

Assessing the Effectiveness of Leadership Styles and Achievement of Students in the Colleges of Education

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Abstract: The study assessed the effectiveness of leadership styles and achievement of students in the Colleges of Education in Ghana. The descriptive cross-sectional survey design was employed in the study. A multi-stage sampling procedures were used in selecting the sample. In all, 10 principals and vice principals as well as 15 teachers and 125 students were selected from five Colleges of Education to participate in the study. Leadership Questionnaire was self-developed to collect data from the respondents. Structural Equation Model was used as the statistical tool in validating the questionnaire as well as testing the hypothesis. The convergent validity results revealed that leadership questionnaire have some amount of convergence validity. The factor loadings requirement was met by leadership questionnaire. The study found that leadership questionnaire has partial discriminant validity. The validity of the leadership questionnaire in the Ghanaian setting is limited, according to our analysis. While some of the study' indicators demonstrated a satisfactory level of validity, others did not. With the exception of two items, all of the factor loadings satisfied the 0.30 requirement. In contrast, the AVEs were poor for three of the subdimensions that did not meet the 0.50 threshold. In addition, while the estimated indices were close to the standard criterion, the majority of the model fit indices departed from the criteria provided. The findings again, showed that leadership styles; authoritarian and democratic were not significant predictors of students' academic achievement. Laissez-faire was only the leadership style that predicted students' academic achievement in the Colleges of Education in Ghana. The study recommended that principals in the Colleges of Education should make use of different combination of leadership styles to enhance smooth running of the Colleges of Education in Ghana.

Keywords: Leadership styles and academic achievement

I. INTRODUCTION

Mass education at the colleges of education, however, may require new leadership method in order to increase competence and effectiveness. Improved competence is desired and can be attained through management reforms, raising the learner teacher ratio, increasing teachers time on task, reducing repetition and improving accountability (Nsubuga, 2003). Through inefficiency much learning time is

lost in many Sub-African education system. Twenty five percent or more of school days may be lost each year in mostly poorly managed schools (Lewin, 2006). Leadership is indispensable for a successful school development. Leadership focuses on vision, and motivation in school. More specifically, leadership helps schools set academic standards, goals and mode of behaviour in the entire school community (Coyle, 2012). School leadership enhances learners' outcomes through creation of an environment where learning permeates the institution culture. This means that a school leader is able to promote a shared vision, mobilize people, lead curriculum and pedagogical practice, administrate effectively and reflect critically on all practice in the institution.

One of the most difficult tasks for leaders is to channel human capital's potential into educational goals and outcomes. Leaders can't solve problems on their own. As a result, a major focus is placed on encouraging teamwork and effective leadership (Jones & Rudd, 2008). The cooperation of subordinates is required for the leader to conduct leadership. In this scenario, leadership only occurs until other members of the group acknowledge it. In their ability to establish and maintain connection, leaders tend to stand out from followers. These leaders help individuals with limited abilities to participate more fully, accept a wide range of personalities, and are particularly tolerant of deviations (Bass, Avolio, Jung, & Berson, 2003). Principals in the Colleges of Education are accountable for improving the quality of teaching and learning, as well as student achievement. Setting high expectations, as well as monitoring and evaluating the effectiveness of learning outcomes, are all part of this process. Successful educational leaders are also concerned in the curriculum of their students, since it contributes to academic achievement and general growth (Cotton, 2003). Effective educational leadership improves both student learning and teacher instruction by facilitating an effective educational environment (Rashid, Amin, & Shabir, 2019). Principals' leadership styles have an impact on the teaching and learning process as well as the students' personal development.

The ability to conduct is known as leadership. According to Musaaazi (1982), leadership is the ability to persuade others to work towards achieving educational goals. According to Achieng (2000), leadership is described as the ability to absorb and translate concepts, rules, regulations, and procedures in order to direct subjects in completing a mission within a set mandate. On the other hand, Okumbe (1998) defines leadership style as the behaviours used by leaders to push subordinates to reach educational goals. It's also a method by which a principal affects a teacher or a group of teachers to achieve educational objectives (Adeyemi, 2006). School leadership involves inspiring and supporting others towards the achievement of the school vision which is based on clear personal and professional value. Essential functions of school leadership involve traditional competencies of integration, coordination, assimilation of details, capacity for multi-perspectives, diplomacy and core-business competency (Budohi, 2009). School principals therefore have to embrace the best practices to be effective and efficient by creating and sustaining a competitive school. Principals have to develop and implement strategic school improvement plans and provide instructional guidance to improve learning

Academic achievement is interpreted as a yearly adequate progress of successful school activities (Wahab, Rahmat, Yosuf, & Mohamed, 2015). As a result, the sort of leadership styles used by principals has a direct impact on school accomplishment. This is due to the fact that a principal's leadership style is thought to be a crucial component in achieving educational goals (Drewziecka & Roczniowska, 2018). Principals indirectly influence student achievement by setting school-wide goals, setting high expectations, allocating resources, organizing classrooms, creating an orderly environment and communicating with parents and community members, training teachers in instruction, visiting classrooms and frequent teacher supervision and evaluation (Griffith, 1999). Interactions between principals and teachers have an impact on a leader's influence on student achievement. Identifying objectives, allocating time in classroom instructions, and offering help and direction are all examples of interactions between principals and teachers (Eberts & Stone, 1988). With this background the study intends to look at assessing the effectiveness of leadership styles and achievement of students in the Colleges of Education in Ghana.

Much of the existing research on leadership claims that it has just a minor impact on student achievement (Ross & Gray, 2006). According to Kruger, Witziers, and Slegers (2007), leadership no longer has a direct impact on academic achievement, but instead has an indirect impact on instructional organization and culture. With this assertion, this study intends to conduct a research to confirm or disconfirm the assertion made by Kruger, Witziers, and Slegers (2007). Again, the majority of research has focused on the impact of leadership styles on teacher performance (Abwalla, 2014). Atif, Sarfraz, Hong-biao, and Congman (2000), for example, looked into principal leadership styles and teacher job

performance. The survey included a total of 253 middle management employees. The structural equation modeling findings demonstrated that the directed leadership style had a significant impact on teacher job performance. Based on the prevailing literature, majority of the previous studies were conducted in Western and accordingly, their findings are likely to be less applicable in the Ghanaian context because leadership styles and academic achievement among students are likely to differ between Ghana and other countries due to diverse cultures, values, and beliefs (Agormedah, Britwum, Amoah, Acheampong, Adjei, & Nyamekye, 2021) It has therefore become necessary to assess the effectiveness of leadership styles and achievement of students in the Colleges of Education in Ghana. To fill this gap in the existing literature, the present examination proposed this research hypothesis;

H1: Leadership styles will not predict students' academic achievement in the Colleges of Education in Ghana.

II. MCGREGOR'S X AND Y THEORY

Theory X and theory Y, developed by McGregor in 1960, are essential theories for understanding the link between leadership styles and school success. Based on the productivity of humans, this hypothesis involves two extreme assumptions (Gyasi, Xi & Ampomah, 2016). Theory X managers are pessimistic, believing that people are unwilling to work unless they are directed, supervised, or monitored to achieve organizational goals, whereas theory Y managers are optimistic, believing that people are willing and ready to work on their own if they are properly motivated (Lin, 1999). As a result, school principals who believe in theory X are more likely to use the authoritarian leadership style, whereas those who believe in theory Y are more likely to use democratic leadership style. Some school principals, on the other hand, may use a combination of theories X and Y depending on the situation.

III. GREAT MAN AND TRAIT THEORY

The long-established theory of the great man believes that leaders are born with qualities that inspire people to follow them. The great man leadership theory also assumes that great leaders are born to lead people (Swanepoel, Erasmus, Van Wyk, & Schenk, 2000). In terms of the great man theory, it is postulated that such leaders arise when the need presents itself. In turn, the trait theory is based on the great man theory. The trait approach identifies leadership as the main key of institution effectiveness and performance. Zaccaro (2007) states that both the great man theory and trait perspective presupposes that great leader naturally have qualities that differentiate them from other people. Sashkin and Sashkin (2003) refer to the work of researchers like Stogdill (1974) in their attempt to determine the specific characteristics of great leaders and find that leaders are bit cleverer, more sociable, innovative, accountable, "taller and heavier than average people." However, Ricketts (2009, p. 2) found that even if some traits are common to many leaders,

the overall evidence suggests that a leader may not be a leader in all types of situations because one who is “an effective leader in one situation may not be an effective leader in another situation”. As Hayward (2005) explains, the leadership trait theory focuses on a leader’s personality, physical appearance, social background, intelligence and ability and this theory proposes that leaders are naturally effective because of the traits or qualities with which they are gifted by nature.

IV. CONCEPTUAL REVIEW

4.1. Autocratic Leadership Style

A leader that strives to exercise tremendous control through reward and pressure to influence his or her followers, focusing his or her attention on the product rather than human needs, is described as autocratic leader (Bogler, 2001). All decision-making processes in this type of leadership is leader-centered. Autocratic leadership style is effective in providing the leader with strong motivation. This leadership style also allows the leader to make judgments rapidly since he or she makes decisions for the entire staff and keeps each decision confidential until he or she has to reveal it (De-Cremer, 2006). The leader instructs group members on how to perform duties but fails to keep a clear line of communication between himself and his followers. He or she does not give authority to subordinates or allow them to participate in policymaking (Smylie & Jack, 1990; Hoy & Miskel, 1992; John, 2002). While the leader is monitoring, activities are usually completed quickly and less time is spent on discussion, tension is minimized as a result of increased control, and the group can be more productive. According to Adeyemi (1998) the authoritarian or autocratic leadership style is used when leaders tell their employees what to be done and how to accomplish it, without getting the advice of followers. It can be said that authoritarian leadership style should normally be used on rare occasions. This often results in disputes in an institutions or organization hence affecting the achievement of the overall goals and objectives.

4.2. Democratic Leadership Style

Democratic leadership style is one that encourages workers' "humanness," "teamwork," and "participation" (Peteman, 2000, p. 7-11). It is the most practical approaches for allowing employees to freely express their ideas or opinions within the institution for which they work. Democratic is a term used by leaders to engage people in managerial tasks by providing direction and support. "Democratic leadership comprises a participative leadership style, guides employees to participate in their groups and make decisions" (Goleman (2007, p. 20). This permits member of the group to feel more involved in the organization's procedures, as well as more driven and innovative. The benefit of democratic leadership style is that everyone in the group has a say, and power is transferred from the leader to subordinates, allowing group members to express their knowledge and skills (Kane & Patapan, 2010). Nsubuga

(2008) maintains that an effective principal pays more attention to planning work, special tasks and permits teachers to participate in decision-making processes in an effort to achieve school goals. Using this style is of mutual benefit. It allows them to become part of the team and allows you to make better decisions. According to Ogunasanwo, (2000) the participatory leadership style provides a climate of sense of unity in pursuit of set goals.

4.3. Laissez-Faire Leadership Style

According to Mbiti (2007), laissez-faire leadership style is one in which the leader does not lead but rather leaves the group to its own devices. Hackman and Johnson (2009) define laissez-faire approach as the most effective, particularly when followers are mature and highly driven. Subjects have the greatest amount of freedom under such a leader. They are granted complete autonomy in determining their own policies and procedures. This type of leader believes that there should be no rules or regulations because everyone has an inherent feeling of duty. The leader does not interfere with or engage in the group's decision-making process (Talbert & Milbrey, 1994). However, where the subordinates are skilled in the various disciplines, this system can be appropriate.

V. RELATED STUDIES

Leadership has significant effects on student educational outcomes. Leadership is therefore important as it takes a successful leader to transform a school from a loose collection of individual classrooms to an effective connected school with shared mission and successful students' outcome. There are number of empirical studies that has be revealed by researchers on leadership styles and academic achievement of students. For example, Berhane, Ephrem, and Gaikar (2021) looked into the link between principal leadership styles and school performance in Eritrean secondary school. The researchers used the descriptive research design with qualitative and quantitative approaches. A sample of 30 school principals, 250 instructors, 50 students, and 45 parents engaged in the study using non-probability sampling. The study discovered that principals' leadership styles had an impact on school performance. Democratic and situational leadership styles were found to have good effects on school performance, whereas autocratic and laissez-faire leadership styles were found to have negative effects on the students' performance.

Abwalla (2014) investigated the impact of leadership styles on teachers' performance. Descriptive survey design was used in the study. A total of 170 teachers were chosen as a sample using a random selection procedure, specifically the lottery method. The study found a favourable association between leadership styles and teachers' performance, according to the findings. The results showed that democratic leadership style was among the rest that was practiced in the secondary schools.

Aruzie, Adjei, Mensah, Nkansah, Anorkyewaa, and Frimpong (2015) examine the impact of leadership styles on teaching and learning outcomes in the Nkoranza-North district. The participant included in the study were sixty (60). Interview schedule and questionnaire were used to gather the information. The study found that autocratic style, democratic style, laissez faire style, charismatic style, bureaucratic style, transformational style all had influence on learning outcome

At the university level, Rashid, Amin, and Shabir (2019) investigated the association between principal leadership styles (democratic, autocratic, transformational, and transactional) and student academic accomplishment. The study's participants were social science department heads and master's degree students. Twenty-nine Heads of Departments (HODs) and two hundred and sixty students were selected through simple random and stratified (proportionate) sampling techniques. Correlation was used to test the hypothesis. According to the findings, all the leadership styles were closely linked to student academic accomplishment.

Effiong, Ekpo, and Achigbe (2019) looked at the link between the leadership style of head teachers and the academic performance of mathematics students. One hundred ninety (190) students and ten (10) head teachers were randomly selected from the study's population using a random sampling technique. The hypothesis was tested using the correlation. The data revealed that democratic leadership style and student academic performance had significant association.

Al-Safran, Brown, and Wiseman (2019) investigated the effect of principal's leadership style on school outcome. The study focused on the indirect relationship between the leadership styles and the school environment. An additional objective was to investigate the impact of culture on leadership style as related to school environment and outcome. Descriptive statistics and ANOVA were used in the statistical analysis. The data analysis supported the hypothesis that the democratic leadership style was related to school outcomes.

Budohi (2009) investigated the effect of principal's leadership style on the academic achievement of students in Kenya Certificate of Secondary Education examinations in public schools in Lurambi division, Kakamega County. The study attempted to find out the main leadership styles used, the relationship between principals' personal characteristics and situational factors and leadership styles and the relationship between principal's leadership style and students' academic achievement in public secondary schools in Lurambi Division. The study used a descriptive survey design. The target population was 18 public secondary schools with a population of 200 teachers. Ten schools which had presented students for KCSE exams from 2008 to 2011 were sampled using stratified and purposive sampling design and thus a total of 10 principals, 40 teachers were sampled. Self-administered questionnaires and a document analysis checklist were used in the study. The study revealed that most principals used autocratic leadership style.

Igwe, Ndidiamaka, and Chidi (2017) compares the leadership styles of principals in public and mission secondary schools on students' academic performance in Enugu South Local Government Area of Enugu State, Nigeria. Ex-post facto descriptive research design was adopted. Data collection instruments were the use of structured questionnaire and interviews. A total of 285 copies of the questionnaire were administered to principals, teachers and supportive staff of the selected Secondary Schools using simple random sampling techniques. A combination of chi-square and Pearson product moment correlation statistical tools at 0.05 level of significance was utilized. Results of the investigation reveal that autocratic leadership style was positively correlated with students' academic performance.

Harerimana and Toyin (2017) investigated the influence of leadership styles on students' academic performance in selected secondary schools: A case study of Gasabo District, Kigali, The study used descriptive survey design. The study revealed that democratic leadership style was highly applied than the remaining leadership styles. Finally, correlation results revealed that there was a positive relationship of 0.332 between transformational, democratic style and performance of student's while a negative relationship was found between laissez-faire and academic performance of the students.

Obama, Eunice, and Orodho (2015) examine the effect of principals' leadership styles on students' academic performances. The study assess teachers perceptions regarding their principals leadership styles and the relationship between principals leadership styles and students' academic performance. The study adopted an ex-post facto research design. From an accessible 39 secondary schools, 36 were randomly selected to provide 36 principals and 216 teachers yielding an overall sample size of 252 respondents. A test of hypothesis using the chi-square test of association ($X^2 = 15.67$, $df = 5$) at $\alpha = .05$ level of statistical significance further established that there was a significant relationship between the leadership styles applied by principals as perceived by teachers and students' academic performance. The schools that embraced more democratic and participatory leadership styles encouraged group work and team spirit and performed significantly better than those that used more autocratic leadership styles. All these related works were conducted in the western world and non has been conducted in Ghana, specifically, in the Colleges of Education. Again, Ghana has a unique quality in terms of geography, history, language, religions, culture, and child-rearing practice, among other things, and how Ghanaian people respond to questions may differ from how people in the Western world would respond to questions due to cultural differences, among other things (Britwum, Amoah, Acheampong, & Adjei, 2022). Hence there is the need in this regard.

VI. RESEARCH METHODS

6.1. Research Design

For the purpose of this study the descriptive survey was used. The study adopted a descriptive survey method, which used quantitative approaches to make inferences on leadership styles and academic achievement of students. With the help of the survey method, the study was able to describe a current, previous and phenomenon in its existing situations or conditions (Karasar, 2012). This means the study used the characteristics of the descriptive survey for the sake of drawing a true picture of relationships between leadership styles variables (authoritarian, democratic and laissez-faire) and academic achievement. The objective of using the quantitative approach was to develop and make use of mathematical models, theories and or hypotheses pertaining to the phenomenon of leadership styles in the College of Education.

According to Aggarwal (2008), descriptive research is devoted to the gathering of information about prevailing conditions or situations for description and interpretation. In the words of Kulbir (2009), descriptive research design seeks to find factors associated with certain occurrences, outcomes, conditions or types of behaviour. According to Best and Khan (2007), descriptive research is concerned with the conditions or relationships that exist, such as determining the nature of prevailing conditions, practice and attitudes; opinions that are held; processes that are going on or trends developed. Amedahe (2002) also maintains that in descriptive research, accurate description of activities, objects, processes and persons is the objective. It concerns the gathering of data to answer research questions or test hypotheses. The descriptive research design allows for generalization of findings from sample to population. It does not only deal with the characteristics of an individual but rather the characteristics of the whole sample. It provides information useful to the solutions of local issues or problems.

The study found the descriptive survey approach the most appropriate method to describe the relationship between leadership styles and academic achievement. This is in the sense that it allows for usage of large population and again permits generalization of results from sample to population. Descriptive research allows for the collection of large amounts of data within a relatively short period of time. When used, the descriptive design also gives clear meaning to events. It will therefore be the best approach in finding answers to the variety of leadership styles and how they are related to students' academic achievement in the Colleges of Education in Ghana.

6.2. School Selection

The study's target population was all Ghanaian College of Education principals, vice principals, teachers and students. In Ghana, there are forty-six (46) College of Education. There are five zones in which public Colleges of

Education are located namely, Northern Zone, the Ashanti/Brong Ahafo Zone, the Volta Zone, the Eastern/Greater Accra Zone and the Central/Western Zone. The accessible population for the study included 10 principals and vice principals and teachers in 5 College of Education in Ghana. Level 300 students from 5 Colleges of Education in Ghana were also used which amounted to 1,665 (Institute of Education, 2021). In the selection procedure, multi-stage sampling techniques were applied. The overall number of Colleges of Education to be picked from each of the zones were determined using a proportionate sampling technique. Following that, the College of Education were chosen using simple random sampling. To determine the total number of students to be spick from the College of Education, the proportionate sampling technique was utilized once more. Thereafter, simple random sampling specifically, the table of random numbers were used to select the students. In all 125 students were selected based on Krejcie and Morgan (1970) sample size determination table. Purposive sampling technique was used to select 10 principal and vice principals and 15 teachers in the Colleges of Education.

6.3. Data Collection Instrument and Analysis

Leadership Questionnaire (LQ) was self-developed based on the literature review and it was used for the data collection. The questionnaire was measured on a 6-point Likert scale format ranging from "Strongly Disagree"-1, "Moderately Disagree"-2 "Slightly Disagree"-3, "Slightly Agree"-4, "Moderately Agree"-5 and "Strongly Agree"-6. Students' achievement test scores were taken from Institute of Education, University of Cape Coast. Structural Equation Model (SEM) was used to validate the questionnaire as well as testing the hypothesis.

6.4 Pre-Testing

Pre-testing was carried out to validate the instrument, that is, to determine whether it was valid and dependable for the main data collection. The researchers used 100 teachers who were not part of the study for pre-testing the instrument. Results and feedback on the pre-testing were used to refine the instrument before the final data collection.

6.5. Validation of the Questionnaire

The validation was done using convergent validity and covariance-based Structural Equation Model (SEM). Thus, for the purpose of this study, a developed questionnaire was validated using convergent validity. Items, which had low factor loadings (thus, below .30) were discarded before the final data collection (Pallant, 2010). In addition, convergent validity was assessed using AVE of .50 or more (Fornell & Larcker, 1981). The discriminant validity was assessed using Fornell and Larcker's (1981) criterion, which states that the square roots of AVEs should be greater than the correlation among the dimensions. The convergent validity is described below.

6.6. Convergent validity of Leadership Questionnaire (LQ)

This section presents the results on the leadership questionnaire. The details of the convergent validity are presented in Table 1.

Table 1- Item loadings, AVE, and Composite Reliability of LQ

Items		Loadings	AVE	CR
Authoritarian	It is fair to say that most teachers in the general population are lazy.	.533	.24	.64
	As a rule, teachers must be given rewards or punishments in order to motivate them to achieve organizational objectives.	.193*		
	Most teachers feel insecure about their work and need direction.	.501		
	The leader is the chief judge of the achievements of the members of the group.	.589		
	Effective leaders give orders and clarify procedures.	.556		
	It is the leader's job to help teachers find their "passion."	.501		
Democratic	Teachers want to be a part of the decision-making process.	.193*	.26	.65
	Most teachers want frequent and supportive communication from their leaders.	.524		
	Leaders need to help teachers accept responsibility for completing their work.	.469		
	Leaders should give teachers complete freedom to solve problems on their own.	.524		
	People are basically competent and if given a task will do a good job.	.591		
	People are basically competent and if given a task will do a good job	.539		
Laissez-faire	In complex situations, leaders should let teachers work problems out on their own.	.563	.26	.67
	Leadership requires staying out of the way of teachers as they do their work.	.473		
	As a rule, leaders should allow teachers to appraise their own work.	.546		
	In most situations, teachers prefer little input from the leader.	.543		
	In general, it is best to leave subordinates alone	.423		
	In general, it is best to leave subordinates alone.	.547		

LQ1 – LQ18 = questionnaire items

As shown in Table 1, two item had a factor loading below .30, therefore, these items were discarded. These were the only items discarded since they had a factor loading below the recommended loading of .30 (Pallant, 2010). From Table 1, all the AVEs for the various dimensions were lesser than .50, hence the dimensions lack convergent validity. In addition, convergent validity was assessed using AVE (Fornell & Larcker, 1981). It can also be released that all the

Composite Reliability (CR) were all above .50 which shows that there is a higher reliability of the dimensions.

Table 2- Discriminant Validity (LQ)

Variable	Authoritarian	Democratic	Laissez-faire
Authoritarian	(.49)*		
Democratic	.72	(.51)*	
Laissez-faire	.94	.21	(.51)*

*Values in parenthesis are square roots of AVEs

The result showed that the correlation between Authoritarian and Democratic (.72); was greater than the square roots of AVEs while, the square roots of AVEs Democratic (.51)* was greater than Laissez-faire. Based on this, it was concluded that discriminant validity was partially established. In all, the 16 items were retained for the final data collection. Figure 2 shows the hypothesised model.

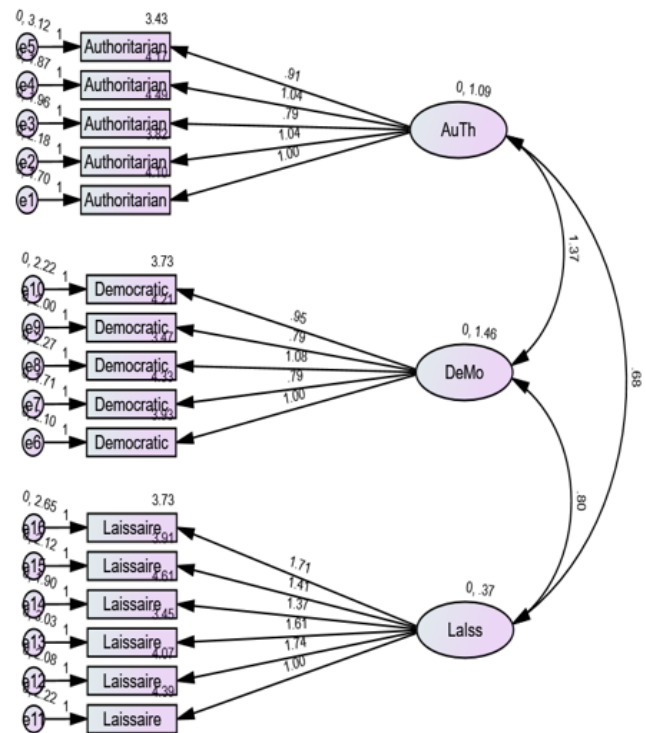


Figure 1-Leadership Questionnaire

6.7. Model Fit Indices for the Measurement Model (Leadership Questionnaire)

The model fit indices were evaluated to see if the hypothesized model fits the data collected from a sample of College of Education students in Ghana. The model was estimated using NFI, TLI, and CFI, among other variables. The following thresholds were used to evaluate the model fit indices: CMIN/DF (2 or 3; Schreiber, Nora, Stage, Barlow, & King, 2006), CFI (>0.90; Kline, 2013), NFI (>0.90; Kline, 2013), IFI (>0.90; Kline, 2013), TLI (>0.90; Kline, 2013), RMSEA (0.08; Schreiber et al, 2006), RMSEA (0.08;

Schreiber et al, 2006), RMSEA (Civelek, 2018). (See Table 3 for details) Table 3 displays the model fit indices.

Table 3: Goodness of Fit Indices of Leadership Questionnaire

Fit Indices	Leadership Questionnaire	Threshold
Chi-square (χ^2)	226.899, $p < 0.000$	$> .05$
CMIN/DF	2.247	≤ 2 or 3
Comparative Fit Index (CFI)	.831	$\geq .90$
Normed Fit Index (NFI)	.742	$\geq .90$
Incremental Fit Index (IFI)	.839	$\geq .90$
Tucker-Lewis Index (TLI)	.772	$\geq .90$
Root Mean Square Error of Approximation (RMSEA)	.061	$\leq .08$

As presented in Table 3, the chi-square (χ^2) = 0, implies that there is no difference between the expected data and the actual data. Table 3 shows that the data for the Leadership Questionnaire items model did not fit the hypothesized model in almost all of the model fit indicators. Only the CMIN/DF fit indicator indicated an excellent fit with values of 2.247, according to Schreiber et al (2006) criterion for Leadership Questionnaire. Despite the fact that the CMIN/DF fit indicator showed a good fit, it did not meet the criteria set by the researchers. This could be as a result of lack of discriminant validity (Kline, 2013; Acheampong, Amoah, & Britwum, 2021). The study concluded that researchers who want to use it should re-validate the questionnaire.

VII. FINDINGS

H1: Leadership styles will not predict students’ academic achievement in the Colleges of Education in Ghana

The main aim of the hypothesis was to examine how leadership style will predict students’ academic achievement in the Colleges of Education in Ghana. Covariance-based SEM was performed to test data on this hypothesis. The analysis was performed using Analysis of Moment Structures (AMOS) software version 26. Specifically, 5000 bootstrap samples, with bias-corrected and accelerated confidence intervals was performed. Figure 2 presents the model.

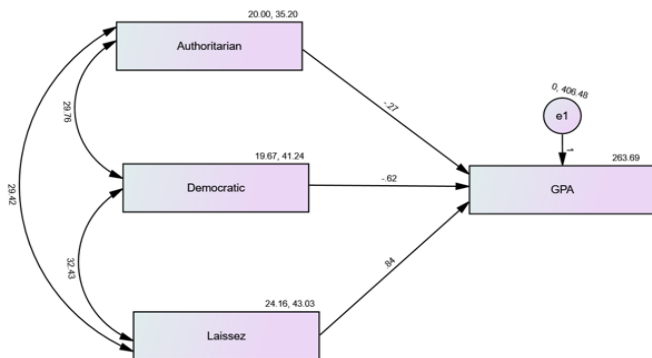


Figure 2- Path model of leadership styles and Academic Achievement

As presented in the path analysis (Figure 3), authoritarian predict students AA by $-.27$ with a mean and error variance of (20.00, 35.20), followed by democratic which predicted academic achievement by $-.62$ with a mean and error variance of (19.67, 41.24). Further, Laissez-fair predicted students’ academic achievement by $.84$ with a mean and error variance of (24.16, 43.03) and an intercept of 263.69 for academic achievement. Table 4 presents the significance of the path model.

Table 4: Regression Model for leadership Styles

Model	B	SE	CR	95% Confidence Interval	
				Lower	Upper
(Constant)	263.692	6.543	40.791	250.761	276.622
Authoritarian	-.271	.483	-.561	-1.237	.695
Democratic	-.619	.458	-1.352	-1.534	.297
Laissez-Faire	.840	.427	1.965	.014	1.693

Source: Field data, 2021

*Significant, $p < .05$; $R^2 = .028$

From Table 4, the results of the SEM shows that the model was saturated and that the model partially fits the data. Leadership styles (authoritarian, democratic and laissez-faire) jointly explained 2.8% of the variations in academic achievement of the students. The results showed that authoritarian [$b = -.271$, *Boot95%CI* (-1.237, .695)], democratic [$b = -.619$, *Boot95%CI* (-1.534, .297)] were not significant predictors of academic achievement of the students. Laissez-Faire [$b = .840$, *Boot95%CI* (.014, 1.693)] was significant predictor of academic achievement of College of Education students. The implication of these result is that authoritarian and democratic leadership styles were not necessarily predictors of academic achievement of the students.

VIII. DISCUSSIONS

The study assessed the effectiveness of leadership styles and achievement of students in the Colleges of Education. The convergent validity results revealed that leadership questionnaire has some amount of convergence validity. The factor loadings requirement was met by leadership questionnaire. The study found that leadership questionnaire has partial discriminant validity. The validity of the leadership questionnaire in the Ghanaian setting is limited, according to our analysis. While some of the study' indicators demonstrated a satisfactory level of validity, others did not. With the exception of two items, all of the factor loadings satisfied the 0.30 requirement. In contrast, the AVEs were poor for three of the subdimensions that did not meet the 0.50 threshold. In addition, while the estimated indices were close to the standard criterion, the majority of the model fit indices departed from the criteria provided. Hu and Bentler (1999), for example, chose a cut-off value approaching 0.95 for CFI. On the other side, Bentler (1992) offered a number greater than 0.90. According to Williams et al. (2009), numerous

statistical values must be considered before a judgement about the quality of the items and/or scale can be reached. Kline (2013) also suggested that the recommended threshold value of .90 be used. As a result, the outcomes of this CFI study were operationalized based on Kline's (2013) proposal that the leadership questionnaire have limited application in the Ghanaian cultural milieu. Future researchers will need to take a closer look at the objects and the instrument's dimensions and re validate the instrument as a result of this.

The study again, revealed that authoritarian and democratic leadership styles were not predictors of students' academic achievement. The findings of the study disagree with the findings of Effiong, Ekpo and Achigbe (2019) which revealed that there is a significant positive relationship between authoritarian leadership style and students' academic performance. It is in the view that, in authoritarian leadership style, the leaders make all the decisions, without involvement or inputs of the workers as well as the students specifically, the school representative council (SRC). Wu and Shiu, (2009) explained that authoritarian leadership style is gained through punishments, threats, demands, orders, rules and regulations. It was not surprising that authoritarian leadership style was not predictor of students' academic achievement. The study results contradict that of Tedla, Redda, and Gaikar (2021) who examine leadership styles and school performance. The study found that democratic and situational leadership styles have a positive impact on school performance.

The study again, revealed that laissez-faire leadership style predicted students' academic achievement. The study results are in line with the findings of Aruzie, Adjei, Mensah, Nkansah, Anorkyewaa, and Frimpong (2015) who found that leadership styles such democratic style, laissez faire style, charismatic style all had influence on learning outcome. The laissez-faire leadership style employed by principals in the Colleges of Education may be influenced by a variety of factors including their personality trait, level of control, and their level of experience in managing the school.

IX. CONCLUSION AND RECOMMENDATIONS

Authoritarian leadership style determines policies alone and assigns tasks to subordinates without consulting with them. Tasks and methods are imposed on members. There are little communication between the leader and the teachers as well as the school representative council (SRC). When this happens it leads to tense, fearful, or resentful, on the part of the teachers and the students. Democratic leadership style was also not found as a predictor of students' academic achievement. It is of the opinion that, in this leadership style decisions are made between the leader, the teacher and SRC. Principals who use democratic leadership style obtain the input of others before making a decision. In practice, democratic leadership style is not always the best because too many ideas can cloud the decision and make it hard for the group to make a decision.

Laissez-faire leadership style was found to be a predictor of students' academic achievement. Generally, this style of leadership is used for delegation purposes to have smoothly running of school. The principals in the Colleges of Education might use this method when they are unable to perform a task or solve a problem due to having too many tasks to keep up with. The study recommended that principals in the Colleges of Education should make use of combination of leadership styles to enhance them in running or managing the Colleges of Education.

REFERENCES

- [1] Abwalla, J. (2014). The principals' leadership styles and teachers' performance in general secondary schools. Thesis submitted to the department of educational planning and management in partial fulfillment for the requirements of degree of master of arts in educational leadership. Jimma, Ethiopia
- [2] Acheampong, H. Y., Amoah, S. O., & Britwum, F. (2021). Students' perception of deficit needs and academic performance of senior high school students. *American Journal of Education and Information Technology*, 5(2), 118-128.
- [3] Achieng, O. U. (2000). "A study of the effects of leadership styles on performance in KCSE examination in Nairobi". Unpublished M. ED project. University of Nairobi.
- [4] Adeyemi, T. O. (2006). *Fundamentals of educational management*. Lagos: Atlantic Associated Publishers. pp. 21-60.
- [5] Aggarwal, Y. P., (2008). *Statistics of Education*. (2nd Ed.). Delhi: Sterling.
- [6] Agormedah, E. K., Britwum, F., Amoah, S. O., Acheampong, H. Y., Adjei, E., & Nyamekye, F. (2021). Assessment of Time Management Practices and Students' Academic Achievement: The Moderating Role of Gender. *International Journal of Social Sciences and Educational Studies*, 8(4), 171-188.
- [7] Al-Safraan, E., Brown, D., & Wiseman, A. (2019). The effect of principal's leadership style on school environment and outcome. *Research in Higher Education Journal*, 15, 1-19
- [8] Alvoid, L., & Black Jr, W. L. (2014). *The changing role of the principal: How High-Achieving Districts Are Recalibrating School Leadership*. Center for American Progress.
- [9] Amedahe, F. K. (2002). Notes on educational research. Unpublished lecture notes, University of Cape Coast
- [10] Aruzie, R. S., Adjei, A., Mensah, D. A., Nkansah, I., Anorkyewaa, A. A., & Frimpong, B. O. (2015). The impact of leadership styles on teaching and learning outcomes: a case study of selected senior high schools in the Nkronza districts of Brong Ahafo Region in Ghana. *International Journal of Scientific Research and Management*, 6(12), 47-57.
- [11] Atif, S., Sarfraz, A., Hong-biao, Y., & Congman, R. (2000). Principal leadership styles and teacher job performance: viewpoint of middle management. *Sustainability*, 12, 2-15. doi:10.3390/su12083390
- [12] Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology*, 88(2), 207-218. DOI: <http://doi.org/10.1037/0021-9010.88.2.207>.
- [13] Berhane, A. T., Ephrem, H. R., & Gaikar, V. B. (2011). Leadership styles and school performance: A study within an Eritrean context of Eastern Africa. *International Journal of Management (IJM)*, 12(4), 56-73.
- [14] Best, J. W., & Kahn, J. V. (2007). *Research in Education*, New Delhi, Prentice Hall of India Private
- [15] Bogler, R. (2001). The influence of leadership style on teacher's job satisfaction. *Educational Administration Quarterly*, 37(5), 663-683.
- [16] Britwum, F., Amoah, S. O., Acheampong, H. Y., & Adjei, E. (2022). Self-esteem as a predictor of students' academic achievement in the colleges of education. *International Journal of*

- Learning and Teaching, 14(1), 43-54.
<https://doi.org/10.18844/ijlt.v14i1.6302>
- [17] Budohi, L. A. (2009). The effect of principals' leadership styles on the academic achievement of students in public secondary schools. Unpublished master's thesis. Kenyatta University, Kenya.
- [18] Civelek, M. E. (2018). Essentials of structural equation modelling. Lincoln: University of Nebraska
- [19] Cotton, K. (2003). Principals and student achievement. Alexandria, V. A: Association for Supervision and Curriculum Development.
- [20] Coyle, M. (2012). Teacher leadership and school management: Flatten the Hierarchies. *The Cleaning House. A journal of Educational Strategies, Issues and Ideas*, 70(5), 236-239.
- [21] De Cremer, D. (2006). Affective and motivational consequences of leader self-sacrifice: The moderating effect of autocratic leadership. *The Leadership Quarterly*, 17(1), 79-93.
- [22] Drewziecka, M., & Roczniowska, M. (2018). The relationship between perceived leadership style and organizational constraint: An empirical study in Goleman's typology. *Revue Europeenne de Psychologie Appliquee*, 68, 161-169
- [23] Eberts, W., & Stone, A. (1988). Student achievement in public schools: Do principals make a difference? *Economics of education Review*.
- [24] Effiong, E. C., Ekpo, O., & Achigbe, J. O. (2019). Head teacher leadership style and secondary school students' academic performance in a local government area of cross river state. *Global Journal of Educational Research*, 18, 91-97
- [25] Fornell, C. G., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- [26] Goleman, D. (2007). *Social intelligence: Beyond IQ, beyond emotional intelligence*. New York: Bantam.
- [27] Griffith, J. (1999). The school leadership/school climate relation: identification of school configurations associated with change principals. *Educational Administration Quarterly*.
- [28] Hackman, M. Z., & Johnson, C. E. (2009). *Leadership: A communication perspective* (5th ed.). Long Grove, IL: Waveland Press.
- [29] Harerimana, J. P., & Toyin, A. O. (2017). Investigation on the Influence of Leadership Styles on Students' Academic Performance in Selected Secondary Schools: A Case Study of Gasabo District, Kigali, Rwanda. *Journal of Research & Method in Education (IOSR-JRME)*7(2), 18-26
- [30] Hayward, B. A. (2005). Relationship between employee performance, leadership and emotional intelligence in a South African parastatal organisation. Unpublished thesis. Rhodes University, Grahamstown, South Africa.
- [31] Hoy, N. K., & Miskel, C. G. (1992). *Educational administration: Theory, Research and Practice*. 2nd Edition. Randam House, New York. pp. 22-24.
- [32] Igwe, N. N., Ndidiamaka, M., O., & Chidi, A. F. (2017). Principals' leadership styles and students' academic performance in Enugu Metropolis: A Comparative Survey of Public and Mission Secondary Schools. *Archives of Business Research*, 5(8), 7-30.
- [33] John, C. M. (2002). *Million leader's mandates*. Notebook one. Equip Publishers, America.
- [34] Jones, D., & Rudd, R. (2008). Transactional, transformational, or laissez-faire leadership: an assessment of College of Agriculture Academic Program Leaders'(Deans) leadership styles. *Journal of Agricultural Education*, 49(2), 88-97.
- [35] Kane, J., & Patapan, H. (2010). The artless art: Leadership and the limits of democratic rhetoric. *Australian Journal of Political Science*, 45(3), 371-389.
- [36] Kline, R. B. (2013). Assessing statistical aspects of test fairness with structural equation modelling. *Educational Research and Evaluation*, 19(2), 204-222.
- [37] Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- [38] Mbiti, D. M. (2007). *Foundation to education: Its Meaning and Significance to Society*. Heinemann press.
- [39] Musaazi, J. C. S. (1982). *The theory and practice of educational administration*. London, Macmillan Press
- [40] Nsubuga, Y. K. (2003). Development and expansion of secondary education in Uganda: Experience and challenges. Paper presented at the annual head teachers' workshop, Kampala.
- [41] Obama, M. O., Eunice, L. A. & Orodho, J. A. (2015). Effect of principals' leadership styles on students' academic performance in public secondary schools in Homa-Bay County, Kenya. *Journal of Humanities and Social Science*, 20(3), 51-60
- [42] Ogunsanwo, O.A. (2000). "Modern Principles and Techniques of Management". Ibadan: External Studies Programme, Department of Educational Management, University of Ibadan.
- [43] Okumbe, J. A. (1998). *Educational management theory: A comparative evolution to general theory*. Nairobi: Nairobi University Printery.
- [44] Pallant, J. (2010). *SPSS survival manual. A Step by Step Guide to Data Analysis Using SPSS*
- [45] Peteman, C. (2000). *Participation and democratic theory*. London: Cambridge University Press.
- [46] Rashid, A., Amin, R., & Shabir, A. (2019). Relationship between teachers' leadership styles and students' academic achievement. *Global Social Sciences Review (GSSR)* 4(4), 360-366
- [47] Sashkin, M. & Sashkin, M. G. (2003). *Leadership that matters: The critical factors for making a difference in people's lives and organizations' success*. San Francisco: Berret-Koehler Publishers.
- [48] Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results. A review. *The Journal of Educational Research*, 99(6), 323-338.
- [49] Smylie, M. A., & Jack, W. D. (1990). Teachers' leadership tension and ambiguities in organizational perspective. *Educ. Admin.*, 5, 26-59.
- [50] Swanepoel, B., Erasmus, B., Van Wyk, M. & Schenk H. (2000). *Training and developing employees: organisational perspective*. Human resource management theory and practice. Cape Town: Juta.
- [51] Talbert, J. E., & Milbrey, W. M. (1994). Teacher professionalism in local school contexts" *Am. J. Educ.*, 22, 123-153.
- [52] Tedla, B. A., Redda, E. H., & Gaikar, V. B. (2021). Leadership styles and school performance: A study within an Eritrean context of eastern Africa. *International Journal of Management (IJM)* 12(4), 56-73,
- [53] Wahab, S., Rahmat, A., Yosuf, M. S., & Mohamed, B. (2016). Organization performance and leadership style: Issues in Education Service. *Social and Behavioral Sciences*, 224, 593- 598
- [54] Wu, F. Y and Shiu, C., 2009: The Relationship between leadership styles and Foreign English Teachers Job Satisfaction in Adult English, Gram schools: Evidences in Taiwan; the *J. Ame. Acad Bus.* Cambridge 14(2).
- [55] Zepeda, S. J. (2014). *The principal as instructional leader. A handbook for supervisors*. 2nd ed. New York: Routledge.