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Factors affecting academic performance of undergraduate students of an Agriculture University

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Abstract

Higher education plays an important role in determining the professional role and job opportunities of an individual. It also prepares the youth to face various challenges of life in their adulthood. Academic performance is important in higher education because it helps to demonstrate mastery of concepts and skills, and is often plays a pivotal role in securing internships, scholarships and job opportunities. The present study was conducted to examine various factors influencing the academic performance of students in an agricultural university. The respondents for this study were undergraduate students from all four years of B.Sc. (Agriculture) programme offered by the University. Information was collected from 240 students (120 male and 120 female) using a pre-tested questionnaire. Correlation analysis indicated that parents' education and achievement motivation were related to academic performance. The study, however, revealed that academic self-efficacy was not related to the academic performance of the students.

Keywords: Academic performance, academic self-efficacy, achievement motivation, parents' education, socio-economic status

Introduction

Education policies have been developed by countries worldwide for many years. These policies place relevant emphasis on preparing the youth to meet the future challenges at both personal and societal level. In this era of globalization and technological revolution, education is considered as the first step for every human activity and it plays a vital role in the development of human capital. Education is also linked to the well-being and opportunities for better living (Battle and Lewis, 2002) ^[4]. Education ensures the acquisition of knowledge and skills that enable individuals to increase their individual productivity and improve their quality of life. This increase in productivity also leads to new avenues of livelihood, which directly enhances the economic growth of a country (Saxton, 2000) ^[35]. Higher education is one of the major factors that facilitate individuals to achieve success in obtaining a profession in order to face different life challenges.

College life at times can be challenging and difficult for a new student. According to Mbathia (2005) ^[27] education supplies people with specific skills and therefore, it enables them to perform their tasks effectively. Higher education is an important factor making a difference locally, regionally, nationally and globally. Educators, trainers, and researchers have long been interested in exploring factors that contribute effectively towards quality of performance of learners. These factors are both internal and external to the higher education system and affect students' academic performance. In order to succeed in higher education, students should be able to comprehend and apply complex ideas and theories. By earning high grades and performing

well on exams, students can demonstrate that they have a thorough understanding of the subject or discipline. This not only helps them to feel more confident in their abilities, but also prepares them for the challenges they will face in their future careers. Academic performance is also important in higher education as it is often an important factor in securing internships, scholarships, and future job opportunities. Many employers and graduate programs look for candidates who have a strong academic record, as this is seen as an indicator of their mastery in a particular field succeed in a professional setting. Additionally, students who perform well in their courses are often eligible for scholarships and other forms of financial aid, which reduces the cost of their education. In addition to these practical benefits, high academic performance can also have a significant impact on a student's personal growth and development. By working hard and achieving academic goals, students develop a sense of accomplishment that can boost their self-esteem and confidence. Students can also learn important skills such as time management, organization, and critical thinking, which can be applied in other areas of their lives.

Academic performance is the students' achievement outcomes that indicate the extent to which a person has accomplished specific goals that were the main focus of instructional environment. Higher education systems in India mostly define cognitive goals that either apply across multiple subject areas (e.g., critical thinking) or include the acquisition of knowledge and understanding in a specific intellectual domain (e.g. numeracy, literacy, science, history). Therefore, academic performance is a multifaceted

construct that involves different domains of learning. The field of academic performance is very wide ranging and covers a broad variety of educational outcomes.

Numerous factors have an impact on academic performance of students. Formal investigations have revealed the role of several factors including intelligence, motivation, personality, age, gender, geographical location, ethnicity, socioeconomic status (SES), and parents' education level influence students' academic performance.

The association between intelligence and academic achievement has been described by the concept that intelligence reflects an individual's ability to learn. Intelligence is considered to be the most important predictor of academic achievement. Kuncel, *et al.*, 2001 [22] demonstrated the relevance of general intelligence in explaining educational or career success. General intelligence and specific aspects of intelligence both were found to be important for predicting academic achievement.

Motivation has also been extensively investigated in the context of academic achievement because to two reasons. Firstly, it is believed to be an important predictor of academic achievement. Secondly, Motivation is seen as an important academic outcome. Thus, there are many studies on the association between different motivational constructs and academic achievement. Wigfield and Cambria (2010) [42] provided a theoretical overview of selected motivational constructs such as achievement values, goal orientation, and interest and their association with academic achievement.

Personality as a predictor of academic achievement has recently, been the focus of research studies. One argument put forth regarding why academic achievement might be associated with personality refers to the fact that besides intellectual ability, the willingness to perform well is relevant to achievement (Zeidner and Matthews, 2012) [43].

The authors discuss basic concepts and give detailed theoretical framework on the association of selected personality constructs and with academic achievement. Among the "Big Five" personality traits (neuroticism, extraversion, openness to experience, agreeableness, conscientiousness), conscientiousness is seen as the most important personality predictor of academic achievement

(Poropat, 2005) [34].

A number of studies have shown that gender plays a vital role in academic achievement. Girls outperform boys in school grades, whereas boys perform better in standardized achievement tests or college placement exams in scientific or mathematical fields. Gender is one of the personal variables that have been related to the differences found in motivational functioning and academic achievement. Different researches have demonstrated the existence of different attribution patterns in boys and girls. It has been posited that, while girls tend to give more emphasis to effort when explaining their performance (Lightbody, Siann, Stocks and Walsh, 1996) [21], boys appeal more to reasoning ability as the cause of their academic achievement (Burgner and Hewstone, 1993) [5]. Many researchers have also pointed out that girls usually make external attributions for successes and failures, and that when they make internal attributions, these refer not so much to effort, but to ability. However, boys usually attribute successes to stable internal causes like effort, thus showing an attributional pattern which enables them to enhance their self-image (Smith, Sinclair and Chapman, 2002) [37].

The conditions at home and socio-economic status of students' family also affects individual's performance since parents are the first socializing agents in a person's life. Family background determines a children's reaction to life situations and their level of academic achievement. Several studies have revealed that self-efficacy influences choice and commitment to a task, energy spent in performing it, and the level of performance

The purpose of the present study was to ascertain the factors that affect academic performance among college students. Relationship between achievement motivation, parental education, academic self-efficacy and academic performance of undergraduate students pursuing B.Sc. (Agriculture) program at G B Pant University of Agriculture and Technology, Pant Nagar, Uttarakhand was studied to achieve the objective. Framework used for the study has been diagrammatically represented in a simplified form in Figure 1.

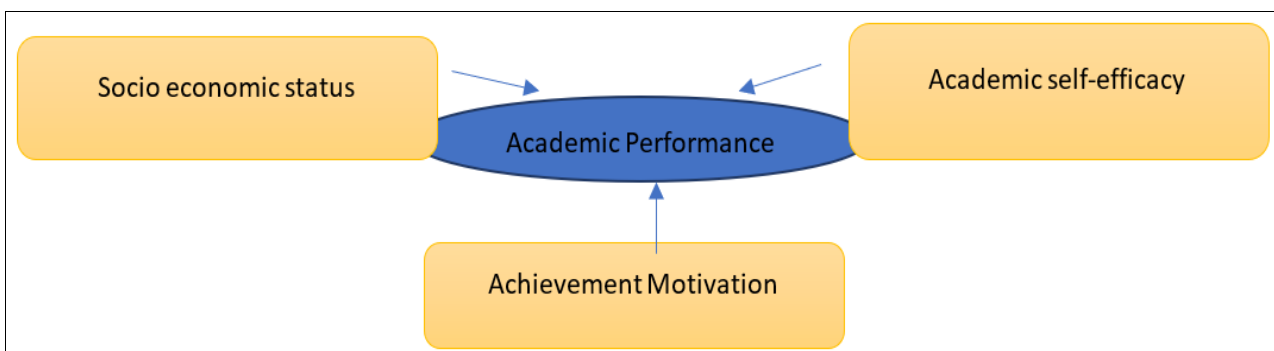


Fig 1: Relationship between academic self-efficacy, achievement motivation, socio economic status and academic performance

Literature cited

Educational services are often intangible and are difficult to measure as they result in the transformation of knowledge, life skills and behaviour modifications of learners (Tsinidou, Gerogiannis, and Fitsilis, 2010) [39]. Environmental and personal characteristics of learners play an important role in

their academic success. Socio-economic status is one of the most researched and debated factor and education professionals assert that it contributes towards the academic performance of students. Chapman (1925) [10] defined Socioeconomic Status as the position that an individual or family occupies with reference to the prevailing average of

standards of cultural possessions, effective income, material possessions, and participation in group activity in the community, The Michigan State Department of Education (1971) ^[15], defined SES as the function of three major factors i.e., family income, parents' educational level and parents' occupation. Parental education and family SES level have positive correlations with the student's quality of achievement (Caldas and Bankston, 1997) ^[8]. Studies indicate that higher the SES of the student's family, higher will be the academic achievement. This relationship has been documented in several studies and seems to hold true no matter what measure of Socioeconomic Status (SES) is used. Some of the common measures include occupation of principal breadwinner, family income, parents' education or some combination of these (Boocock, 1972) ^[6]. It has been reasoned that learners from families with low Socioeconomic Status often lack the financial, social, and educational support that characterize learners from high Socioeconomic Status households. Poor families may have inadequate or limited access to community resources that promote and support children's development and school readiness. Parents may have inadequate skills for activities such as reading to and with their children. Having inadequate resources and limited access to available resources can negatively affect family's decisions regarding their children's development and learning. Most experts argue that low Socioeconomic Status has negative effect on the academic performance of students because their basic needs remain unfulfilled and hence, they do not perform well academically (Adams *et al.*, 1996) ^[2]. Low Socioeconomic Status causes environmental deficiencies, which results in low self-esteem of students (US Department of Education, 2003) ^[40]. Out of all the indicators used to assess the SES of the learners', parental education is considered the most stable (permanent) aspect of socio-economic status. This assertion has been supported by research which revealed that mother's level of education influences adolescents' educational outcomes and expectancy beliefs (Wider and Thompson, 1988) ^[38]. Karshen (2003) ^[44] opines that students whose parents are well educated occupy higher positions in their respective professions and are able to afford better schools, tuitions, learning resources, etc. Educated parents involve themselves in their children's school activities and school environment, help their children in school work and create environment that facilitates learning (Williams, 1980) ^[45]. However, Okagaki (1978) ^[46] found that parent's education is indirectly correlated with children's educational achievements. Similarly, Hawkes (1995) ^[19] concluded that student's performance do not necessarily depend on parents professional competency or educational attainments. Academic self-efficacy is defined as the confidence in one's ability to do well in academic tasks. Efficacious individuals meet an academic challenge, such as earning an A Grade, with sustained effort. They also know how to achieve their goals and believe that they can overcome obstacles. Bandura (1997) ^[3] defined academic self-efficacy as "the belief in one's capability to organize and execute courses of actions required to produce given attainments". A number of studies have been carried out to investigate and explore the manner in which self-efficacy influences different spheres psychosocial functioning in children (Holden, Moncher,

Schinke, and Barker, 1990) ^[47], academic achievement and persistence (Multon, Brown, and Lent 1991) ^[48], athletic performance (Moritz, Feltz, Fahrbach, and Mack 2000) ^[49], and performance at work (Sadri and Robertson, 1993) ^[50]. The findings revealed a significant impact of self-efficacy on the individual's performance and motivation. Individuals with high level of self-efficacy are inclined to perform activities in a successful way. According to Bandura (1986) ^[51] there is a major difference in the way individuals with low and high self-efficacy feel and act. He defined self-efficacy as personal confidence in one's ability to successful accomplishment of a certain task. Self-efficacy beliefs have significant influence on whether individuals will be able to expend effort on a task and continue to cope with a difficulty. Individuals with a high level of self-efficacy attempt tasks and keep on trying even though tasks might be difficult, while most of the time individuals with a low level of self-efficacy most of the times end up giving up easily. Individuals suspicious of their own abilities tend to avoid challenges and difficult tasks, whereas individuals with a high level of self-efficacy cope with challenging situations in a more mature way and do not consider them as a threat. A study conducted by Collins (1982) ^[52] clearly demonstrated the importance of self-efficacy on academic performance. The study showed that people may perform poorly in tasks not necessarily because they lack the ability to succeed, but because they lack belief in their capabilities. Motivation level of students is an important parameter in higher education, particularly due to its influence on academic performance. Motivation in the context of education can also have an effect on how students learn and behave (Ormrod, 2006) ^[33]. Motivation is based on a person's emotions and achievement related goals. There are different forms of motivation, such as extrinsic, intrinsic, physiological, and achievement motivation. Motivation determines students' attitude towards learning process. A number of studies have been conducted to probe the role of students' motivation in academic performance. Lumsden (1994) ^[24] analysed students' involvement in education and sources of their motivation. Marshal (1987) ^[25] defined students' motivation as a force beneficial to the learner. Ames (1990) ^[1] stated that motivation to learn is long-term phenomenon and dependent on quality attached to and the process of learning. Most theorists believe that motivation is involved in the performance of all learned responses and leaned behaviour will not occur unless it is energized. Bomia *et al.* (1997) ^[7] interpreted student motivation as students' willingness, need, desire and obligation to participate in the learning process. Students are not always internally motivated; they sometimes need external motivation provided by environmental conditions created by the teacher. Subsequent to McClelland (1961 and 1965) ^[28, 29] work, most researchers defined achievement motivation in terms of competition and individual success and emphasised the role of personal desires and accomplishments, independent decision making and self-actualization. The motive to achieve was thought to reflect a motive to achieve for the "self," and, as such, achievement was defined as individual accomplishment for one's own sake. Individual's needs and desires have a strong impact on the direction of their efforts and behaviour. Individuals usually satisfy their needs through different means, and are

driven by success (Elliot and Covington, 2001) ^[17]. Many previous studies have focussed on the relationship between achievement motivation and academic performance. These studies followed the work of Murray (1938) ^[31] and McClelland (1961) ^[28] and focussed on needs, such as the need for achievement and the need for affiliation. In the late 1960s and early 1970s, a number of social-cognitive theories of motivation were developed. These theories examined students' beliefs about attributions and abilities, such as self-efficacy and competence. A number of empirical studies have focused on achievement motivation, in particular among East Asian groups. For example, Philippine students value social approval and group status more than American students, who tend to emphasize on individual success and competition (Church and Katigbak, 1992) ^[11]. According to Mento, Locke and Klein (1992), internal rewards for goal attainment, in other words, the satisfaction one receives following successful task accomplishment has a strong influence on effort and achievement than external rewards such as grades or academic performance.

Materials and Methods

This descriptive study was conducted by using a survey method. For this study, 240 (120 male and 120 female) undergraduate students of B.Sc. (Agriculture) program were selected from all the four years. The sample size of 240 students was obtained by calculating the sample size from known population method given by Cochran (1963) in his book 'Sampling Techniques'. The sample size for the infinity population calculated is $n_0 = Z^2 * P(1-P) / e^2$, Where, n_0 = Sample size to be calculated, Z = Critical value of desired level of confidence, e = Margin of error, P = Maximum probability of variation in distribution. On substituting the desired values in the formula, a minimum sample size of 385 was obtained for the infinite population. The total number of students enrolled in all the four years collectively were six sixty-four. The formula for determining the sample size for the known population is mentioned as follows.

$$N = n_0 * N / n_0 + (N - 1)$$

Where, n is sample size of known population, n_0 is the proportion obtained by unknown population and N is the known population size. Thirty girls and thirty boys were randomly selected from students enrolled in each year of the programme.

Parent's education was used as a proxy variable for determining the socio-economic status of parents. A schedule was developed and the students were categorised into seven categories on the basis of highest formal education attained by their parents (Illiterate, Primary, Middle school, High school, Intermediate, Graduate, Post graduate and above). The measures used in the study for Self-Efficacy was by scale created by Imperial college of London. This academic self- efficacy scale measures people's expectations that they can perform competently across a broad range of situations that are challenging and require effort and perseverance. The instrument consists of 5 items and the participants were asked to rate the degree to which each item applies to them on a scale ranging from most unfavourable (1) to most favourable (5). For the

summary score the item scores were summed up. For measuring Achievement motivation scale by Yadav (2004) was used and the statements were ranked accordingly on the basis of strongly agree to strongly disagree. Further three categories of low, medium and high were made for both academic self-efficacy and achievement motivation on the basis of maximum and minimum classifications of scores. The data on academic performance was collected through GPA grade point average self-reported by the participants at the end of the first semester of the 2022-2023 academic year. The grades were used as the measure of students' academic performance. The relationship between Parents income, Academic self-efficacy and achievement motivation with academic performance was obtained by correlational analysis.

Results and Discussions

Based on the study objective of Parents Education as a Proxy variable for socio-economic status, affecting the student academic performance the following major findings were established. The results reflected (Table 1.0) that eight out of two forty respondents' parents were illiterate, constituting for about 3.33 per cent of the sample size. It was also observed that around 4.58 per cent, 1.66 per cent and 7.50 per cent of the parents had attained Primary, Middle and High school level of education respectively. The study also revealed that a major section of the respondents' parents was either graduate (37.08%) or post graduate (29.17%). The present study also evaluated the effect of student' socio-economic background measured via Parents education on academic performance. The proposed null hypothesis that there is no significant relationship between the academic performance and parents' education of undergraduate agriculture students was rejected, establishing positive ($t=3.1821$) significant correlation ($r=0.2020$) between Parents education and academic performance of undergraduate Students of an agricultural university. Jencks *et al.*, (1972) ^[53] cited in a study that there are many differences among families that can potentially affect the academic performance of the children in addition to differences in education, occupational level, and income of the parents. The results obtained in the present study reflect that high level educated parents to an extent, have more influence on their children to achieve and perform well in their studies at university level of education. This assertion has been supported by the fact that high level educated parents usually show interest and care in their children's academic performance or achievements and their choice of career. Some researchers have however not agreed with this. They argue that children's academic achievements in most case do not necessarily depend on parents' education level. For example, Hawkes (1995) ^[19] in his research study of parent's educational attainments concluded that it does not effect on students' academic achievements.

There are many researchers' focussing on the relationship between achievement motivation and academic performance of the students in Higher education. In the present study it was observed that the majority (77.50%) of the students had medium extent of achievement motivation, followed by High (16.25%) and Low (6.25%) extent of achievement motivation. the Null Hypothesis that there is no significant

relationship between the academic achievement and academic performance of undergraduate students of an agricultural university was rejected. The correlational analysis (0.1918) indicated a positive significant relationship between the academic performance and achievement motivation of undergraduate students in an agricultural university. The results of the present study reflect that students' beliefs in their abilities for doing things associated with their academic motivation that can affect academic achievement of the students and help students move towards learning. Locke and Latham (1990) [54] in a study defined that the more challenging the goals are, the more motivation they stimulate. A high level of motivation and willingness bring about higher academic accomplishments. The findings of the present study are in conformity with the results of researches carried out by Ferla, Valcke, and Cai (2009) [18] which also reflected a positive significant relationship between the academic performance and achievement motivation among the undergraduate students of a higher education institution. The present study also measured the levels of self-efficacy of undergraduate students of GB Pant University of agriculture and technology. It is clear from the results

(Table 1.0) that slightly more than half of the students had medium (60.83%) extent of academic self-efficacy followed by high (10.84%) and low (10.84%) level respectively. Correlation test was performed to investigate the relationship between self-efficacy and academic performance. The result of the analysis showed that there was no significant relationship between self-efficacy and academic performance ($r=0.0965$). The results obtained was contradictory to the results obtained in the several studies (Steindhart and Dolbier, 2009) [55] that reflected self-efficacy as a significant concept in determining the academic performance of universities students. Bandura (1989) [56] has also found that the perceived self-efficacy increases academic achievement in a direct and an indirect way, by influencing individuals' goals. Bandura (1997) [3] also described that self-efficacy beliefs are different with different individuals; they vary under different circumstances, undergo transformations with time, and increase the academic achievements as determined by the different factors like mastery experience, vicarious experience, verbal persuasion, and physiological and emotional states.

Table 1: Profile characteristics of undergraduate students

S. No	Characteristics	Category	Frequency	Percentage
1.	Parents Education	Illiterate	8	3.33%
		Primary School	11	4.58%
		Middle School	4	1.66%
		High School	18	7.50%
		Intermediate	40	16.67%
		Graduate	89	37.08%
		Post Graduate	70	29.17%
2.	Achievement Motivation	Low (Up to 9)	15	6.25%
		Medium (Between 10-19)	186	77.50%
		High (More than 20)	39	16.25%
3.	Academic Self Efficacy	Low (Up to 6)	26	10.84%
		Medium (Between 7-13)	146	60.83%
		High (More than equal 14)	68	28.33%

Table 2: Relationship between the selected students profile characteristics and academic achievement

S. No	Independent variable	Correlation coefficient	T-Calculated
1.	Parents Education	0.2020*	3.1821
2.	Achievement Motivation	0.1918*	3.0105
3.	Self-Efficacy	0.0965	1.4961

*Significance at 0.05 level of probability; t-value at 0.05 level of significance (DF=239) = 1.9773

Conclusion

The study attempted to assess the relationships between academic performance and factors affecting academic performance among the undergraduate students of an agricultural university. The findings of the present research suggest the importance of parents' education, achievement motivation and academic self-efficacy for educational outcomes. This research study concludes that high level educated parents to an extent have more influence on children to achieve and perform well in their studies at university level. High achievement motivation also leads to better academic performance, however there was no relationship obtained between academic performance and academic self-efficacy among the undergraduate students. Despite several limitations, the findings of the study provide

a first step towards the identification of the relationship between self-efficacy and academic performance among the agriculture graduates of G B Pant University of agriculture and technology. The list of factors investigated in the study was not exhaustive, for there are several other factors that can influence academic performance. Further analysis of these other factors that are known to influence academic performance (such as intelligence, gender, age and attendance) is required. Future research may also address the same study, but with improved measures and a larger representative population of agriculture students.

References

1. Ames CA. Motivation: What teachers need to know. Teachers College Record. 1990;91:409-421.

2. Adams GA, King LA, King DW. Relationships of job and family involvement, family social support, and work-family conflict with job and life satisfaction. *Journal of Applied Psychology*. 1996;81(4):411-420. <https://doi.org/10.1037/0021-9010.81.4.411>
3. Bandura A. *Self-efficacy: The exercise of control*. New York: Freeman; c1997.
4. Battle J, Lewis M. The increasing significance of class: The relative effects of race and socioeconomic status on academic achievement. *Journal of Poverty*. 2002;6(2):21-35.
5. Burgner D, Hewstone M. Young children's causal attributions for success and failure: "Self-enhancing" boys and "self-derogating" girls. *British Journal of Developmental Psychology*. 1993;11:125-12.
6. Boocock SP. *An introduction to the sociology of learning*. Boston: Houghton Mifflin Co; c1972.
7. Bomia L, Beluzo L, Demeester D, Elander K, Johnson M, Sheldon B. the impact of teaching strategies on intrinsic motivation. Champaign; c1997.
8. Caldas SJ, Bankston C III. Effect of school population socioeconomic status on individual academic achievement. *The Journal of Educational Research*. 1997;90(5):269-277.
9. California State Department of Education. California slate testing program 1970-71: Profiles of school district performance. Technical supplement. Sacramento, Calif.: Office of Program Evaluation; c1973.
10. Chapman JC, Wiggins DM. Relation of family size to intelligence of offspring and socioeconomic status of family. *Pedagogical Seminary and Journal of Genetic Psychology*. 1925;32:414-421.
11. Church AT, Katigbak MS. The cultural context of academic motives: A comparison of Filipino and American college students. *Journal of Cross-Cultural Psychology*. 1992;23:40-58.
12. Cohn MA, Fredrickson BL, Brown SL, Mikels JA, Conway AM. Happiness unpacked: Positive emotions increase life satisfaction by building resilience. *Emotion*. 2009;9:361-368.
13. Coleman J, Campbell E, Hobson C, McParland J, Mood A, Weinfield F, *et al.* Equality of educational opportunity. U.S. Government Printing Office. Washington, D.C.; c1966.
14. Cornell D, Grossberg I. Family environment and personality adjustment in gifted program children. *Gifted Child Quarterly*. 1987;31(2):59-64.
15. Dave PN, Dave JP. Socio-economic environment as related to the non-verbal intelligence of rank and failed student. *Individual Study: University of Mysore*; c1971.
16. Dolbier CL, Jaggars SS, Steinhardt MA. Stress-related growth: Pre-intervention correlates and change following a resilience intervention. *Stress and Health: Journal of the International Society for the Investigation of Stress*. 2010;26(2):135-147.
17. Elliot AJ, Covington M. Approach and Avoidance Motivation. *Educational Psychology Review*. 2001;13:73-92.
18. Ferla J, Valcke Man, Cai Y. Academic self-efficacy and academic self-concept: Reconsidering structural relationships. *Journal of Learning and Individual Differences*. 2009;19(3):499-505.
19. Hawkes N. Some correlates of success in second language learning in some Ghanaian Schools. *Africa Journal of Education*. 1995;1:125-140.
20. Jeynes WH. Examining the effects of parental absence on the academic achievement of adolescents: The challenge of controlling for family income. *Journal of Family and Economic Issues*. 2002;23(2):56-65.
21. Lightbody P, Siann G, Stocks R, Walsh D. Motivation and attribution at secondary school: The role of gender. *Educational Studies*. 1996;22:13-25.
22. Kuncel NR, Hezlett SA, Ones DS. A comprehensive meta-analysis of the predictive validity of the Graduate Record Examinations: Implications for graduate student selection and performance. *Psychological Bulletin*. 2001;127:162-181.
23. Krashen S. *Explorations in language Acquisition and use*. Portsmouth, NH: Heinemann; c2003.
24. Lumsden LS. Student Motivation to Learn. Educational Resources. Information Center, Digest Number 92; c1994.
25. Marshall HH. Motivational strategies of three fifth-grade teachers. *The Elementary School Journal*. 1987;88(2):135-150.
26. Ma X, Klinger DA. Hierarchical linear modeling of student and school effects on academic achievement. *Canadian Journal of Education*. 2000;25(1):41-55.
27. Mbathia M. "Cream for Law and Medicine". The Standard. Nairobi: The Standard Ltd; c2005.
28. McClelland DC. *The achieving society*. Princeton, NJ: Van Nostrand; 1961.
29. McClelland DC. Toward a theory of motive acquisition. *American Psychologist*. 1965;20:321-333.
30. Mitchell DE, Collom E. The determinants of student achievement at the academy for academic excellence. CA: School of Education University of California; v2001.
31. Murray HA. *Explorations in personality*. Oxford University Press. New York; c1938.
32. Parelius RJ, Parelius AN. *Sociology of education. USA: Prentice Hall International*; c1987.
33. Ormrod JE. *Educational psychology: Developing learners*. Upper Saddle River, N.J.: Pearson Merrill Prentice Hall; v2006.
34. Poropat AE. An examination of the relationship between personality and Citizenship Performance in academic and workplace settings. Unpublished Doctoral Dissertation, Griffith University, Brisbane, QLD; c2005.
35. Saxton J. Investment in education: Private and public returns. <https://www.house.gov/jec/educ.pdf>; c2000.
36. Schmeck RR. *Learning strategies and learning styles*. New York: Plenum Press; c1988.
37. Smith L, Sinclair KE, Chapman ES. Students' goals, self-efficacy, self-handicapping, and negative affective responses: An Australian senior school student study. *Contemporary Educational Psychology*. 2002;27(3):471-485. <https://doi.org/10.1006/ceps.2001.1105>
38. Thompson M, Alexander K, Entwisle D. Household composition, parental expectations and school achievement. *Social Forces*. 1988;67:424-451.

39. Tsinidou M, Gerogiannis V, Fitsilis P. Evaluation of factors that determine quality in higher education: An empirical study. *Quality Assurance in Education*. 2010;18:227-244.
<https://doi.org/10.1108/09684881011058669>
40. U.S. Department of education, national center for education statistics. *The Condition of Education 2003*, NCES 2003-067. Washington, DC; c2003.
41. Wilder DA, Thompson JE. Assimilation and contrast effects in the judgments of groups. *Journal of Personality and Social Psychology*. 1988;54(1):62-73.
42. Wigfield A, Cambria J. Students' achievement values, goal orientations, and interest: Definitions, Development and Relations to Achievement Outcomes. *Developmental Review*. 2010;30:1-35.
43. Zeidner M, Matthews G, Roberts RD. *What we know about emotional intelligence: How it affects learning, work, relationships, and our mental health* (1. MIT Press paperback Ed). MIT Press; c2012.
44. Schultz JW, Karshin CM, Woodiel DK. Assessment of college students' behavioral status related to tattooing. In *National Convention and Exposition of the American Alliance for Health, Physical Education, Recreation, and Dance*. Philadelphia, PA 2003 Apr 3.
45. Williams E. Predication. *Linguistic inquiry*. 1980 Jan 1;11(1):203-38.
46. Talerman A, Gratama S, Miranda S, Okagaki T. Primary carcinoid tumor of the testis. Case report, ultrastructure and review of the literature. *Cancer*. 1978 Dec;42(6):2696-706.
47. Holden G, Moncher MS, Schinke SP, Barker KM. Self-efficacy of children and adolescents: A meta-analysis. *Psychological reports*. 1990 Jun;66(3):1044-6.
48. Multon KD, Brown SD, Lent RW. Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of counseling psychology*. 1991 Jan;38(1):30.
49. Moritz SE, Feltz DL, Fahrbach KR, Mack DE. The relation of self-efficacy measures to sport performance: A meta-analytic review. *Research quarterly for exercise and sport*. 2000 Sep 1;71(3):280-94.
50. Robertson IT, Sadri G. Managerial self-efficacy and managerial performance. *British Journal of Management*. 1993 Mar;4(1):37-45.
51. Bandura A. *Social foundations of thought and action*. Englewood Cliffs, NJ. 1986;1986(23-28).
52. Collins J. Discourse style, classroom interaction and differential treatment. *Journal of reading behavior*. 1982 Dec;14(4):429-37.
53. Bane MJ, Jencks C. The Schools and Equal Opportunity. *Saturday Review: Education*. 1972;55:38.
54. Locke EA, Latham GP. Work motivation and satisfaction: Light at the end of the tunnel. *Psychological science*. 1990 Jul;1(4):240-6.
55. Steinhardt MA, Mamerow MM, Brown SA, Jolly CA. A resilience intervention in African American adults with type 2 diabetes. *The Diabetes Educator*. 2009 Mar;35(2):274-84.
56. Bandura A. Regulation of cognitive processes through perceived self-efficacy. *Developmental psychology*. 1989 Sep;25(5):729.