

## College Climate and Teacher-Trainee's Academic Work in Selected Colleges of Education in the Ashanti Region of Ghana

Augustine Adjei<sup>1\*</sup> Samuel Dontoh<sup>1</sup> Stephen Baafi-Frimpong (PhD.)<sup>2</sup>

1. Offinso College of Education Box 7, Offinso Ashanti-Ghana West Africa

2. University of Cape Coast, Department of Education and Psychology, Cape Coast Central Region-Ghana West Africa

### Abstract

The study aimed at investigating the extent to which College climate (Leadership roles/practices and Class size) impact on academic work of Teacher-trainees. A survey research design was used for the study because it involved a study of relatively large population who were purposively and randomly selected. A sample size of 322 out of the population of 1850 from Offinso, Akokerri and Wesley Colleges of Education comprising 226 males and 114 females were used for the study. A questionnaire and an interview guide were used to collect data for the study. The data collected were analyzed using Means, Standard deviations and Analysis of Variance (ANOVA). The study established that effective leadership roles and practices of Principals and Tutors had impact on the academic work of Teacher-trainees. By implication, good leadership practices had a positive relationship with students' academic work. The results of the ANOVA tests indicated that there was no significant difference in the means of the responses on College class size provided by the respondents ( $p > .05$ ). The implication is that large class sizes turn to affect classroom teaching and learning as compared to small class size. The respondents from Offinso College had the lowest mean of 2.41 on infrastructure, implying that their College infrastructure was the least developed. However, the respondents of Akokerri had an overall mean of 3.55 which implied that their College infrastructure was moderately developed. The study also revealed that, the higher the academic qualification of college tutors in their respective area of study, the more likely they are to impact positively on the academic work of Teacher-trainees.

**Keywords:** Leadership, School/College Climate, Organic Leadership and Transformational Leadership

### 2.0 Introduction

This chapter looks at the relevant related literature related to the study: The impact of college climate on the academic work of Teacher-trainees. The literature is under the following sub-headings: Academic performance, College climate Leadership roles, Class size, Teacher quality, Infrastructure and Conceptual framework.

### 2.1 Academic Performance

Student success is linked with a plethora of desired student and personal development outcomes that confer benefits on individuals and society. These include becoming proficient in writing, speaking, critical thinking, scientific literacy, and quantitative skills and more highly developed levels of personal functioning represented by self-awareness, confidence, self-worth, social competence, and sense of purpose. Although cognitive development and direct measures of student learning outcomes are of great value, relatively few studies provide conclusive evidence about the performance of large numbers of students at individual institutions (Association of American Colleges and Universities (AACU), 2005; National Center for Public Policy and Higher Education, 2004; Pascarella and Terenzini, 2005).

Creating the conditions that foster student success in college has never been more important. As many as four-fifths of high school graduates need some form of postsecondary education (McCabe, 2000) to prepare them to live a economically self-sufficient life and to deal with the increasingly complex social, political, and cultural issues they will face. Earning a baccalaureate degree is the most important rung in the economic ladder (Bowen, 1978; Bowen and Bok 1998; Boyer and Hechinger, 1981; Nuñez 1998; Nuñez and Cuccaro-Alamin, 1998; Pascarella and Terenzini, 2005; Trow 2001), as college graduates on average earn almost a million dollars more over the course of their working lives than those with only a high school diploma (Pennington, 2004). Yet, if current trends continue in the production of bachelor's degrees, a 14 million shortfall of college-educated working adults is predicted by the year 2020 (Carnevale and Desrochers, 2003).

The good news is that interest in attending college is near universal. As early as 1992, 97 percent of high school completers reported that they planned to continue their education, and 71 percent aspired to earn a bachelor's degree (Choy, 1999). Two-thirds of those high school completers actually enrolled in some postsecondary education immediately after high school. Choy noted that two years later, three-quarters were still enrolled. Also, the pool of students is wider, deeper, and more diverse than ever. Women now outnumber men by an increasing margin, and more students from historically underrepresented groups are attending college. On some campuses, such as California State University Los Angeles, the City University of New York Lehman College, New Mexico State University, University of Texas at El Paso, and University of the Incarnate Word,

students of color who were once “minority” students are now the majority; at Occidental College and San Diego State University, students of color students now number close to half of the student body.

Another issue is that the quality of high school preparation is not keeping pace with the interest in attending college. In 2000, for example, 48 percent and 35 percent of high school seniors scored at the basic and below basic levels, respectively, on the National Assessment of Educational Progress. Only five states—California, Indiana, Nebraska, New York, and Wyoming—have fully aligned high school academic standards with the demands of colleges and employers (Achieve, 2006). Just over half (51 percent) of high school graduates have the reading skills they need to succeed in college (American College Testing Program (ACT), 2006). This latter fact is most troubling, as 70 percent of students who took at least one remedial reading course in college do not obtain a degree or certificate within 8 years of enrollment (Adelman, 2004).

There are a number of factors that affect performance in school; one of the most influential is motivation. Motivation, also referred to as academic engagement, refers to “cognitive, emotional, and behavioral indicators of student investment in and attachment to education” (Tucker, Zayco, & Herman, 2002, p. 477). It is obvious that students who are not motivated to succeed will not work hard. In fact, several researchers have suggested that only motivation directly effects academic achievement; all other factors affect achievement only through their effect on motivation (Tucker et al., 2002). However, it is not as easy to understand what motivates students. Numerous studies have been conducted on this topic, which has led to the development of several theories of motivation.

One widely accepted theory is Goal Theory. It postulates that there are two main types of motivation for achieving in school. Students with an ability or performance goal orientation are concerned with proving their competence by getting good grades or performing well compared to other students (Anderman & Midgley, 1997; Maehr & Midgley, 1991). On the other hand, students with a task goal orientation are motivated by a desire to increase their knowledge on a subject or by enjoyment from learning the material. Studies have shown that students with a task goal orientation are more likely to engage in challenging tasks, seek help as needed, and adopt useful cognitive strategies, and, possibly most importantly, tend to be happier both with school and with themselves as learners (Ames, 1992; Anderman & Midgley, 1997).

Subsequent research has suggested, however, that despite its potential implications for middle school policy and curriculum design, a dichotomous perspective of either “task-based” or “performance-based” goals may be too simplistic of a model of adolescent motivation (Dowson & McInerney, 2001). In addition, research has also suggested that task and performance goals are not mutually exclusive. While many experimental studies forced research participants to select one goal orientation or the other, correlational research has found that individuals’ endorsement of a task goal orientation is often weakly correlated or uncorrelated with endorsement of a performance goal orientation (Kaplan & Maehr, 2002).

Researchers have also identified a number of other student goals. A third academic goal orientation is work avoidance, where students try to minimize the amount of effort they put into tasks (Dowson & McInerney, 2001). Students also have social goals that influence their motivation alongside academic goals. Urdan and Maehr (1995) describe four types of social goals: social approval, social compliance, social solidarity, and social concern. Research involving qualitative methods has suggested that social goal orientations are associated with academic achievement (Kaplan & Maehr, 2002). Unfortunately, most research has focused on only the previous two orientations.

## **2.2 College/ School climate**

Women now outnumber men by an increasing margin, and more students from historically underrepresented groups are attending college on some campuses, such as California state university Los Angeles, the city university of new York Lehman college, new Mexico state university, university of Texas at el Paso, and university of the incarnate word, students of colour who were once “minority” students are now the majority; at occidental college and San Diego State University, students of color students now number close to half of the student body (Fullan, 1992).

Creating a learning culture – It has been argued that any attempt to improve a school that neglects school culture is “doomed to tinkering” (Fullan, 1992) because school culture influences readiness for change. The nature and quality of the leadership provided by the principal and senior staff has a significant influence of the nature of the school culture. Schein (1985, p. 2) argues that: there is a possibility that the only thing of real importance that leaders do is to create and manage culture and that the unique talent of leaders is their ability to work with culture.

Schein (1985) suggests that a culture enhancing learning: balances all stakeholders’ interests; focuses on people rather than systems; makes people believe they can change their environment; makes time for learning; takes a holistic approach to problems; encourages open communication; believes in teamwork; and has approachable leaders.

Similarly, Shulman (1997, p. 101) argues that “ teacher learning’s potential depends on: the processes

of activity, reflection, emotion and collaboration supported, legitimated, and nurtured in a community or culture that values such experiences and creates many opportunities for them to occur". Principals, however, can only create conditions fostering commitment to the collective good; they cannot ensure it will happen. Attempts to stimulate cultural development may precipitate cultural change in unforeseen and undesired directions (Hargreaves, 1994; Wallace, 1996). A similar conclusion that organizational culture is not directly manipulable has been reached in studies of British industry (Anthony, 1994; Williams, Dobson & Walters, 1993).

Ensuring learning at all levels – Some argue that the central task of educational leadership is fostering, and then sustaining, effective learning in both students and adults (Law & Glover, 2000). Southworth (1999) suggests that some leaders, at least, focus on learning as a pupil achievement outcome while addressing less attention to the pedagogical processes. Leaders model particular behaviours and, as Louis and colleagues (1995, p. 39) note: “what leaders say and do expresses what they value Principals who focus on classroom practice demonstrates through their actions that pedagogy is important”. If school leaders are to facilitate the growth of a community it will be essential that they focus on promoting professional learning as fundamental to the change process. Leithwood, Jantzi, and Steinbach (1999) see this as creating the conditions for growth in teachers’ professional knowledge. They argue that this is best accomplished by embedding professional development in practical activities, through “situated cognition”

A considerable amount of evidence suggests that pupils benefit from being part of relatively small organizations (Lee, 2000). For elementary schools, the optimum size seems to be about 250 to 300 students, whereas 600 to 700 students appear to be optimal for secondary schools. Especially for struggling students, smaller schools increase the chances of their attendance and schoolwork being monitored. Smaller schools also increase the likelihood of students having a close, ongoing relationship with at least one other significant adult in the school, an important antidote to dropping out. Smaller school organizations tend to have more constrained and focused academic programmes. Typically, they are also more communal in nature, with teachers taking more personal responsibility for the learning of each pupil. Summarizing the rationale for smaller schools, Lee, Ready and Johnson (2001) argue that: Constructs such as social networks, social resources, caring, social support, social capital, cultural capital and communal school organization are bound by a common idea. Students and adults in schools should know one another better (p. 367).

School personnel are not often in a position to determine the total numbers of students assigned to their school buildings (district leaders do). But they do have some control over the internal social structures of those schools. Because secondary schools often range in size from 1,000 to 3,000 students in the same building, creating schools-within-schools has frequently been recommended as a practical means for realizing the benefits of small units. While promising, this solution has not been nearly as widely implemented as is generally believed. Where it has been implemented, it is typically a response to uncommitted pupils – pupils with low attendance rates, high dropout rates and generally low performance.

Class size research suggests that reductions from a typical 22 to 30 student class, to an approximately 15 student class have the potential to significantly increase student achievement, provided that suitable changes are made in teacher practices which take advantage of fewer students. Evidence about class size effects not only identifies optimum sizes, it also suggests that the greatest benefits of reducing class size are found in the first two years of schooling when accompanied by appropriate adaptations to instruction (Finn, 2001). These benefits are most beneficial for students who are socially and economically disadvantaged. The effects realized by smaller classes in the primary grades appear to be maintained even three or four years later. Among the explanations for small class effects are improved teacher morale, more time spent by teachers on individual instruction and less on classroom management, along with fewer disruptions and fewer discipline problems. Other explanations for small class size effects include greater engagement by students in instruction, more opportunities for better teaching to take place, reduced grade retention, reduced dropout rates in secondary schools and increased aspirations among students to attend college.

There are significant constraints or hurdles to be addressed if the impressive effects of smaller class sizes are to be realized on a large scale. As the California experience illustrates so painfully, smaller classes require additional qualified teachers and more safe playground areas and classroom space. Without considerable increases in education funding, smaller primary classes also mean larger classes in the later grades.

Formulae for calculating class size also have to be made explicit. By including non-teaching staff such as librarians into the student-teacher ratio, an inaccurate picture of the number of students is depicted by as much as six or seven students per classroom. The more accurate calculation required to realize the benefits reported in the class-size research entails counting the actual number of students in each classroom (Finn & Achilles, 1999).

A good deal of recent research about the qualities of teachers that are linked to student learning has been driven by debates about whether teaching should be considered and promoted as a profession, or if it should be deregulated and opened up to people without formal teacher preparation ( Darling- Hammond & Youngs, 2002). The bulk of this evidence suggests that significant amounts of variation in student learning are accounted for by teachers’ capacities, including:

- Basic skills, especially literacy skills
- Subject matter content knowledge
- Pedagogical skill
- Pedagogical content knowledge
- Classroom experience

An understanding of how teachers interpret the needs of their own students and the nature and value of external reform efforts requires, however, attention to their mental models. The term mental models has emerged as a shorthand for capturing a central tenet of recent cognitive research, namely, that people interpret their environment through a set of “cognitive maps” that summarize ideas, concepts, processes or phenomena” in a coherent way.

That people have mental models that serve as internal representations of the world is not new (Carley and Palmquist, 1992), but the incorporation of this concept into cultural studies of schools is more recent. The convergence of cognitive psychology and cultural sociology is based on the assumption that culture presents a “toolkit” (Swidler, 1986) of mediated images and validated actions that individuals and groups draw on, often with little explicit thought, to guide their daily behaviour (DiMaggio, 1997) Reliance on mental models may be particularly prevalent in the case of busy professionals like teachers, whose work requires them to make hundreds of rapid decisions each day as they search for the best way of encouraging their students to absorb and interpret the material that they are presenting.

### 2.3 Leadership

Leadership occurs whenever one person attempts to influence the behaviour of an individual or group, regardless of the reason. It may be for one’s own goals or for the goals of others and these goals may or may not be congruent with organizational goals. Leading or influencing requires three general skills, or competencies; diagnosing - understanding the situation you are trying to influence; adapting - altering your behaviour and the other, resources available to meet the contingencies of the situation; and communicating - interacting with others in a way that people can easily understand and accept (Hersey, Blanchard, & Dewey, 2001).

Through the decades of the twentieth century, the role of school leaders in the United States greatly evolved and could generally be characterized as highly transformative. Metaphorically, the dominant role of school Principals in the 1930s was one of a scientific manager. In the 1940s the Principal was expected to fulfill primarily the role of a democratic leader. In the 1970s the Principal was viewed as a humanistic facilitator, and in the 1980s school Principals were expected to serve primarily as instructional leaders (Beck & Murphy, 1993). Even though instructional leadership received great popularity and pervaded leadership literature during the 1980s, this notion was introduced a few decades prior to this period. Mackenzie and Corey in 1954 were among the early writers who referred to the school Principal as an instructional leader of a school (Greenfield, 1987). De Bevoise (1984, p.15) used the term to designate “the actions that school principal takes, or delegates to others, to promote growth in student learning”.

A number of researchers have developed theoretical frameworks of instructional leadership roles of school Principals, contributing to the clearer conceptualizations of the term. The works of Bossert, Dwyer, Rowan, and Lee (1982) may be considered pioneering efforts directed toward a deeper understanding of instructional leadership roles of a school Principal. These researchers emphasized that a school Principal, through his or her activities, roles, and behaviours in managing school structures does not affect student achievement directly, in the ways the teachers do. However, classroom teaching may be impacted by Principals’ actions, such as setting and clearly communicating high expectations for all students, supervising teachers’ instructional performance, evaluating student progress, and promoting a positive teaching/learning environment.

The past century has taught us several ways of viewing educational organizations. One prominent model is the traditional approach, which views organizations as a hierarchical system in which power and intelligence are originated at the top and passed down through commands and control to the lower levels of the system before being put into practice. According to Chrispeels, Burke, Johnson and Daly (2008), gains in student learning have been made, but a top-down approach in leadership could inhibit organizational learning by preventing flexibility or teacher discretion in meeting the needs of diverse learners. Another perception of organizational leadership, which is also the newer perspective, is to think about organizations as cooperative, collegial and collaborative in which the belief is, good ideas exist at every level of the organization. These ideas can be manifested when the leaders of those in command act in ways to motivate subordinates to release their capabilities (Owens & Valesky, 2007).

For the past two decades, legislators and the public have provided external pressures to encourage schools to develop and change places of education. Leadership and school restructuring have been in the forefront of school reform in the effort to focus on school improvement and student achievement (Goker, 2006). It suggests that in studying school improvement and student achievement, individuals should understand leadership and administration. This means, working with and through other individuals to achieve organizational



goals. When working towards achieving organizational goals, school leadership has to take into account organizational behaviour. Organizational behaviour according to Owens and Valesky (2007) is defined as “a field of social-scientific study and application to administrative practice that seeks to understand and use knowledge of human behaviour in social and cultural setting for the improvement of organizational performances” (p. 259). The hypothesis of this literature review is that school leadership has an effect on student achievement by playing a central role in nurturing the internal conditions for developing school instruction, as well as maintaining positive school and community relationships.

### **Leadership Styles and School Success**

**Transformational Leadership:** A review of the literature on some of the leadership styles that breed success within educational organizations discovered that Transformational Leadership was more effective than Transactional Leadership. Ross and Gray (2006, p. 800) define transformational leadership as the multidimensional construct that involves three clusters: charisma (identifying and sustaining a vision of the organization), intellectual stimulation of members, and individual consideration. According to them, transformational leadership enhances an organization by raising the values of members, motivating them to go beyond self-interest to embrace organizational goals, and redefining their needs to align with organizational preferences.

In comparison, transactional leaders often try to accomplish organizational goals without attempting to elevate the motives of followers or the human resources within the organization. Transactional leadership does not constitute a change in the culture of the organization, whereas transformational leadership requires a change in the culture of the organization in order to be effective. In looking at the effects of transformational leadership on student achievement, Ross and Gray (2006) discovered principals are often perceived as accountable for student achievement, but most researchers found that Principals have very little direct impact on achievement. The researchers hypothesized that principals indirectly contributed to student achievement through teacher commitment and beliefs about their collective capacity. Ross and Gray re-analyzed data from a database to test the link between leadership and student achievement. A total of 205 schools within two districts and 3,042 teachers were used for the research. Student achievement was tested in grades three through six. Data collection was performed using Likert items with a 6-point response scale ranging from strongly disagree to strongly agree. The results indicated that the Principal's effects on achievement primarily occurred through leadership contributions to teacher perception of capacities, commitment to professional values and collective teacher efficacy. The indirect effects of leadership impact on student achievement were limited. Results indicate that every 1.0 standard deviation increase in transformational leadership led to a .222 SD increase in student achievement. The results indicated that the achievement effects of leadership continue to be indirect, as the path from leadership to student achievement of (standardized regression weight .113,  $p=.502$ ) was not statistically significant. Likewise the path from collective teacher efficacy, standardized regression weight of .270,  $p = .122$  was also not statistically significant, suggesting that the effect of collective teacher efficacy on achievement was likely mediated by teacher commitment to professional values. The research indicates that Principals who adopt a transformational leadership style have a stronger effect on teachers' commitment to the school mission ( $r = .75$ ;  $p<.01$ ), which may indirectly impact the school process and student achievement.

### **Leadership Traits Leading to Students' Achievement**

Looking to challenge the theory that certain types of leadership will improve student achievement, Berker (2007) did a qualitative case study looking at the Shire School in the south of England. Seventeen staff members were selected and interviewed. Interview notes were word processed in first person statement. Classroom observations were also undertaken to triangulate comments from interviews to student and teacher relationships. The researcher found that although the leadership of the school played an important role in transforming the processes of the school, the direct effect on leadership pertaining to student achievement remains unclear and unproven. Miller and Rowan (2006) also looked at a study that included 20,000 students enrolled in 250 American schools. The study showed that “organic management” had no effect on achievement growth. Although the results of many studies on transformational leadership indicate that strong leaders significantly impact student outcomes, few empirical studies provide strong evidence of direct leader impact on student outcomes; few empirical studies provide strong evidence of direct leader impact on student outcomes. Berker (2007) suggests the effects are usually indirect and mediated by teachers.

In performing an inductive exploratory study to discover the common theme of successful schools in Virginia, Crum and Sherman (2008) interviewed Principals to gain insight into their practice, which was supportive of high student achievement. The need for the study was supported by the lack of information concerning successful school leadership in the post No Child Left Behind era and the statement by Dinham (2005) that “there can be little doubt from an examination of research findings that leadership is important in developing effective, innovative school and in facilitating quality teaching and learning” (p. 340). Crum and Sherman The researchers conducted semi-structured interviews with 12 Principals using a standard interview

guide. The Principals were chosen from successful schools determined by those schools that met both state and federal accreditation standards. All Principals were at least in their third year and had at a minimum two years of leadership experience.

The research was grounded by allowing the Principals to talk about actual practice, rather than theory, while identifying specific initiatives that supported success within their school. Six common leadership Principles or themes emerged from the interview process. The themes are: developing personal and facilitating leadership, responsible delegation and empowering the team, recognizing ultimate accountability, communicating and rapport, facilitating instruction, and managing change. Principals in the study gave credit to their staff, rather than crediting themselves. It was also discovered that principals recognized the fact that they could not physically be in each class to guide instruction, therefore the role of the school leader was to facilitate and build rapport, and that the staff members held the responsibility of student success. It should also be noted that failure to communicate was a theme that was detrimental to the system, which caused lack of focus on teaching and student learning. Although this study took the form of a semi-structured interview, Crum and Sherman (2008) provided insight for future leaders in determining leadership roles that advocate successful student achievement.

Outstanding education outcomes of students in years seven to ten in 38 secondary schools in Australia were studied by Dinham (2005). Outstanding educational achievement was defined as: developing fully the talents of all students, attaining high standards of knowledge, skills and understanding through a comprehensive and balanced curriculum, and being socially just. Research was conducted through site visits, document analysis, lesson observations, and interviews with teachers, community members, Principals, other executive staff and students. Site teams used prepared protocols when recording data and observations and the information was compiled and entered into a database using open ended coding. Results indicate that Principals in successful schools have a positive attitude toward change and a strong focus on students and learning. Six areas contributing to outstanding educational outcomes emerged around the focus on students and learning. They include:

1. External awareness and engagement
2. Bias towards innovation and action
3. Personal qualities and relationships
4. Vision, expectations and a culture of success
5. Teacher learning, responsibility and trust
6. Student support, common purpose and collaboration

The researchers also discovered three things found in outstanding schools: Principals use their powers and the rules and boundaries of the system creatively, exhibit a bias towards experimentation and risk taking, and exhibit strength, consistency, yet flexibility in decision making and the application of policy and procedure. As found in other research, teachers indeed play a huge role in obtaining student achievement. This study recognized this fact, along with realizing that school leaders also play a key role in creating conditions where teachers feel comfortable and can operate efficiently while facilitating student achievement.

## 2.4 Class Size

As school population increases class sizes also increase and the performances of students become an issue. According to Dror (1995), class size has become a phenomenon often mentioned in the educational literature as an influence on pupils' feelings and achievement, on administration, quality and school budgets. He noted that class size is almost an administrative decision over which teachers have little or no control. Most researchers start from the assumption that size of the class would prove a significant determinant of the degree of success of students. The first issue that calls for immediate clarification is what number of students should constitute a large group and what should be described as a small group.

The empirical literature on class size and its relationship to academic achievement has been unwieldy and confusing. Jordan (1964), in his analysis of the inter-relationship of intelligence, achievement and socio-economic status of high schools concluded that School location among other variables was directly related to mean achievement level of students in all the sampled subjects. However, the report by some researchers on elementary school pupils revealed that the size of school and length of attendance have little or no effect upon pupils' achievement when educational opportunities are comparable. In his conclusion, Jordan asserted that teachers generally, have definite preference for the size of schools in which they wish to teach and that the larger the size, the lower the level of students' achievement will tend to be. The observation agreed with the findings of Sitkei (1968) and Walberg (1969) that a significant and consistent relationship exist in the achievement of students in small classes of about 1-20 pupils. Sitkei and Walberg in their studies observed that students in small classes and those small classes are necessary for student achievement.

Expressing a divergent view, Silver (as cited by Bolton, 1988) found that there was no significant difference in post test achievement scores between large classes and small classes control groups; he concluded

that larger class is sometimes better. Earlier, Keeves (1978) had acceded that type of school did not make a contribution to academic achievement. However, Carpenter and Western (1984) found that school type makes a difference in students academic achievement. Glass et al (1979) as a corollary to the above statement indicated through meta-analyses that, compared to larger classes, small classes lead to higher pupils achievement, more favourable teacher effects (e.g. morale, attitude towards students), greater attempts in individualized instruction, a better classroom climate and more favorable student effects (e.g. self concept, participation). In another development, Finn and Achilles (1990) observed in a longitudinal analysis of a portion of their large scale experiment (describing Kindergarten and teachers) that students in small classes out-perform their peers in kindergarten classes of regular size (Regular class size here means large classes). According to a study conducted in United States, Campbell (1980) remarked that students from large schools were exposed to large number of school activities and the best of them achieved standards that were unequaled by students in small schools. However, he observed that students in small schools participated in more activities (both academics and extra- curricular activities). The study concluded that the versatility and performance of pupils in small schools were consistently higher. The assertion made by Campbell appears confusing as he failed to pinpoint the one that is more reliable.

In his contribution, Ornstein (1990) discovered that in a 10-year study of high schools in Illinois, the lowest achievement on three separate standard tests occurred in schools with fewer than 495 students. The highest achievement, however, was found in schools with 495 to 1,280 students. The situation was slightly different from this in Ekiti State where schools with fewer students recorded better results, than schools with larger students' population (Owoeye, 1991). Factors such as socio-economic status and geographical location were accounted for but these were eliminated as possible explanations. A similar view had earlier been expressed by George (1958) when he reported in his research on high school class rank and academic performance that graduate from high school seem to perform better academically in college when the high school from which the student graduated has a large graduating class. Edge (1980) identifies two problems that are posed by large class teaching; (a) the provision of an opportunity for discussion or for any kind of oral input to the written work is difficult and; (b) the amount of marking involved can dissuade even the most enthusiastic teacher from setting the amount of written work that he feels would benefit the students

In another development, a comprehensive study conducted by Glass and Smith (1979) on the relationship between class size and achievement gathered 80 studies, read and separated their results to meta-analysis procedures. It was concluded from the results that reduced class size and greater pupil achievement are related. Researchers using Meta analysis to integrate research findings of Glass and Smith meta-analytical techniques to describe relationship between class size and academic achievement or classroom processes, in their analyses never suggested substantial changes in conclusions originally drawn in Glass and Smith (1979) and Smith and Glass (1980). Similarly, Tupen (as cited in Onocha, 1985) reported that the possession of larger and better equipped laboratories, libraries and opportunity for collaboration between two or more teachers may be some of the major reasons accounting for the variance in achievement between large and small schools. This statement has only established that differences exist between large and small schools without actualizing the particular one.

Though there is a debate about the extent of benefits small classes bring, or how much it costs to achieve, there is at least some agreement in the literature that using certain tests, class size does matter in some circumstances. Educationists such as Hoxby (2002) and Hanushek (1989) support this view. No such agreement exists in the literature concerning the effect of class size in higher education. Bowden and Marton (1998) have presented arguments that class size is the primary environmental variable college faculties must contend with when developing effective teaching strategies. They argue that while class size may not be significant in courses best suited for lecture style learning, courses geared toward promoting critical thinking and advanced problem solving are best taught in a smaller classroom environment. Their views are consistent with findings which suggest that students and educators' motivation and attitude towards learning tends to be more negatively affected by larger classes. Becher (1999) agrees that though they may have learned the material, students do not feel as satisfied with the classroom experience as they would have in smaller classes, suggesting that some learning opportunities may have been lost.

Gibbs (1992) states that the typical class size in many institutions of higher education in the twentieth century are likely to be 80 to 100, with small group work being defined as involving 16 to 20 students. Gibbs (1992) maintains that the danger of the speed of the increase in student numbers is that the system will not be able to adapt fast enough. This, he adds, could result in Higher Education Institutions (HEI's) responding by modeling themselves on existing systems of mass higher education or by attempting to remain as they are and finding that resources are stretched beyond acceptable limits.

Herbst (2001, P.69) advances a number of reasons for variations in terms of optimum class sizes in different learning institutions. He believes that systems around the country differ in many respects. Important sources of variation include the examination system, existence of high-stake incentives for students and

educators, provision of remedial instruction for lagging students or enrichment classes for outstanding achievers, the level of allocation of resources, the quality of educators amongst others. He believes that these are the factors which inform class sizes in many institutions. As a result, naively assumed estimations of educational production functions may be biased by omitted variables among these characteristics of good teaching. These include the ability to communicate challenging content; involving students in hands-on experiences; providing clear and immediate feedback; and supporting family involvement and endogeneity of class size with respect to student performance. In this regard, Herbst states that “estimating the “true” class size impact, which is the causal outcome of class size on learner performance, requires an identification strategy” (p. 69). He maintains that this should restrict the analysis of exogenous variations in class size, being the factors other than those earlier mentioned. Several of these exogenous features involved classroom management issues such as student discipline and instilling a culture of hard work. Overall, differences were found with regard to student misbehavior, teacher misbehavior reprimands, teacher control, noise levels, student engagement, perceptions of class size and effectiveness, the use of in-depth projects and equipment as well as student assignment choice.

After assessing the plethora of factors that Herbst (2001) believes also contribute immensely to student achievement, teacher behaviour, teacher feedback and student cooperative help were seen as being more prevalent in large classes. He is of the opinion that other variables such as potential grade inflation, student aptitude, lower academic standards and a lack of remediation for ill-prepared and disadvantaged students, teaching styles and student motivation and effort could confound research results in this area and may also account for inconsistent results.

## 2.5 Conceptual Framework

For the purposes of this research study, a modified Bossert’s (1982) framework was utilized. According to Bossert’s model, a principal’s managerial behaviour is shaped by school context (external and district) and the principal’s personal characteristics. At the same time, a principal’s managerial behaviour directly influences school climate and instructional organization, and indirectly school outcomes (student learning and performance).

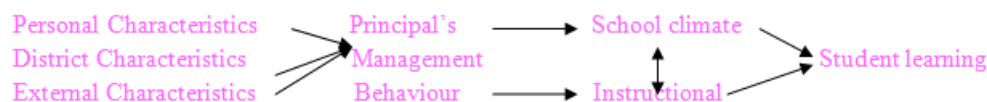


Figure 1: Bossert’s Model of School Climate (1982)

As obvious from the proposed framework, the school principal’s managerial behaviour (prevalent leadership roles) may be at the same time considered a dependent and an independent variable. It plays the dependent variable role in relation to principal’s personal characteristics, district characteristics, and external characteristics variables, while it plays an independent variable role when related to school outcomes. I modified Bossert’s framework by leaving out antecedent variables (context and leader’s personal characteristics), assuming that these characteristics are already embedded in the leader’s dominant leadership style. By leaving out the variables with potential antecedent effects, the nature of the model changes, and researchers look at the indirect effect of leadership style on school outcomes, moderated by the presence of a third variable (school climate). Modification of the Bossert’s model has led to a proposed conceptual framework.

I speculate that the presence of the first variable and an aspect of the third variable may influence the relationship between the independent and dependent variables (the relationship between leadership and academic achievement). Normally, researchers theorize that administrator effects would take place less than one set of conditions and not under another.

Figure 2 is a conceptual framework that that shows moderated effects of administrator’s behaviour. It is obvious from the figure that the first two represent a generic variable indicating leadership style, while the third represents generic variable indicating school outcomes.

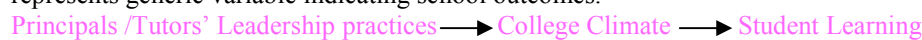


Figure 2: Moderated Effects Model- A Conceptual Framework.

## 3.0 Methodology

### 3.1 Sample and Sampling Techniques

In this study, the sample size of 322 was selected from all the accessible population. Following the Krejcie and Morgan (1970) table, for a population of 1800, the sample size is 317, what it means is that, for every target population, about a sixth is used as a sample size .The sample size was therefore derived using Krejcie and Morgan’s formula. The sample size of 322 was purposively selected because the respondents were made up of subgroups, thus, female and male trainees, male and female course tutors and Principals after which they were randomly selected from the three colleges of Education in the Ashanti Region of Ghana. The distribution of the population and the sample by college is presented in Table 1.



**Table .1: Distribution of Population and Sample Size by Colleges of Education**

College	Population	Sample Size
Offinso College of Education	610	102
Wesley College of Education.	620	110
Akokerri College of Education	620	110
<b>Total</b>	<b>1850</b>	<b>322</b>

**Source: field, 2014**

To ensure credibility and reliability of the quality of the data, students were given brief explanation of the research idea to find out their understanding of College climate variables and whether or not it influenced their academic work. The purposive and random sampling techniques were adopted to select the student-trainees, Principals and tutors who were involved in the study. In using purposive sampling technique, I carefully and consciously chose the subjects to be included in the sample so that the sample can be developed for their needs. It is a non-probabilistic sampling technique. I handpicked the elements to be included in the sample on the basis of their judgment of their typicality or particularly knowledgeable about the issues under study. Purposive sampling is also known as judgmental sampling, I purposively chose subjects who in my opinion were relevant to the research topic. The researcher used purposive sampling because he wanted a sample of experts as in the case of a need assessment using the key informant approach. It was after the purposive sampling that I used the stratified randomization sampling technique

In the case of stratified random sampling, the sample was broken into distinct classes; the method of simple randomization was applied to select the subjects of interest. That is, after the population has been divided into strata, samples were selected randomly but independent from each stratum. Out of a sample size of 322 from 1800, I broke this into male and female tutors and teacher-trainees. Random sampling is the most basic of the probability designs. This design gave all units of the target population an equal chance of being selected. After identifying the target population that in my opinion who could provide the expert information, I used the lottery method which is one of the strategies of simple random sampling techniques. A sampling frame was first constructed comprising a list of the units of the target population with names of sample units in alphabetical order and numbered accordingly. Names were listed in sample frame on slips of paper and put them in a container. It was mixed well and removed one slip or paper at a time from the container without looking into it. Name on slip was picked and recorded. Anytime a slip was selected and recorded, it was thrown back into the container and ignored before the next one was picked. The process continued until the required number of respondents was recorded.

### 3.2 Instruments for Data Collection

A questionnaire was adapted for data collection in this study. It was adapted from Martin Olsen Laney (2002). He used it to collect data on shy students and the way it has been structured to best suit the structure of my items; it comprised 15 standard structured items. The questionnaire was divided into three major sections. Section A sought for information about the bio-data of the respondents while sections B and C sought for information from respondents on the variables: Leadership roles, class size, and infrastructure and tutor quality under study related to the four (4) research questions.

A 5point Likert-scale questionnaire was structured in the Likert-scale format and included: Strongly Agree (SA), Agree (A), Not sure (NS) Disagree (D), and Strongly Disagree (SD). They were also assigned numerical weight of 5, 4, 3, 2, and 1 respectively. The respondents were instructed to select the option most appropriate to them and that corresponded to their opinion about the statement provided.

### 3.3 Validity of Instrument

Validity and reliability are essential to the effectiveness of any data-gathering procedure (Best & Kahn, 1998). Reliability is the degree of consistency that the instrument or procedure demonstrates. Validity is defined as the appropriateness, meaningfulness and usefulness of specific inferences made from the instrument or procedure results (Gall et al; 1996). As Best and Kahn (1998) stated, reliability is a necessary but not sufficient condition for validity. A test must be reliable for it to be valid, but a test can be reliable and still not be valid.

According to Gall et al, (1996), four procedures exist for demonstrating the validity of the research inferences. This study used validity. Content validity refers to the degree to which the scores yielded by a test adequately represent the content or conceptual domain that these scores purport to measure. The claim of content validity was based on the examination of the survey instrument by educational professionals, advisory committee

members and participants of the pilot study.

The questionnaire was adapted from Martin Olsen Laney, based on experience and to reflect the dependent and independent variables and also based on literature reviewed, purpose of study and research questions. In addition, the questionnaires were given to my supervisor and two other experts in Educational Psychology Department at the University of Education, Winneba to read through and offer the necessary advice where possible. They helped to correct all errors, corrected and reframed its content in line with the research topic, purpose of study and the research questions. It was hoped that they helped modify certain items in the questionnaire and suggested other areas of improvement where necessary. Their suggestions and corrections were effected. All the corrections helped to ensure that the instruments were close to perfection and were of high content, construct and face validities.

### **3.4 Reliability of the Instrument**

The questionnaire was trial-tested using Staff, Principals and Student-teachers in St. Louis College of Education who were not part of the main study. In all, 50 participants were involved in the pilot testing. The study established the degree of consistency of the questionnaire at providing the required information. The resulting data was divided into two equal halves and correlated statistically with a correlational statistic. The Cronbach's alpha reliability coefficient was calculated to be .75. This indicated that the questionnaire was highly reliable.

### **3.5 Method of Data Collection**

A letter of introduction was collected from the Head of Department of Educational Leadership, University of Education Winneba, Kumasi; which enabled the researcher to collect data from the respondents in the Colleges of Education. The letter was sent to the Principals of the aforementioned colleges to seek permission to undertake the research. The questionnaire was administered on the respondents through the help of my colleagues in Education department from Offinso, Wesley and Akokerri colleges of Education with St. Louis College of Education being used for pilot study. The required number of questionnaires were counted and given to them and after a week, went for the administered questionnaire.

### **3.6 Method of Data Analysis**

The data collection techniques presuppose specific data analysis for qualitative and quantitative research methods. Data analysis was performed using the Statistical Package for Social Sciences (SPSS) computer software packages. Analysis of the data included Means, Standard deviations, and Analysis of Variance (ANOVA) were used as analytical methods on all the data except items on interview guide and open ended items for teacher-trainees and college tutors. Upon completion of the data collection a comprehensive analysis of trainees' additional comments found at the end of the survey was performed in order to identify notable themes or ideas (Glesne, 1999).

The purpose of the interview data analysis in this study was to draw out the emergent themes and present these in such a manner as to address the research questions. Actual quotes of the interviewees were also used to describe certain points of view. The data were presented according to the research questions of the study.

## **4.0 Analysis and Discussion**

The analysis of the main data is presented in relation to the research questions.

**Research Question 1:** What is the impact of college leadership on student-trainees' academic work?

To examine the college leadership roles, the respondents were asked to respond to some statements using a 5 point Likert scale that ranged from Strongly Disagree (=1) to Strongly Agree (=5). The means and standard deviations were calculated for each question. The responses of the trainees are shown in Table 4.6.

**Table 2: Trainees Response on College Tutor’s Leadership Roles / Leadership Impact on Academic Work**

Items	Offinso (n=95)		Akokerri (n=95)		Wesley (n=95)		Average Mean
	Mean	SD	Mean	SD	Mean	SD	
1. Collective formulation of rules and regulations.	3.30	1.41	4.08	0.90	4.06	1.09	3.8
2. Shared Leadership roles	4.06	1.13	4.31	0.90	4.34	.979	4.2
3. Negative comments by tutors	3.24	1.40	2.43	1.37	2.04	1.27	2.3
4. Extensive Feedback on progress of work.	3.86	1.00	4.01	1.09	3.79	1.30	3.9
5. Collective decisions taking	2.95	1.36	3.54	1.36	3.82	1.30	2.5
6. Fair treatment by tutors	3.38	1.17	4.15	1.04	4.18	0.73	3.9

**Source: Field Survey, 2014**

With regard to the individual statements, it could be observed that the responses of the trainees regarding their respective college tutor’s leadership practices were similar for the respondents of Akokerri and Wesley Colleges but different for the respondents of Offinso College. For instance, the mean scores recorded for “shared leadership roles of tutors” were 4.06, 4.31 and 4.34 for Offinso, Akokerri and Wesley Colleges respectively. The results indicate that majority of the respondents in all the colleges agreed to the statement that leadership roles (such as class prefectship) are given to students in class to perform.

The mean scores recorded for “collective decisions taking” were 2.95, 3.54 and 3.82 for Offinso, Akokerri and Wesley Colleges respectively. The results indicate that majority of the respondents in Offinso college disagreed or were not sure about the statement while majority of the respondents in Akokerri and Wesley Colleges were not sure or agreed to the statement that there is collective decisions taking in their colleges.

However, for purposes of comparing the means of the responses from the trainees of the various colleges, all the statements on college leadership roles and practices were aggregated into one index with the arithmetic mean and standard deviation calculated for the various colleges. This is shown in Table 3

**Table 3: Aggregated Trainees Response on College Tutor’s Leadership Roles / Leadership Impact on Academic Work**

College Leadership Roles	Offinso College (n=95)		Akokerri College (n=95)		Wesley College(n=95)	
	Mean	Std D.	Mean	Std D.	Mean	Std D
	3.46	0.42	3.75	0.70	3.71	0.84

**Source: Field Survey, 2014**

Based on the five point Likert scale, a mean of 3.0 was calculated to be the mid-point. A mean score above 3.0 therefore denoted a positive perception (which suggests college leadership impacted on student-trainees’ academic work) while a mean score below 3.0 denoted negative perception (which suggests college leadership did not impact on student-trainee’s academic work). A fairly good number of respondents strongly agreed that the role tutors play during instruction impact positively, while a section of the respondents however disagreed. The respondents from Offinso College for instance, had the lowest mean of 3.46 with a standard deviation of 0.42.

Some of the comments from the respondents of Offinso College revealed that rules and regulations were well formulated. However, the respondents of Akokerri and Wesley colleges had an overall mean of 3.75 and 3.71 respectively. Some of the comments from the respondents of Akokerri College revealed that the cordial relationship between the teachers facilitates learning and affects academic work positively. From the results, most of the student-trainees indicated that effective leadership roles such as cordial relationships, collective decision making and well formulated rules and regulations had an impact on their study habits. By implication, the good leadership practices had a positive relationship with student-trainees’ academic work. This is in line with the findings of Kannapel and Clements (2005) when they found that collaborative decision making differentiated high-from low-performing elementary schools. This is however in contrast with the view of Ross and Gray (2006) and Berker (2007) who argued that Principals have very little direct impact on student achievement as they indirectly contributes to student achievement through teacher commitment and beliefs about their collective capacity .In the view of the researcher, it is imperative to exercise transformational leadership by

college Tutors, Administrators and Principals of various Colleges of Education as their good leadership skills together could contribute to good Teacher-trainees' academic achievements. The reason is that they all in one way or the other deal directly or indirectly with College students.

In fact, Tucker, Zayco and Herman postulate that there are a number of factors that affect performance in school; and one of the most influential is motivation. They are of the view that motivation is referred to as academic engagement, which refers to cognitive, emotional, and behavioral indicators of student investment in and attachment to education. Their belief is that students who are not motivated to succeed will not work hard and that several researchers have suggested that only motivation directly effects academic achievement; all other factors affect achievement only through their effect on motivation. It is in this direction that the researcher urges College leadership to recognize the important leadership roles/practices student play and give them the authority to operate as such under the guidance of the College authorities since it motivates them to achieve positive self-image hence, good academic work/achievement.

To test the variations in the aggregated means of their responses on college leadership roles, a one way analysis of variance was used. This is shown in Table 4

**Table 4: Analysis of Variance on College Tutor's Leadership Practices as Perceived by Trainees**

Source of Variation	SS	df	MS	P-value
Between Groups	0.29	2	0.143	0.74
Within Groups	6.84	15	0.46	
Total	7.12	17		

**Alpha level is .05**

The results from Table 4.8 indicate that there was no significant difference in the means of the aggregated responses of the respondents from the various colleges. The significance or p-value was 0.74 which is greater than the predetermined alpha of 0.05.

The responses of the tutors on their respective college leadership styles also showed some variations. The responses of the tutors are shown in Table 5.

**Table 5: Tutors Response on College Leadership Practices**

	Offinso College (n=20)		Akokerri College (n=20)		Wesley College (n=15)		Average Mean
	Mean	SD	Mean	SD	Mean	SD	
1. Guidance of trainees during instruction.	4.05	.83	4.20	.959	4.47	.52	4.3
2. Offer of career and educational guidance and counseling by tutors.	2.95	1.39	2.85	1.39	2.80	1.42	2.9
3. Cordial relationship between Principals, Administrators, Staff and Trainees.	3.40	0.94	2.90	0.92	3.14	1.13	3.16
4. Tutors assign student-trainees roles in the classroom teaching and learning situations.	3.20	1.20	4.05	0.61	4.40	0.83	4.0
5. Issues are mostly imposed on the teaching staff.	2.75	.85	3.35	.815	3.07	.883	3.1
6. Tutors are well motivated to give of their best as part of their work.	3.25	1.25	2.40	1.05	2.34	0.72	2.7
7. Collective decision making	2.90	0.97	2.35	0.81	2.27	0.70	2.5
8. My principal exhibits more of transformational leadership than autocratic.	3.25	.91	2.35	.813	3.07	.96	2.9
9. Tutors are always regular and punctual.	3.40	1.31	4.00	1.17	3.67	.62	3.7

**Source: Field Survey, 2014**

The tutors' responses on some individual statements regarding their respective college leadership styles showed some variations. For instance, the mean scores recorded for "tutors assign student-trainees roles in the



classroom” were 3.20, 4.05 and 4.40 for Offinso, Akokerri and Wesley Colleges respectively. The results indicate that majority of the respondents in Offinso college were not sure about the statement while majority of the respondents in Akokerri and Wesley Colleges agreed to the statement that they assign student-trainees roles in the classroom teaching and learning situations.

With regard to guidance of trainees during instruction, the mean scores recorded were 4.05, 4.20 and 4.47 for Offinso, Akokerri and Wesley Colleges respectively which indicate that majority of the tutors in all the three colleges agreed to the statement that Tutors guide trainees in their assignments, projects, and exercises during instruction. The aggregated means of their responses on the various statements is shown in Table 6.

**Table 6: Aggregated Tutors Response on College Leadership Practices**

	Offinso College (n=20)		Akokerri College (n=20)		Wesley College (n=15)	
	Mean	Std D	Mean	Std D.	Mean	Std D.
College leadership practices	3.24	0.38	3.16	0.76	3.24	0.80

**Source: Field survey, 2014**

The aggregated means of the statements on college leadership roles indicate that the impacts of college leadership styles on students’ academic work was also fairly neutral in all the colleges. This is a clear indication that leadership in our Colleges of Education are not doing too well regarding leadership roles and practice and this could affect negatively the academic work of trainees. To test the variations in the aggregated means of the tutors’ responses on college leadership styles, a one way analysis of variance was used as shown in Table 7.

**Table 7: Analysis of Variance on College Leadership Practices as Perceived by Tutors**

Source of Variation	SS	df	MS	P-value
Between Groups	0.04	2	0.02	0.96
Within Groups	10.88	24	0.45	
Total	10.92	26		

**Alpha level=0.05**

The results indicate that there was no significant difference in the aggregated means of the responses of the tutors. The significance or p-value was .96 which is greater than predetermined alpha of .05.

**College Class Sizes and the Academic Work of Trainees**

**Research Question 2:** What will be the impact between class size and the study habits of trainees? The question sought to find out the impact of college class size on the academic work of student-trainees.

Regarding the college class sizes, respondents were asked to respond to some questions using a Likert scale that ranged from (1) Strongly Disagree to (5) Strongly Agree. The means and standard deviations were calculated for each question. The responses of the trainees are shown in Table 8.

**Table 8: Trainees Response on College Class Sizes**

	Offinso College (n=20)		Akokerri College (n=20)		Wesley College (n=15)		Average Mean
	Mean	SD	Mean	SD	Mean	SD	
1. Spacious lecture room for effective teaching and learning	2.65	1.29	4.15	1.14	4.32	0.97	3.7
2. Every student has chair and desk to sit and write on.	2.41	1.40	4.61	0.67	4.69	0.58	3.9
3. Tutors are able to move freely to monitor trainee’s progress during instruction.	2.72	1.27	4.31	0.98	4.40	0.78	3.8
4. Well-furnished library for use.	2.82	1.44	3.93	1.22	4.68	0.53	3.8
5. The nature of our classrooms promotes group work	3.19	1.37	3.93	1.13	3.98	0.96	3.7

**Source: Field survey, 2014**

From Table 4.12, majority of the trainees in Offinso College disagreed with the statement that their lecture rooms are spacious enough for effective teaching and learning while majority of the respondents in Akokerri and Wesley Colleges agreed to the statement. The mean scores recorded were 2.65, 4.15 and 4.31 for

Offinso, Akokerri and Wesley Colleges respectively. The mean scores recorded for the Statement that “tutors are able to move freely to monitor trainee’s progress during instruction” were 2.72, 4.31 and 4.40 for Offinso, Akokerri and Wesley Colleges respectively. The results indicated that majority of the respondents in Offinso college disagreed with the statement while majority of the respondents in Akokerri and Wesley Colleges agreed with the statement.

However, for comparing the means of the responses from the trainees of the various colleges, all the statement on college class sizes were aggregated into one index with the arithmetic mean and standard deviation calculated for the various colleges. This is shown in Table 9

**Table 9: Aggregated Trainees Response on College Class Sizes**

	Offinso College (n=95)		Akokerri College (n=95)		Wesley College(n=95)	
	Mean	Std D.	Mean	Std D	Mean	Std D.
College class sizes	2.76	0.27	4.19	0.29	4.42	0.30

**Source: Field survey, 2014**

The aggregated mean of the statements on college class sizes among the various colleges indicated that the impacts of college class sizes on the academic work was different for the Offinso trainees but similar for respondents of Akokerri and Wesley Colleges. Offinso College had the lowest mean of 2.76. Akokerri and Wesley colleges had means of 4.19 and 4.42 respectively. The results imply that class sizes in Akokerri and Wesley colleges were relatively better for trainees study habits than that of Offinso College, hence, impacting negatively on their academic work.

To test the variations in the aggregated means of their responses on college class sizes, a one way analysis of variance was used. This is shown in Table 10.

**Table 10: Analysis of Variance on College Class Sizes as Perceived by Trainees**

Source of Variation	SS	Df	MS	P-value
Between Groups	8.05	2	4.03	1.87E-06
Within Groups	1.01	12	0.08	
<b>Total</b>	<b>9.06</b>	<b>14</b>		

**Alpha level is 0.05**

The results indicated that there was no significant difference in the means of the responses on college class sizes provided by the respondents. The responses of the tutors on the impact between class size and the study habits of trainees are shown in Table 11.

**Table 11: Tutors Response on College Class Sizes**

	Offinso College (n=20)		Akokerri College (n=20)		Wesley College (n=15)		Average Mean
	Mean	SD	Mean	SD	Mean	SD	
1. Spacious class rooms for effective instruction.	2.53	.90	2.70	.66	2.87	0.74	2.7
2. Tutors are able to move freely to supervise progress of work during instruction in class.	2.40	.82	1.95	.22	2.47	0.83	2.3
3. The number of trainees in a class should be reduced for effective teaching and learning.	3.65	0.81	4.103	.55	3.67	0.72	3.8
4. My College has enough classrooms for teaching and learning.	2.35	.88	2.80	.83	3.07	.59	2.7
5. The number of trainees in my class should be maintained.	2.60	0.88	2.35	.81	2.67	0.72	2.5
6. My class size (number of trainees) is large and does not support academic work.	3.65	.75	4.05	.83	3.93	.26	3.9
7. My tutors are able to attend to all students during instruction.	2.25	.72	1.80	.77	2.73	.96	2.3

**Source: Field survey, 2014**

From Table 11, majority of the tutors in all the three colleges disagreed or were not sure about the statement that their class rooms are spacious enough for effective instruction. The mean scores recorded were 2.53, 2.70 and 2.87 for Offinso, Akokerri and Wesley Colleges respectively. Also, regarding reduction in class size, the mean scores recorded were 3.65, 4.10 and 3.67 for Offinso, Akokerri and Wesley Colleges respectively. The results indicate that majority of the respondents in Akokerri college agree with the statement that the number of trainees in a class should be reduced for effective teaching and learning.

Majority of the respondents in Offinso and Wesley Colleges were not sure or agreed to the statement. This follows from the fact that majority of tutors indicated that their class size (number of trainees in class) is large and does not support academic work. However, comparing the means of the responses from the tutors of the various colleges, all the statement on college class sizes were aggregated into one index with the arithmetic mean and standard deviation calculated for the various colleges. This is shown in Table 12.

**Table 12: Aggregate Tutors Response on College Class Sizes**

	Offinso College (n=95)		Akokerri College (n=95)		Wesley College (n=95)	
	Mean	Std D.	Mean	Std D	Mean	StdD.
College class size	2.78	0.61	2.82	0.93	3.06	0.54

**Source: Field survey, 20114**

The aggregated mean of the responses by the tutors on their respective college class sizes indicate that the impact of college class sizes on students academic work was noticeable. This is supported by Jordan that teachers generally, have definite preference for the size of schools in which they wish to teach and that the larger the class size, the lower the level of students' achievement will tend to be. Bolton however, hold an opposing view and thinks that the larger the class size, the better it is in relation to student achievement. To test the variations in the overall means of the tutors' responses on college class sizes, a one way analysis of variance was used.

This assertion has been contested by Glass et. al; who indicated through meta-analyses that, compared to larger classes, small classes lead to higher pupils achievement, more favourable teacher effects (e.g. morale, attitude towards students), greater attempts in individualized instruction, a better classroom climate and more favorable student effects (e.g. self concept, participation). In another development, Finn and Achilles also

observed in a longitudinal analysis of a portion of their large scale experiment (describing Kindergarten and teachers) that students in small classes out-perform their peers in kindergarten classes of regular size (Regular class size here means large classes). However, a study conducted in United States, Campbell remarked that students from large schools were exposed to large number of school activities and the best of them achieved standards that were unequaled by students in small schools. The study concluded that the versatility and performance of pupils in small schools were consistently higher. The assertion made by Campbell appears confusing as he failed to pinpoint the one that is more reliable. This study has therefore confirmed Glass and his friends together with Jordan that small class size brings about higher performance among College students since supervision is effective and materials are also effectively and efficiently managed. The study added teachers need to create an enabling classroom learning atmosphere coupled with good class control and management. This is shown in Table 13.

**Table 13: Analysis of Variance on College Class Sizes as Perceived by Tutors**

Source of Variation	SS	Df	MS	P-value
Between Groups	0.33	2	0.16	0.74
Within Groups	9.18	18	0.51	
<b>Total</b>	<b>9.52</b>	<b>20</b>		

**Alpha level=.05**

The results indicate that there was no significant difference in the aggregated means of the responses by the various respondents. The significance or p-value was 0.74 which is greater than the alpha level of .05.

## Summary, Conclusions and Recommendations

### 5.0 Introduction

This chapter discusses the findings of the study as presented in Chapter Four. It also presents the conclusions arising from the study and recommendations on the various findings of the study.

### 5.1 Summary of Findings

#### Characteristics of respondents

The total sample size of 322 respondents was made up of 172 trainees and 50 tutors chosen from Offinso College of Education, Akokerri College of Education and Wesley College of Education. With regards to the trainees, majority of them (65.6%) were males with the remaining 34.4% being females. With their age distributions, over 90% of the respondents were below 30 years, which is the common age bracket of teacher trainees in Ghana. Less than 6 % of the total respondents were over 30 years old.

With regard to the tutors, majority (70.9%) of them was males and the remaining 29.1% were females. Also, majority (56.67%) were found to be senior tutors with the remaining 43.33 % being junior tutors. The tutors were also found to be professionally qualified with 58.2% having a Master's Degree and 41.8% having a Bachelor's Degree. It was observed from the sampled tutors that all the senior tutors had obtained a Master's degree and the junior tutors had a Bachelor's degree.

### 5.2 College Leadership Practices and academic work of Student-Trainees

It could be observed that the responses of the trainees regarding their respective college leadership styles were similar for the respondents of Akokerri and Wesley Colleges. Comparing the means of the responses from the trainees of the various colleges, the aggregated mean of the items indicate that the impacts of college leadership practices on academic work had neither a positive impact nor a negative impact (neutral) was for all the colleges. The respondents from Offinso College had the lowest mean of 3.46. However, the respondents of Akokerri and Wesley colleges had an overall mean of 3.75 and 3.71 respectively. The results of an ANOVA test indicate that there was no significant difference in the means of the aggregated responses of the respondents from the various colleges. The significance or p-value was 0.74 which is greater than the predetermined alpha of .05.

From the analysis, most of the trainees indicated that effective leadership roles such as cordial relationships, collective decision making and well formulated rules and regulations had an impact on their study habits. By implication, the good leadership practices had a positive relationship with students study habits. This is in line with the findings of Kannapel and Clements (2005) when they found that collaborative decision making differentiated high from low-performing elementary schools.

The responses by the tutors on college leadership roles among the various colleges indicate that the impacts of college leadership styles on students study habits was also fairly neutral. The results of an ANOVA test indicate that there was no significant difference in the aggregated means of the responses of the tutors. The significance or p-value was 0.96 which is greater than predetermined alpha of .05.



### 5.3 College Class Sizes and the academic work of Trainees

From the analysis, it can be observed that the responses of the trainees regarding their respective college class sizes were similar for the respondents from Akokerri and Wesley Colleges but different for the respondents of Offinso College. The aggregated mean of the statements on college class sizes among the various colleges indicate that the impacts of college class sizes on their study habits was different for the Offinso trainees but similar for respondents of Akokerri and Wesley colleges. Offinso College had the lowest mean of 2.76. Akokerri and Wesley colleges had means of 4.18 and 4.41 respectively. The results of the ANOVA test indicate that there was no significant difference in the means of the responses on college class sizes provided by the respondents ( $p > .05$ ).

From the analysis, majority of the tutors in all the three colleges especially Akokerri College indicated that their class rooms are not spacious enough for effective instruction. Most of the trainees also indicated that the number of trainees in a class should be reduced for effective teaching and learning. This means that class sizes had an impact on academic work of trainees. Compared to larger classes, small classes lead to higher pupils achievement, more favourable teacher effects (e.g morale, attitude towards students) greater attempts in individualized instruction, a better classroom climate and more favorable student effects (e.g. self concept, participation). By implication, large class sizes had a negative relationship with the academic work of trainees. This is consistent with several studies. For instance, the findings of Sitkei (1968) and Walberg (1969) that significant and consistent relationship exists in the achievement of students in small classes of about 1-20 pupils that obtained higher scores in science tests than their counterparts in large classes are necessary for student achievement. Finn and Achilles (1990) also observed in a longitudinal analysis of a portion of their large scale experiment that students in small classes out-perform their peers in kindergarten classes of large classes.

The aggregated mean of the statements on college class sizes among the tutors of the various colleges indicate that the impacts of college class sizes on students study habits was fairly neutral. To test the variations in the overall means of their responses on college class sizes, a one way analysis of variance was used. The results indicate that there was no significant difference in the aggregated means of the responses by the various respondents. The significance or p-value was 0.73 which is greater than the alpha level of .05.

### 5.4 Conclusions

On the basis of the findings of the study, the following conclusions are drawn:

Effective College leadership practices will promote good academic work in student-trainees. This was based on the finding that there was positive relationship between leadership roles and student-trainees' academic work.

Class sizes were also found to have an impact on the trainees' academic work. For instance, the results showed that respondents who had high aggregated mean scores for the variables under college class size of their respective colleges had better academic performance than those who had low aggregated mean scores. The study therefore concludes that maintaining small class sizes in the colleges of education will improve student-trainees' academic work. This is premised on the findings that class size had positive relationship.

### 5.5 Recommendations and Implications

Based on the findings of the study and conclusions drawn from them, the following recommendations are made:

1. College administrators should guarantee an enabling learning environment for trainees. It is therefore recommended that College administrators should formulate policies that will ensure that the number of students in a class should not be large during instruction. This suggests that the government should provide enough classrooms for the Colleges. Other stakeholders are also implored to compliment the effort of the government to boost the academic work of trainees by building more classrooms for the colleges.
2. Stakeholders of the Colleges of Education should ensure that colleges are provided adequate facilities in terms of teaching and learning materials. This will enable the teachers successfully plan their teaching and learning environment to attract trainees attention which will in turn promote their study habits.
3. Positive student relationship should be encouraged in schools because the teachers' role is not limited to teaching; they also act as parents to the students. Such relationships should be positive, warm and trusting so as to enable students develop positive self image and attitudes towards school and consequently improved grades. Healthy relationships require trust, self-disclosure, and reciprocity, so that true feelings can be shared. Insecure student-trainees seek positive, warm, trusting relationships, but do not have the skills to create them. This means it is up to the teacher to change trainees' views of relationships and meet their academic and socio-emotional needs.
4. Colleges should implement and enforce strict school rules that guarantee an enabling learning environment. A student's zeal and tenacity to excel sometimes becomes sidetracked by distractions and disruptions in the classroom and school. These disruptions are usually counterproductive and greatly

affect performance.

5. It is also recommended that all Colleges of Education in the country should fully establish Guidance and Counselling centres on campus where Counsellors shall operate to help reduce if not completely do away with learning difficulties, emotional, and psychological problems mostly associated with Student-trainees.
6. Colleges of Education should periodically assess their climate (Leadership practices, class size, tutor quality, Guidance and Counselling and infrastructure) in order to identify desirable and undesirable practices. This may help identify factors that negatively impacts on trainees' academic work hence take steps to rectify that.

### Acknowledgements

We thank Rose Adjei (Mrs.), Justice Adom-Adjei, Bridgit Adom-Adjei, Herbert Adom-Adjei, Diana Adutwumwaa, Raymond Suoseg A., James Boakye, Lloyd Alexander Djangmah, Comfort Bremini and Lucy Osei-Wusu for their support of this research work.

### Funding

This work was co-supported by the Government of the Republic of Ghana (GRASAG GRANTS), Augustine Adjei (Mphil), Samuel Dontoh (M.Ed) and Stephen Baafi-Frimpong (PhD.)

### References

- Anthony, P. (1994). *Managing culture*. Buckingham: Open University Press.
- Adelman, C. (2004). *Principal indicators of student academic histories in postsecondary education, 1972-2000*, Washington, DC: U.S. Department of Education
- Anderman, L. H., & Midgley, C. (1997). Motivation and middle school students. In J. L. Irvin(Ed.), What current research says to the middle level practitioner (pp. 41-48). Columbus, OH: National Middle School Association.
- Ames, C. (1992). Classrooms: Goals, structures and student motivation. *Journal of Educational Psychology*, 84(3), 262-271.
- Association of American Colleges and Universities (AACU) (2005). *Liberal education outcomes: A preliminary report on student achievement in college*. Washington, DC: Author.
- Barker, B. (2007). The leadership paradox: Can school leaders transform student outcomes? *School of Effectiveness and School Improvement*, 18(1) 21-43. doi:10.1080/09243450601058618
- Becher, T. 1999. Making audit acceptable: A collegial approach to quality assurance in quality management in higher education institutions. *Higher Education Quarterly*, 46(1):47-66.
- Bolton, J.K. (1988). Larger is Sometimes Better Approach to the Smaller classes A paper presented at the Annual Convention of Teachers of English to Speakers of the Languages. Chicago, Illinois.
- Bowden, J. and Marton, F. 1998. *The University of learning: beyond quality and competence in higher education*. London: Kogan Page.
- Bowen, H. (1978). Some reflection on the current position and future outlook of American higher education. *Academe: Bulletin of the AAUP*, 66(1), 8-15.
- Bowen, W. G., & Bok, D. C. (1998). *The shape of the river: Long-term consequences of considering race in college and university admissions*. Princeton, NJ: Princeton University Press.
- Campbell, R. N. (1980). The Oral Approach with large Classes Language Learning, Vol. X, No. 122, pp.41-46.
- Carnevale, A. P., & Desrochers, D. M. (2003). Preparing students for the knowledge economy: What school counselors need to know. *Professional school counselling*, 6(4): 228-236.
- Carley, K., & Palmquist, M. (1992). Extracting, representing and analyzing mental Models: *Social forces*, 70 (3), 601- 636.
- Choy, S. P. (1999). College access and affordability. *Education Statistics Quarterly*, 1(2):74-90.
- Chrispeels, J. H., Burke, P. H., Johnson, P., & Daly, A. J. (1999). Aligning mental models of district and school leadership teams for reform coherence. *Education and Urban Society*, 40(730), 1-22. doi: 10.1177/0013124508319582.
- Committee for Academic Excellence. Retrieved February 28, 2008, from <http://www.Prichardcommittee.org/Ford%20student/FordReportJE.pdf>.
- Darling-Hammond, L., & Youngs, P. (2002). Defining "highly qualified teachers": What does "scientifically-based research" actually tell us? *Educational Researcher*, 31(9), 13-25.
- Dinham, S. (2005). Principal leadership for outstanding educational outcomes. *Journal of Educational Administration*, 43(4), 338-356. doi: 10.1108/09578230510605405.
- DiMaggio, P. (Ed.). (1997). Culture and cognition. *Annual review of sociology*. Washington, D.C., American sociological association

- Dowson, M., & McInerney, D. M. (2001). Psychological parameters of students' social and work avoidance goals: A qualitative investigation. *Journal of Educational Psychology*, 93(1), 35-42.
- Dror, Y. (1995). School Location as a Function of Uniqueness, Autonomy Integration and Comprehensiveness: A Historical Model with current Implication. *Journal of Education Administration and History*, 27 (1).
- Edge, J. (1980). Teaching Writing in Language Classes" *ELT Journal Education: A harvest of Crisis in National Concord Tuesday*, 17, 1996, P.19 xxxiv (2), 146-148.
- Finn, J.D. and Achilles, C.M. (1999). Answers and questions about class Size: A state-wide Experiment. *American Educational Research Journal*, 27 (3), 557-577.
- Fullan, M. (1992). *What's worth fighting for in headship?* Buckingham: Open University Press.
- George, A.K. (1958). High School Class rank and Academic performance in College. *Dissertation Abstract international*, 20 (9), 3575
- Gibbs, G. 1992. *A strategy for improving student learning on a national scale in improving student learning strategically, Improving student teaching*. Oxford: The Oxford Centre for Staff & Learning Development.
- Glass, G.V and smith, M.L. (1979). Meta-analysis of Research on Class Size and Achievement. *Educational Evaluation and Policy Analysis*, 1, 2-16.
- Goker, D. S. (2006). Leading for learning: Reflective management in EFL schools. *Theory into Practice*, 45(2), 187-196. doi: 10.1207/s15430421tip4502\_11.
- Jordan, B.H. (1964). Analysis of the Interrelationship of Intelligence, Achievement and Socio Economic Status in selected Population of High School. *Dissertation Abstract International*, 25(2).
- Hargreaves, A. (1994). *Changing teachers, changing times: Teachers' work and culture in the postmodern age*. London: Cassell.
- Herbst, M.C. 2001. *Publishing your Research, Pain or Pleasure*. Pretoria: Okhuthele
- Hersey, P., et al; (2001) Management of Organizational Behaviour *Leading Human*.
- Kaplan, A. & Maehr, M. (2002). Adolescents' achievement goals: Situating motivation in socio-cultural contexts. In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescents* (pp. 125-167). Greenwich, CT: Information age publishing.
- Kannapel, P. J., and Clements, S. K. (with Taylor, D., and Hibpshman, T. 2005). *Inside the backbox of high-performing high-poverty schools*. Lexington, K Y: Prichard.
- Keeves, J.P. (1978). Approaches to the Goal of Educational Equality in Renewal of Australian Schools: A changing perspective in Educational Planning. In J.V.D. Crus and P.J Sheehan (Eds), *Melbourne ACER*, 92-107
- Law, S., & Glover, D. (2000). *Educational leadership and learning: practice, policy and research*. Buckingham: Open University Press.
- Lee, V., Ready, D., & Johnson, D. (2001). The difficulty of identifying rare samples to study: The case of high schools divided into schools-within-schools, *Educational Evaluation and Policy Analysis*, 23 (4), 365-379.
- Lee, V. (2000). School size and the organization of secondary schools. In M. T. Hallinan (Ed.), *Handbook of the Sociology of Education* (pp. 327-344). New York: Kluwer/Plenum.
- Leithwood, K., & Jantzi, D. (2008). Linking leadership to student learning: The contributions of leader efficacy. *Educational Administration Quarterly*, 44(486), 1-34. doi: 10.1177/0013161X08321501
- Leithwood, K., Jantzi, D., & Steinbach, R. (1999). *Changing leadership for changing times*. Buckingham: Open University Press.
- Louis, K. S., Kruse, S., & Bryk, A. S. (1995). *Professionalism and community: What is it and why is it important in urban schools?* In K. S. Louis, S. Kruse & Associates (1995) *Professionalism and community: Perspectives on reforming urban schools*. Long Oaks, CA: Corwin.
- Maehr, M. L. & Midgley, C. (1991). Restructuring the school environment to enhance student motivation and learning. *American educational research association annual meeting 2-18.Resources(8<sup>th</sup> Ed.)* Prentice-Hall, Inc., Upper Saddle River, New Jersey 07458. *International*, 25(2).
- McCabe, R. H. (2000). *No one to waste: A report to public decision-makers and community college leaders*. Washington, DC: American association of community colleges.
- Miller, R. J., & Rowan, B. (2006). Effects of organic management on student achievement. *American Educational Research Journal*, 43(2), 219-253.
- Onocha, C.O. (1985). *Patterns of Relationship between Home and School Factors and Pupils Learning Outcomes in Bendel Primary Science Project*. A Ph.D Thesis in the International Centre for Educational Evaluation, Institute of education, University of Ibadan.
- Ornstein, A.C. (1990). How BIG should Schools and Districts Be? *The Education Digest*, 56(2)
- Owoeye, J.S. (1991). *A Study of the Relationship between class size and Educational Quality in Ondo State*. Unpublished M.Ed Thesis, University of Lagos

- Owens, R., & Valesky, T. (2007) *Organizational behavior in education: Adaptive Leadership and School Reform*. Boston, MA: Pearson Education Inc.
- Pennington, H. (2004, December). *Fast track to college: Increasing postsecondary success for all students*. Boston: Jobs for the future.
- Ross, J., & Gray, P. (2006). School Leadership and student achievement: The mediating effects of teacher beliefs. *Canadian Journal of Education*, 29(3), 798-822.
- Schein, E. (1985). *Organizational culture and leadership: A dynamic view*. San Francisco: Jossey-Bass.
- Shulman, L. S. (1997). Professional development: Learning from experience. In B.S. Kogan (ed), *Common schools: Uncommon futures: A working consensus for school renewal*. New York: Teachers College Press.
- Sitkei, E. G. (1968). *The Effect of Class Size: A Review of Research*. Washington, D.C. [www.ccsenet.org/ass](http://www.ccsenet.org/ass) Asian Social Science Vol. 7, No. 6; June 2011 Published by Canadian Center of Science and Education 189.
- Southworth, G. (1999). Headship, leadership and school improvement. In G. Southworth & P. Lincoln (eds), *Supporting improving primary schools: The role of heads and LEAs in raising standards*. London: Falmer Press.
- Swidler, A. (1986). Culture in action: Symbols and strategies. *American sociological review*, 51(2): 273-286.
- Walberg, H. J. (1969). The social environment as a mediator of classroom learning. *Journal of Educational Psychology*, p.60.
- Tucker, C. M., Zayco, R. A., & Herman, K. C. (2002). Teacher and child variables as predictors of academic engagement among low-income African American children. *Psychology in the Schools*, 39(4), 477-488.
- Urdu, T. C., & Maehr, M. L. (1995). Beyond a two-goal theory of motivation and achievement: A case for social goals. *Review of educational research*, 65(3), 213-243.
- Wallace, M. (1996). A crisis of identity: school merger and cultural transition. *British Educational Research Journal* 22(4), 459-472.
- Walberg, H. J. (1969). The social environment as a mediator of classroom learning. *Journal of Educational Psychology*, p.60.