at the speed of light. Leadership styles can also be understood to mean the behavioural ways used by leaders when interacting with their co-workers. Leadership styles such as autocratic, democratic, and laissez-faire were the early leadership styles identified and used by many organizations and institutions (Lewin, Lippit, & White, 1939). In my view, leadership style, therefore, is the way or pathway employed by leaders to assist, direct and motivate, subordinates in the implementation of plans, and course of actions within an institutional set up. The four main basic leadership styles employed in the study included: Autocratic leadership style, Democratic leadership style, Bureaucratic leadership style and Laissez-faire leadership style (Stoner & Freeman, 1995). Leadership styles and their relationship to the various aspects of the organizational behavior have been studied extensively in other scientific research works.

##### *2.4.1 Democratic/Collaborative/Participative Leadership Style*

In a democratic ambience, all participants reserve the right to participate in the decision making process. Mostly, the leaders have the final decision making power. The process automatically encourages the institutional members to be creative and proactive. They are usually placed in charge of the decision making process and projects coordination. This style often comes with numerous opportunities and incentives. Thus; people's voices and opinions are heard and taken into consideration. The members within the team tend to have a comparative job satisfaction as compared to the other styles. And also, there is high productivity since they are more involved and take part in the organizational running. This style also helps in the personal and professional developments and efficiencies of the employees. The people in the team feel the recognition given to them as being part of a bigger and larger family. This makes them feel that they are useful in the organization and are so encouraged to do more than just to be interested in the financial rewards. One of the negative aspects of democratic leadership is that it can impede and stumble situations where urgency, speed or efficiency is required. For instance, the consensus approach often leads to filibuster and procrastination. Again, the decision process is time consuming and quite indefinite. Many scholars therefore maintain that this style is sometimes not the best (Campbell et al., 1993).

In terms of the leadership styles and their efficiencies and effectualities, it is believed that the

democratic leadership style is the most effective and efficient (Lewin et al., 1939). This means that if a leader's leadership style is to be measured in terms of his ability to maintain good team spirit and firm level of work in an institution, then democratic leadership style is the best. Democratic leadership can be seen as the one where parties see different aspects of a problem and constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible (Gray, 1989). Another name used in place of democratic leadership style is participative leadership style. This is because it gives room for the led to be involved in the decision making processes. The democratic managers usually inform their team members on issues and agendas on what to do on daily basis to ensure that the members are kept abreast on their responsibilities. Democratic leadership style is most effective when the leader wants to keep employees informed about matters that affect them and usually, leaders want employees to share their views and opinions in the decision-making and problem – solving duties (Harrison, 2004). Democratic leaders consult with their subordinates on proposed actions and decisions so that it will encourage participation from them (Wehrich & Koontz, 1993). Such type of leadership ranges from a person who does not take action without subordinates' concurrence to one that makes decisions but consults with subordinates before doing. A good democratic leader encourages participation and delegates wisely but never loses sight of the fact that he or she bears the crucial responsibility of leadership (Goodworth, 1988).

#### 2.4.2 Autocratic or Authoritarian Leadership Style

Autocratic leadership is the composite of the transactional leadership. Under this style, leaders have complete and absolute power over staff. The members in the team have little or no chance to make inputs in the organization, even if the suggestions were in the best interest of the institution or organization. Although many scholars consider this form of leadership to be harsh and single-handed, but it is amazingly efficient and effective. It deals away with filibuster and unnecessary delays. Projects implementation is quick and prompt. Some of the negative aspects of this leadership style is employee resentment. Also, everything ceases when the boss is not available. Again, it limits creativity since only the leader is repository of knowledge and ideas in the firm. The best time to use it is when there is crisis, where everything have to be decided faster and quicker without belabour.

Other studies point out that the effectiveness of group leaders is dependent on the criterion which was being used to assess the leadership (Smith & Peterson, 1988). This means that if leadership were assessed in terms of its productivity, then autocratic leadership style is the most efficient. It is a leadership style where managers retain much more power and decision making authority as possible (Vugt, 2003). Again, the leader neither asks employees nor receives their inputs. The workers are expected to comply with rules without questioning leadership. The workers are enjoined to follow a particular leadership style. This is to prevent the subordinates from taking a different view from the leader during decision making which the leader might consider sabotage when hard pressed with time. Within the school environment, this leadership style is restricted to a-one-way interaction and communication among heads of schools, teachers and students. The main duty of the teachers and students is to carry out the instructions issued by the leader.

### 2.4.3 Laissez-faire Leadership Style

Laissez-faire; from (French: Laissez-faire, lit. 'let do') is an economic system in which transactions between private parties are absent of any form of government intervention such as regulation, privileges, imperialism, tariffs and subsidies (see Wikipedia, 2020, para. 1). Laissez-faire leadership may be the best or the worst of the leadership styles (Goodnight, 2011). Other French phrases or terminologies translate Laissez-faire as “let them do what they wish.” or “let it be,” interpreting this under leadership lens means, leaders who give employees freedom to work on their own with minimal interference (see Wikipedia, 2020, para. 2). Leaders delegate duties to teammates and shy away from leadership responsibilities, they allow team members an uninterrupted freedom to determine their own work schedules from start to completion. There are no stringent rules and regulations to follow, which gives absolute independence or power to staff of the institution. Anyone who is assigned as the leader reluctantly declines to take actions that will be attributable his or her name should they fail. This always produces disastrous consequences (Afful-Broni, 2004). But, where the employees are professionals in the various disciplines, this system can work well without supervision. Notwithstanding the above facts, if laissez-faire leadership is not managed well can lead to indifference and lawlessness on the part of the led. One of the advantages of laissez-faire leadership is that it offers teammates enough autonomy and this often leads to maximum job satisfaction and increases productiveness. On the other hand, it can be disastrous if the members are not monitored well in regards to their time management, knowledge, skills, and motivation to do their work effectively without supervision. At institutions and organizations where authorities have limited managerial control over the management staff, laissez-faire leadership style is likely to take over (Ololube, 2013).

The laissez-faire leadership style involves non-interference policy, allows complete freedom to all workers and has no particular way of attaining goals. However, it is instructive to note that there is no one best leadership style. Laissez-faire style, involving avoidance or absence of leadership, provides no meaning or clarification of events for followers. Generally, laissez-faire leadership style is an effectual style to work with if and only if, the employees are well trained and experienced workers.

### 2.4.4 Bureaucratic Leadership Style

Bureaucracy can be defined as “an organizational structure that is characterized by many rules, standardized processes, procedures and requirements, number of desks, meticulous division of labor and responsibility, clear hierarchies and professional, almost impersonal interactions between employees” (Weber, 1947). Also, bureaucracy is a management system invented to handle state affairs and organize state relationships with its citizens (AlQahtani, 2013). This is how the standard procedures for taking records in an organization is done in terms of business transaction records, and the decision making processes within the administrative set up. Bureaucratic leaders strictly and stringently follow conventions without defiance, and make sure that their teammates also carry out instructions as dictated. This type of leadership is always good for high risk work areas such as big machinery firms, chemical and toxic infested working environments or some of the multi-million dollar companies



because of the high loss risk factors involved in such big corporations. Bureaucratic leadership is also useful in organizations where employees do routine tasks (Shaefer, 2005). The main challenge in this leadership style is that it is ineffectual and unproductive in groups and management systems that depend largely on “flexibility, creativity, or innovation” (Santrock, 2007).

Bureaucratic leadership is where leaders do things as stipulated “by the book.” Under this leadership style, everything must be done according to the rules and regulations. The leaders do not initiate any action on their own. They often turn to the immediate bosses for direction when something is not covered in the working or policy document. These types of managers are like other civil servants and public servants who go by the set rules and norms with little innovation and creativity when discharging their duties. They only act as rule enforcers.

In social and economic discussions, Weber came up with six ideal tenets of bureaucracy which are good for governance and organizational leadership. He worked extensively on different factors and elements of bureaucracy and their organization, this has created a theory on civil society and has been discussed and studied ever since. The discussions and studies focused primarily on the conditions and elements required for bureaucratic leadership to work efficiently. The six tenets form the conceptual and framework basis of bureaucratic leadership style. The six tenets range from strict and formal hierarchy to hiring based on technical proficiency. Hierarchy and high structures are a characteristic of bureaucratic structures as the most standard type of organization structures. The channel of communication within a bureaucratic institution is the top-down leadership approach. It works in the form of a triangular shape.

Again, bureaucracy is “characterized by well-defined roles and responsibilities, a hierarchical structure, and respect for merit” (Weber, 1948). This assertion is also held by the study outcomes on optimal hierarchical structures of organizations that can commit to their organizational structure, but not to long-term wages (Shin & Strausz, 2013). They came up with two results on vertical hierarchies with a more restricted communication approaches to increase incentive dynamism and information delivery and dissemination within an organization. The horizontal hierarchy approach allows more control and the optimal hierarchy depends on exchanges between information dissemination and control. This leadership approach is often based on promotions, and other rewards on long service rather than meritocracy.

### *2.5 Evidence about Leadership Effects on Students*

Many research point to the fact that school leaders’ leadership styles have significant impact on the students’ academic performance. Most of the qualitative studies conducted in some of the “exceptional school settings” attest to this fact (Gezi, 1990). Many scholars and research findings have suggested that the school settings impact students academic performance significantly. These studies based on their statistical analyses often give rise to significant leadership and its impact on not just students’ learning and academic performances but also on a catalogue of school conditions as well (Mortimore et al., 1993). Also, review studies between a period of eighteen years indicated that another source of evidence about school

leadership and its significant impact on students and their academic performances can be found in numerous quantitative research studies (Hallinger & Heck, 1996a, 1996b, 1998). Although, these review studies concluded that both action and inaction of the school leadership might be insignificant but they contribute significantly to educational growth. Leadership contributes only a minute percentage of about ten to twenty to the overall development of the students' academic performances (Creemers and Reezigt, 1996). In putting the significance of the school leadership on students' academic performances in the right context, many quantitative research on school leadership effectiveness indicate that "classroom factors explain slightly larger proportion of the variation in student achievement" (Hill, 1998).

### **3. Research Design and Methodology**

#### *3.1 Research Design*

The research method used in this work was qualitative research method and the research design used was phenomenological studies. The qualitative study was valid because of its accuracy, precision, reliability, flexibility, thoughtfulness and instrument dependability. This investigation, always provided room for differences and debate because facts may sometimes not be the truth. A case study was used because it gives a detailed study of an individual or group of people (Hughes, 1989). Also, case studies are special kinds of qualitative works which investigate contextualized contemporary issues. (Hatch, 2002). It could be a program, an event, a person, process, an institution or social group. Therefore a case study approach coupled with other instruments such as interviews and questionnaires give an in-depth investigation into the phenomenon. Again, phenomenological research allows the researcher to identify the essence of human experiences concerning a phenomenon, as described by participants in the study. Thus, the researcher suppressed his or her own experiences in order to understand those of the participants in the study. This research used a case study design of five Basic Schools (BS) for the survey and data collection. In that this type of research design would be more favourable due to its ability to facilitate and obtain maximum information within minimum time and space. The respondents and interviewees included headmasters, teachers, and students who were purposely selected for this study.

#### *3.2 Data Collection Procedures and Methods*

Data collection was in three ways thus; interviews and questionnaires, documentary analysis, and observations (non-participants). Using interview guide schedules, in-depth interviews were conducted with different respondents who were asked different sets of open-ended questions within their categories so that the desired answers could be obtained for the research. Other documents were also reviewed to enrich the work. An in-depth interviews can be defined as a "qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program or situation." (Boyce, 2006). The interviews were directed to ascertain the validity and detailed views and opinions on the subject of headmasters leadership styles in Basic Schools in Ghana.

The interview schedules were administered through face to face. Policy documents on this topic were reviewed and the results were used to come up with an understanding on some of the good leadership skills good for effective school functioning in terms of administration and management.

### *3.3 Sample Size*

The sample size used was forty respondents and interviewees in total. Thus; five heads of schools, three teachers from each school and four students from each school. The study focused on 40 respondents including headmasters, students, teachers and stakeholders in the Adansi-South District in Ghana who have similar characteristics and related issues concerning the topic.

### *3.4 Sampling Procedures*

The researcher used a purposive sampling technique to select the five Basic Schools out of the over one hundred schools. Additional questions were asked to clarify points, to generally ensure that the interview was to the situation. These interviews were directed to ascertain the validity and detailed views and opinions on the subject of leadership of the headmasters in Basic Schools Adansi-South District in Ghana. The interview schedules were administered through face to face.

### *3.5 Study area Description*

Study area in this context refers to the location where the research was conducted. In this case, the study took place in some selected Basic Schools (BS) in Adansi-South District in the Ashanti Region in Ghana. Adansi-South District was used due to the researcher's enormous engagement of his career in that location as well as the vast different resources, occupation, and lifestyles in that area. The area comprised of urban and rural towns and villages. This composition provided reliable data and unique characteristics because of the rural and urban elements. The target population for this study included all heads of schools, all teachers and all students of Basic Schools in Adansi-South District in the Ashanti Region of Ghana.

### *3.6 Data Analysis Procedures*

The data collected from the questionnaires, interviews, observation and documentary reviews were analyzed using qualitative methods of data analysis. Qualitative methods were used to provide an in-depth description of a specific process, behavioural pattern or setting and to add to the current and available knowledge in the field of study. The research used content analysis to analyze the data obtained. Content analysis is a technique that enables the researcher to study human behaviour in an indirect way through an analysis of communication (Fraenkel S. Wallen, 2000). The content analysis enabled the researcher to organize a large number of scientific and statistical data. It is done through the use of appropriate interpretation skills and knowledge.

## 4. Data Analysis and Results

### 4.1 Basic Demography on the Respondents

**Table 2.** Sex Composition

Respondents	Male	Female	Total	Male %	Female %
Headmasters	3	2	5	60	40
Teachers	10	5	15	60	40
Students	10	10	20	50	50

From the above data, it could be seen that the gender population distribution was as follows: the headmasters were five (5), 3 males and 2 females representing a percentage ratio of 60:40. The teachers were 15 and males to females distribution ratio was 10:5 representing a percentage ratio of 60:40. The students' population (20) were fairly distributed in a ratio of 10:10 and a percentage ratio of 50:50.

**Table 3.** Age of the Respondents

Age	Frequency (F)	Percentage (%)
Below 18	20	50
25-40	15	37.5
Above 40	5	12.5

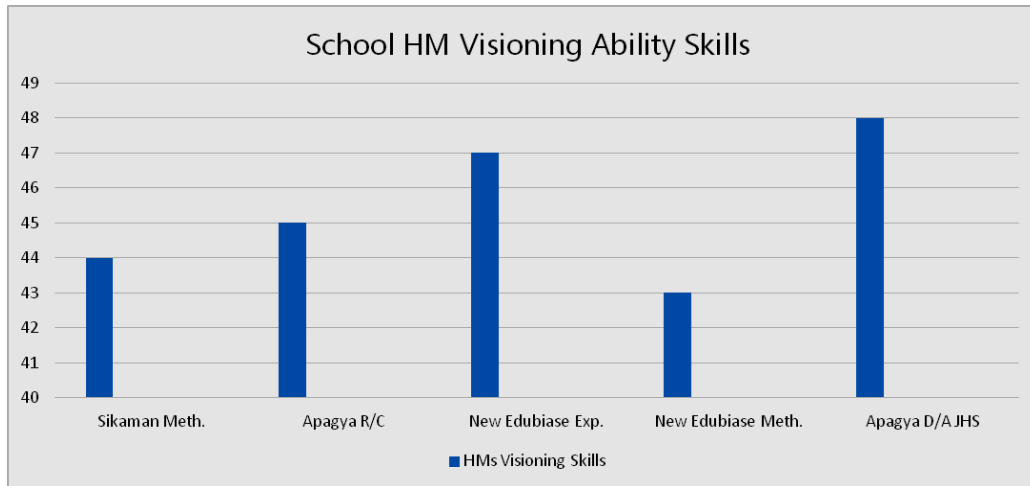
Majority of the respondents were students and their ages fell below 18. Those who fell between the age brackets of (15-16) were 50%, a frequency of 15 respondents who fell within the age brackets of 25-40 were (37.5%) and they were teachers. The oldest among them were the males with an average age of 38. The headmasters were 5 with a percentage mark of 12.5. Their ages range between 50 and 55. Out of the five, 3 of them were within the 55-year group and 2 of them were in their 50s. Some of them will be retiring in the next couple of years. Both teachers and students provided the information.

**Table 4.** Qualifications of the Respondents

Respondents	Diploma		Degree (B.Ed/M.Ed/MSc)		Students	
	Freq.	%	Freq.	%	Freq.	%
Headmasters	5	100	5	100	1	20
Teachers	15	100	10	67	-	-
Students	-	-	-	-	-	-

Majority of the teachers (headmasters and teachers) were qualified teachers holding a diploma in Education. 15 teachers had an undergraduate qualification in either B.Ed or B.Sc (67%). Only 1 (20%) of the headmasters had M.Ed. None of the classroom teachers had M.Ed. Neither of the students had any certificate or qualification.

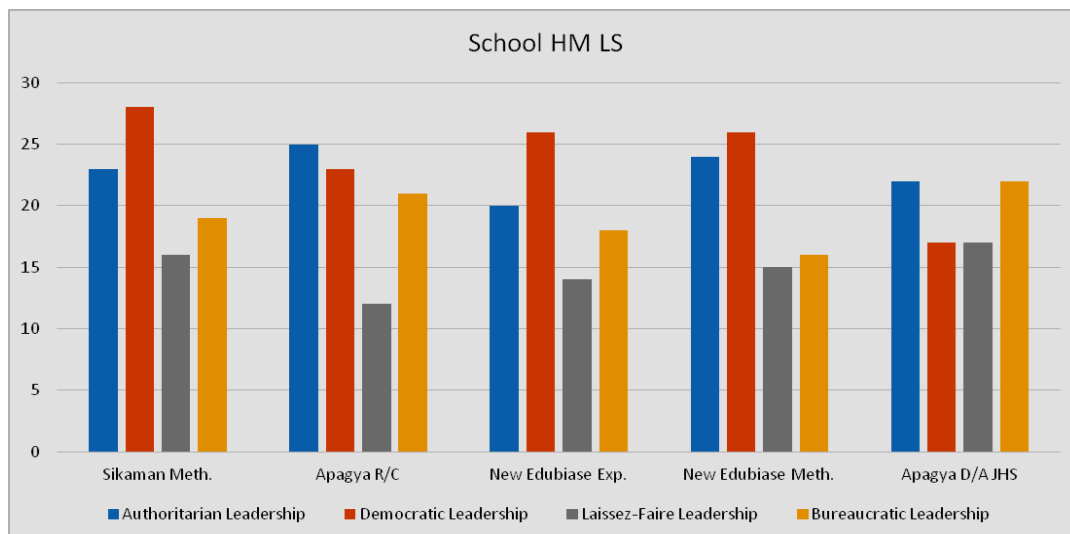
*4.2 School Headmasters Set Goals, Vision and Mission for Their Schools.*



**Figure 1.** Headmasters' Visioning Ability Skills

The researcher witnessed this vision and mission statements boldly and clearly posted on the notice board and office of these heads he visited. On the walls of the headmaster of Sikaman Methodist Basic school office, their vision and mission statements read as “our school's vision is to provide quality basic education in an effort to produce well-educated students with creative skills and respectful citizens in the Ghanaian society. And our school's mission is to improve teaching and learning environment which will promote academic excellence and responsibilities to our students which will be life vision.”

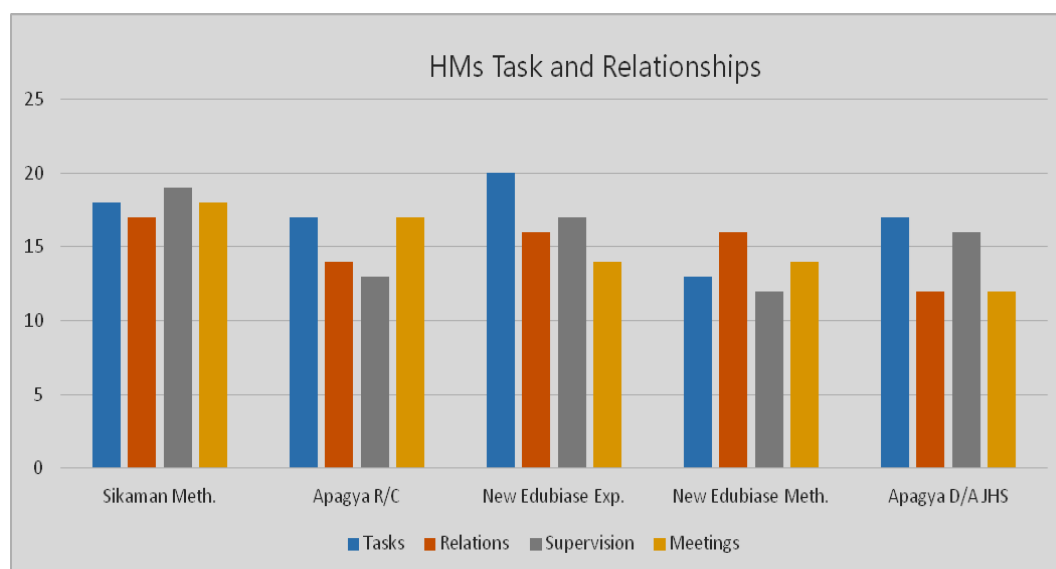
*4.3 Schools Headmasters' Leadership Styles*



**Figure 2.** The Schools' Headmasters' Leadership Styles

The above data showed an investigation conducted on the headmasters and their leadership styles – Authoritarian Leadership, Democratic Leadership, Laissez-faire Leadership and Bureaucratic Leadership—it was found out that, out of the total of the five (5) schools selected for this study, 3 (60%) of the headmasters said that democratic leadership is their dominant style and 2 (40%) said their preferred style is authoritarian leadership style. When they answered questions on why they preferred the kind of leadership style they use, the headmaster of Apagya Roman Catholic School said: "it gives an opportunity to every teacher in the school to express his/her opinion without limitations." The headmaster of Apagya Basic School also said: "I prefer this type of leadership style because it helps me to have full control in the school." On the leadership skill they preferred not to use, the headmaster master of New Experimental Basic School in New Edubiase said: "he said he preferred not to use laissez-faire. I think it does not ensure productivity in schools."

#### 4.4 Schools Headmasters' Task and Relationship



**Figure 3.** The Relationship between Headmasters' Leadership Styles and Their Significant Impact on Students' Performance and Teachers Development

The above data was designed to measure the headmasters' tasks, relationships, supervision and meeting-oriented leadership behaviours. The least range of mark was between 5-9 and the highest range was between 16-20. From the data, the headmaster that scored the highest mark was in task-oriented leadership behaviours that is New Edubiase Experimental School with a scoring rate of 20, it was followed by Sikaman Methodist 18, Apagya D/A Basic School headmaster and Apagya R/C Primary School headmaster were the next to score 17 each and New Edubiase Methodist headmaster scored 13. In a relationship-oriented task, the highest mark 17 was obtained by Sikaman Methodist headmaster. From the data above, it could be seen that each headmaster had his or her strengths and weaknesses in one of the categories which was measured. For example, the headmaster of Sikaman Methodist Basic School had his strengths in the relationship-oriented task and weaknesses in meetings. The

others also had similar situations.

## 5. Discussion

### *5.1 Discussion on the Research Questions for This Study*

To begin discussions on the study questions and results, a brief remarks should be made on the features and attributes of the respondents. The findings of this study indicated that a large number of the respondents were between the ages of 15 and 45. It is instructive to know that most of the teachers and headmasters interviewed held Bachelor and Master Degrees in education. 60% were of the male, 40% were of the female. Many of them have experienced internal promotions in their present organizations within the 3 and 10 years. Majority of the respondents were students and their ages fell below 18 (15-16). The respondents had been working between 5 and above years and have acquired good working experience. 11 (55%) had been working for 5-15 years, 5 (25%) had been working for 15 years and above, 4 (20%) of them had been working between 1 and 5 years. Many of the teachers (40%) had not been working in the same school for more than 5 years. Seven (7) teachers (35%) had been working in their current schools for about 5-15 years under different heads. Five (5) of them had worked in their current schools for above 15 years and these are mostly the headmasters. Those teachers were able to provide very relevant information relating to the leadership styles of their headmasters and other issues relating to the administration and management of the schools. It was found out from the research that most of the headmasters stuck to the use of democratic leadership style and a very minute of them preferred the laissez-faire leadership style. The study findings also indicated that many of the headmasters had administrative, interpersonal and conceptual skills.

The findings underscore the significance of heads of institutions and their subordinates and the way the organizations communicate; similar studies results have shown that supervision and communication from the leadership to be important factors in terms of subordinates' or employees' motivation. The findings from this study were backed by previous studies which also used Multi-factor Leadership Questionnaire (MLQ) and the full range leadership development behaviours in various organizations (Bass & Avolio, 1994). The findings were supported by previous research works in the field of study. The results show the significant and positive influence of transformational leadership factors school leaders use to influence, impact and improve students' academic performances and the negative impact of laissez-faire leadership on subordinates' motivation and performance (Bass and Avolio et al., 1994). The study outcomes were consistent with some previous findings which indicated that promises and rewards promised to employees when delivered and honored impact and influence their productivity. Rewarding and encouraging are consistently considered by academics and scholars as the most significant motivators (Snape, 1996 and Erkutlu, 2008).

The results of this work also showed that most of the employees of the institutions used for the study were seen to be loyal to the institutions, while an insignificant percentage were found to be either neutral or disloyal to the organizations. The study outcomes were in

consistently agreed with the hypothesis that the majority of the leaders and their impact were found to be extremely significant to their organizations. Out of the many leaders used for the study, majority of them are well experienced and have held many positions before. The male category dominated the organizations and positively affects their level of loyalty to the institutions.

### *5.2 The Significant Effects of the Leadership Styles on Performance*

Diverse issues demand diverse forms of leadership styles. In the most pressing situations where there is limited time to make a quick decision on what needs to be done, the more experienced teammate with professional and technical-know-how can make the decision on behalf of the other teammates under autocratic leadership. However, under working conditions and ambience where democratic and participative principles are strongly adhere to, the best leadership style to operate with is democratic or delegative leadership style. This leadership style offers people the opportunity to feel being part of the organization. The team members are able to achieve and attain the set goals of the team members and the institution under the directives of a competent leader. Research has also shown that there is no one particular leadership of headmasters which can have a holistic transformation on the learners rather every situation demands different leadership style to effect the change needed.

#### *5.2.1 Findings on Autocratic Leadership Style and its Effects on Performance*

The findings on this type of leadership were found to work well on the students but not the teachers. All the headmasters interviewed indicated that since the child is under control and sometimes tries to do things according to their own free will, it was better whenever these leadership styles were used to control them. The teachers felt that decision making is left solely in the hands of the leader and they do not say in the school whenever this method is used. Only one person has the full authority and power over the followers or workers under this style (Adair J., 2005). His decision would be viewed and taken as the golden rule and should never be questioned and cannot be interrupted by anyone. The autocratic style may show great results in a short time period. However, excessive use of authority will distort productivity in the long term (Dawson C., 2002)

#### *5.2.2 Findings on Democratic Leadership Style and its Effects on Performance*

The findings from the study indicated that almost all the headmasters were very familiar with this type of leadership. In the interview, the researcher observed that the headmasters prefer this style to the other because of the nature of this leadership style and probably because of the governance system in their country. The headmasters said they like this style because it promotes sharing of responsibility, a delegation of duty, and also it promotes a good working atmosphere in the school. Posited that “under the democratic style promote the sharing of responsibility, the exercise of delegation and continual consultation.” (Heneman & Gresham, 1999). Democratic leadership style is often deemed a beneficial majority of companies (Milgron P., et al., 1991). This leadership style pays more attention to the managerial departments that offer directions and assistantship to team members and the other managerial staff. They also give listening ears to the group members’ submissions and suggestions for



further considerations.

### 5.2.3 Findings on Laissez-Faire Leadership Style and its Effects on Performance

The Laissez-faire leadership style was found not to be used by many of the headmasters when interviewed. They thought that it was not the best kind of leadership style to be used, in that, it does not ensure efficiency and productivity in the schools. They also agreed that this LS does not help in conflict resolution among staff. Research shows that laissez-faire leadership is seen by most leaders as an inefficient style when used in conflict resolution and mediation situations (Bass, Avolio, & Bruk-Lee, 2007). Modern leaders are supposed to apply efficient and productive schemes and techniques to settle and resolve conflicts and misunderstanding to improve the intra-group working atmosphere as indicated (Newman & Grigg, 2008). Generally, the laissez-faire leadership style becomes an effective style only when the workers are well trained professionals, experienced and well-educated. Since they are professionals, they make sure that they succeed at their works under little or no supervision.

### 5.2.4 Findings on Bureaucratic Leadership Style and its Effects on Performance

The study also found out that the bureaucratic leadership is not the best type of leadership because they thought that it is too "bookish" and "rigid". Everything has to be decided at the top and it stifles creativity and initiatives. Research have shown that "bureaucratic leadership is significant in institutions where workers undertake daily tasks assigned to them." (Shaefer, 2005). One of the negative aspects of this leadership style is that it is unproductive in groups and institutions. It stifles ingenuity and productivity (Santrock, 2007). It does not work efficiently in institutions that rely mostly on flexibility, creativity, or innovation. The performance of institutions are measured based on the degree or magnitude of the institution's performing abilities and track records against their performance indicators and contract terms of reference. This stems from the principle that institutions are structures set up to execute specific mandates and objectives steadily, offer others chance to work in that institution to help the organization achieve its purposes and aims. Organizational performance can be quantified and optimized only when their achievements can be measured in relation to how they used the available resources to achieve the set targets. Productivity and efficiency is about achieving positive outcomes with what goes into an institution and what comes out of it. Other research studied have also indicated that the quality scorings of bureaucratic leadership style have been factored in the indices of institutional quality as demonstrated (Rauch & Evans, 2000).

## 6. Conclusion and Recommendations

Diverse issues demand diverse forms of leadership styles. In the most pressing situations where there is limited time to make a quick decision on what needs to be done, the more experienced teammate with professional and technical-know-how can make the decision on behalf of the other teammates under autocratic leadership. However, under working conditions and ambience where democratic and participative principles are strongly adhere to, the best leadership style to operate with is democratic or delegative leadership style. This

leadership style offers people the opportunity to feel being part of the organization. The team members are able to achieve and attain the set goals of the team members and the institution under the directives of a competent leader. Research has also shown that there is no one particular leadership of headmasters which can have a holistic transformation on the learners rather every situation demands different leadership style to effect the change needed.

Therefore, for an institution to move forward in a positive direction, it is significant to comprehend the indicators that affect institutional leadership, behaviour and employees' mindset and how they behave. This study was conducted to find out some of the relevant factors that determine leaders performance and how their leadership styles impact the led and also to see if leadership rewards and motivates the led to bring out their best to affect the institutions they lead. The literature reviewed for the study showed that the factors that were tested about the leadership styles of the heads of schools were significant determining factors for any institutional success, being it public or private. The Basic Schools which were chosen fit for the study and its findings. Some of the major findings and conclusions of the study were:

It was found from the study that students performances are greatly influenced by the school managers and leaders no matter the amount of input they contribute. The small amount of input they contribute go a long way to affected their overall performance in the future.

Findings from the under-studied schools showed that some of the school managers do not make productive and efficient use of the schools' goals, visions and missions statement. Also, it was discovered that school principals who used too much laissez-faire and autocratic leadership styles were not successful in the implementation their schools' goals, vision and mission statements. The managers and administrators who were able to succeed were those who combined both democratic and autocratic leadership styles. They were more successful in the implementation and monitoring processes of the schools' goals, visions and missions as well as teachers' and students' performances monitoring.

One of the recommendations was that the heads of schools must provide teachers with the necessary schemes of work, lesson plans, teaching aids, lesson notes, exercise books, textbooks, laboratories, individual subject log books and other useful teaching and learning aids. Students must also be provided with adequate teaching and learning aids such as textbooks for each subject, furniture, laboratories and enough teachers for each subject. It was also recommended that regular and continuous performance appraisal and auditing be conducted on the students, school heads, teaching staff, and departmental heads to monitor, supervise, inspect their progress.

## References

- Abraham, R. (1999). The Relationship between Differential Inequity, Job Satisfaction, Intention to Turnover and Self-esteem. *The Journal of Psychology*, 133(2), 205-215. <https://doi.org/10.1080/00223989909599734>

- Abrams, M. (1985). *New Perspectives*, 17(2), 15-18.  
<https://doi.org/10.1097/00152193-198508000-00011>
- Adelman, N. E., & Walking-Eagle, K. P. (1997). Teachers, time, and school reform. In A. Hargreaves (Ed.), *Rethinking educational change with heart and mind: The 1997 ASCD yearbook* (pp. 92-110). Alexandria, VA: Association for Supervision and Curriculum Development.
- Afful-Broni, A. (2004). *Theory and practice of educational leadership in Ghana*. Accra: Yamens Press Ltd.
- Afful-broni, A. (2013). Time management behaviour among academic and administrative staff of the University of Education, winneba. *Development research (jecdr)*, 1(3), 67-78.
- Afful-Broni, A., & Nanyele, S. (2012). Factors influencing worker motivation in a private African university: Lessons for leadership. *Creative Education*, 3(03), 315.  
<https://doi.org/10.4236/ce.2012.33050>
- Ahn, M., Adamson, J. S., & Dornbusch, D. (2004). From Leaders to Leadership: Managing Change. *Journal of Leadership & Organizational Studies*, 10(4), 112-124.  
<https://doi.org/10.1177/107179190401000409>
- Aiken, L. R. (1997). *Psychological testing and assessment* (9th ed.). Allyn & Bacon.
- Ali, S. (2003). *Comparative Study of the Leadership Style Interpersonal Relationship and Effectiveness of recruitment and promoted Principals of Delhi*, MA Thesis. A central University. Retrieved from <http://www.jml.nic.In/researchab2002education.Shamshadi.Him>
- Allensworth, E., & Miller, S. (2002). *Declining high school enrollment: An exploration of causes*. Chicago: Consortium on Chicago School Research.
- Anakwe, U., & Greenhaus, J. (1999). Effective Socialization of Employees: Socialization Content Perspective. *Journal of Managerial Issues*, 11(3), 315-330.
- Anderson, J. R., Reder, L. M., & Simon, H. A. (1996). Situated learning and education. *Educational Researcher*, 25(4), 5-11. <https://doi.org/10.3102/0013189X025004005>
- Anderson, S. E. (1991). Principal's management style and patterns of teacher implementation across multiple innovations. *School Effectiveness and School Improvement*, 2(4), 286-304. <https://doi.org/10.1080/0924345910020403>
- Anderson, S. E. (1992). Building collegiality: Innovation vs. school improvement approach. *The Canadian School Executive*, 12(1), 3-8.
- Andre, R. (1995). Leading Diverse Management Teams in Logistics. *Journal of Business Logistics*, 16(2), 65-84.
- Atkinson, T. S. (1998). *We're not just whistling Dixie: Policymakers' perspectives on state*

- education reform*. Education. Greensboro, University of North Carolina.
- Baker, E. (2002). *Validity issues for accountability systems*. University of California, Los Angeles. <https://doi.org/10.1037/e647292011-001>
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.
- Barley, S. R. (1996, September). Technicians in the workplace: Ethnographic evidence for bringing work into organizational studies. *Administrative Science Quarterly*, 41(3), 404-441. <https://doi.org/10.2307/2393937>
- Barth, R. (2001). *Educating by heart*. San Francisco: Jossey Bass.
- Basom, M., Yerkes, D., Norris, C., & Barnett, B. (1996). Using cohorts as a means for developing transformational leaders. *Journal of School Leadership*, 6(1), 99-112. <https://doi.org/10.1177/105268469600600105>
- Bass, B. (1997). Does the transactional/transformational leadership transcend organizational and national boundaries? *American Psychologist*, 52, 130-139.
- Bass, B. M. (1990). From Transactional to Transformational Leadership: Learning to Share the Vision. *Organizational Dynamics*, 18, 19-32. <https://doi.org/10.1037/0003-066X.52.2.130>
- Bass, B. M. (2001). *Transforming leadership*. New York: Lea Publishers.
- Bass, B. M., & Avolio, B. J. (1994). *Improving Organizational Effectiveness through Transformational Leadership*. Thousand Oaks, CA: Sage Publications.
- Bateman, T. S., & Snell, S. A. (1999). *Managing: Building a competitive advantage*. Boston: McGraw-Hill Companies, Inc.
- Bateman, T. S., & Zethaml, C. P. (1993). *Management: Functional Strategy*. Boston: Irwin.
- Brahamson, E., & Fombrun, C. J. (1994). Macrocultures: Determinants and consequences. *Academy of Management Review*, 19(4), 728-755. <https://doi.org/10.5465/amr.1994.9412190217>
- Campbell, C., & Swift, C. (2006). Attributional Comparisons across Biases and Leader-Member Exchange. *Journal of Managerial Issues*, 18(3), 393-410.
- Caudron, S. (1994). Diversity Ignites Effective Work Teams. *Personnel Journal*, 73, 54-63.
- Chatman, J. A., & Flynn, F. J. (2001). The Influence of Demographic Heterogeneity on the Emergence and Consequences of Cooperative Norms in Work Teams. *Academy of Management Journal*, 44, 956-974. <https://doi.org/10.2307/3069440>
- Chattopadhyay, P. (2003). Can Dissimilarity Lead to Positive Outcomes? The Influence of Open Versus Closed Minds. *Journal of Organizational Behavior*, 24(3), 295-312. <https://doi.org/10.1002/job.188>

- Chemers, M. M., Oskamp, S., & Costanzo, M. A. (1995). *Diversity in Organizations: New Perspectives for a Changing Workplace*. Thousand Oaks, CA: Sage.
- Chen, H. H. (2007). *Principals' distributed leadership behaviors and their impact on student achievement in selected elementary schools in texas*. texas a&m university.
- Chen, J., & Silverthorne, C. (2005). Leadership Effectiveness, Leadership Style and Employee Readiness. *Leadership and Organizational Development*, 26(4), 280-288. <https://doi.org/10.1108/01437730510600652>
- Cohen, S. G., & Bailey, D. E. (1997). What Makes Teams Work: Group Effectiveness Research from the Shop Floor to the Executive Suite. *Journal of Management*, 23, 239-264. <https://doi.org/10.1177/014920639702300303>
- Cox, T., & Nkomo, S. (1990). Invisible Men and Women: A Status Report on Race as a Variable in Organization Behavior Research. *Journal of Organizational Behavior*, 11, 419-431. <https://doi.org/10.1002/job.4030110604>
- Creswell, J. W. (2016). *30 essential skills for the qualitative researcher*. Thousand Oaks, CA: Sage.
- Creswell, J. W., & Brown, M. L. (1992, fall). How chairpersons enhance faculty research: A grounded theory study. *The Review of Higher Education*, 16(1), 41-62. <https://doi.org/10.1353/rhe.1992.0002>
- Creswell, J. W., & Guetterman, T. (in press). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (6th ed.). Upper Saddle River, NJ: Pearson.
- Cunningham, G. B., & Sagas, M. (2004). The Effect of Group Diversity on Organizational Commitment. *International Sports Journal*, 8(1), 124-131.
- Dinham, S. (2007). How schools get moving and keep improving: Leadership for teacher learning, student success and school renewal. *Australian Journal of Education*, 51(3), 263-275. <https://doi.org/10.1177/000494410705100304>
- Dion, K. L. (2000). Group Cohesion: From Field of Forces to Multidimensional Construct. *Group Dynamics: Theory, Research and Practice*, 4, 7-26. <https://doi.org/10.1037/1089-2699.4.1.7>
- Duemer, L. S., Christopher, M., Hardin, F., & Olibas, L. (2004). Case Study of Characteristics of Effective Leadership in Graduate Student Collaborative Work. *Education Chula Vista*, 124, 721-726. <https://doi.org/10.2307/2667087>
- Edwards, A. K. (2009). *Professional citizenship and otherness leadership development: Examining the relationships among meaning, moral reasoning, and diversity competencies of graduate students*. Bowling Green State University.
- Ely, R. J., & Thomas, D. A. (2001). Cultural Diversity at Work: The Effects of Diversity Perspectives on Work Group Processes and Outcomes. *Administrative Science Quarterly*, 46(2), 229-273.

- Fiedler, F. E. (1967). *A Theory of Leadership Effectiveness*. New York, NY: McGraw Hill.
- Foldy, E. G. (2004). Learning from Diversity: A Theoretical Exploration. *Public Administration Review*, 64(5), 529-538. <https://doi.org/10.1111/j.1540-6210.2004.00401.x>
- Fujimoto, Y., & Hartel. C. E. (2004). A Field Test of the Diversity-openness, Moderator Model in Newly Formed Groups: Openness to Diversity Affects Group Decision Effectiveness and Interaction Patterns. *Cross Cultural Management*, 11(4), 4-14. <https://doi.org/10.1108/13527600410797918>
- Gil, F., Rico, R., Alcover, C., & Barrasa, A. (2005). Change-oriented Leadership, Satisfaction and Performance in Work Groups: Effects of Team Climate and Group Potency. *Journal of Managerial Psychology*, 20(3/4), 312-328. <https://doi.org/10.1108/02683940510589073>
- Harris, P. (1996). Diversity in the Global World Culture. *Equal Opportunities International*, 15(2), 36-51. <https://doi.org/10.1108/eb010662>
- Harrison, D., Price, K., & Bell, M. (1998). Beyond Relational Demography: Time and the Effects of Surface and Deep-Level Diversity on Work Group Cohesion. *Academy of Management*, 41(1), 96-108. <https://doi.org/10.2307/256901>
- Hofstede, G. H. (2001). *Culture's Consequences: International Differences in Work-Related Values*. Thousand Oaks, CA: Sage, 1980 (revised and expanded in 2001).
- Horn, P. W., Griffeth, R. W., & Sellaro, C. L. (1984). The Validity of Mobley's (1977) Model of Employee Turnover. *Organizational Behavior and Human Performance*, 34, 141-174. [https://doi.org/10.1016/0030-5073\(84\)90001-1](https://doi.org/10.1016/0030-5073(84)90001-1)
- Hostager, T., & DeMeuse, K. (2002). Assessing the Complexity of Diversity Perceptions: Breadth, Depth, and balance. *Journal of Business and Psychology*, 17(2), 189-206. <https://doi.org/10.1023/A:1019681314837>
- House, R. J. (1971). A Path-Goal Theory of Leader Effectiveness. *Administrative Science Quarterly*, 16(3), 321-328.
- House, R. J. et al. (eds.) (2004). *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*. Thousand Oaks, CA: Sage.
- House, R. J., & Dessler, G. (1974). *Path-Goal Theory of Leadership: Some Post Hoc and a Priori Tests*. Carbondale, IL: Southern Illinois University Press.
- House, R. J., & T. R. Mitchell. (1974). Path-Goal Theory of Leadership. *Journal of Contemporary Business*, 3(Fall), 81-97. <https://doi.org/10.2307/2391905>
- Kouzes, J. M., & Posner, B. Z. (2006). *The leadership challenge* (Vol. 3): John Wiley & Sons.
- Lin, N. (1999). Building a network theory of social capital. *Connections*, 22(1), 28-51.
- Maslow, A. H. (1954). Motivation and personality. *Hoper & Row, EUA*, 80-106.

- NSUBUGA, Y. K. (2008). *Analysis of leadership styles and school performance of secondary schools in Uganda*. Nelson Mandela Metropolitan University.
- Paul, H., Blanchard, K. H., & Johnson Dewey, E. (2001). *Management of organizational behavior: Leading human resources*. New Jersey: Prentice-Hall.
- Rosenbach, W. E., & Taylor, R. L. (1989). *Contemporary issues in leadership*. Westview Press.
- Snowden, P. E., & Gorton, R. A. (1998). *School leadership and administration: Important concepts, case studies, and simulations*. McGraw-Hill Companies.
- Waters, J. T., Marzano, R. J., & McNulty, B. (2004). Leadership that Sparks Learning. *Educational leadership*, 61(7), 48.
- Waters, T. J., & Marzano, R. J. (2006). *School District Leadership That Works: The Effect of Superintendent. Leadership on Student Achievement*. A Working Paper. Mid-continent Research for Education and Learning (McREL).
- Waters, T., & Cameron, G. (2007). *The Balanced Leadership Framework: Connecting Vision with Action*. Midcontinent Research for Education and Learning (McREL).
- Wikipedia, (2020). Laissez-faire leadership styles. *Laissez-faire, paras. 1&2* <https://en.wikipedia.org/wiki/Laissez-faire>.

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