Students' Attributions for their Success and Failure in an Exam: Do they relate to Achievement?

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Abstract: This study discovers the different types of attributions that undergraduate attribute their educational success and failure. Attribution principle was applied to understand educational success and failure. Inquiries that directed the research were: what are the influencing factors that dominate in students' academic success? Is there any change if dispositional attribution and grades, factored as standards of academic achievement are measured? Do the measured attribution have any effect when forecasting students' grades? A self-developed data collection instrument Student Attribution Questionnaire (SAQ) measuring seven different attribution with 40 items on Likert scale were applied to 370 university students.The result showed that dispositional attribution, positive attitude, and perception have strong positive relation with high grades.

Keywords: Academic success, Failure, Attribution theory, Attitude, Perception, Study habits

1.0 INTRODUCTION

1.1 Background

Success in academics just as in other spheres of life is a function of how a student attributes challenges, hard work, patience, maintaining schedule, perseverance in success or failure and more importantly it is a function of overcoming internal controllable limitations. Universities' and university students' prime goal is academic achievements. However, there is a consistent poor performance of university students in Kano state, Nigeria. This is demonstrated in the vast number of college students who do not achieve their academic goals despite all the investment made by government, university lecturer and educational stakeholders. Subsequently in 2020 when the universities and colleges got intervention of learning facilities including infrastructure, funding academic staff training and development opportunities, modern internet connected library, modern classroom, extra classes, counseling, advising and other facilities yet their GPA is not improved. This problem has caused great concern to students, faculty members, parents, and university counselors. This issue leads to the production of low output in terms of academic achievement of university students. A great concern has been expressed as to the persistent fall in the general standard of education. Most universities in Kano state are unable to meet set target or goals for low performing students which is particularly due to ineffectiveness and persistent of scoring low GPA for a particular group of students. This consistent low performance for a group of students is a serious setback for the universities. The students that adopt external uncontrollable attribution to justify their poor semester results ended up with academic under achievement which conversely led to depression, low confident and self-esteem, university dropout, exam malpractice, frustration and social vices. (Islam, Abubakar, & Bello, 2023).

It is seeming from all indications that a group of university students who consistently achieve low CGPA in Kano state have mindset of uncontrollable external attribution to justify their low performance which might lead to poor results consistently. Low performing university students have less inner awareness and accept the self-ignorance towards effective studying and wrong approaches to identifying correct attribution for awarding low CGPA is often reason for falling or getting low GPA again in subsequent semester results. Despite huge investment on university facilities, there is still need for proper study habits counselling (Islam, Abubakar, & Bello, 2023). To change the perception of university students with low CGPA and award undergraduate students to compliment academic achievement.

1.2 Objectives and Significance of the present study

To identify the situational attribution, dispositional attribution, perceptions and attitudes on educational attainment of university students in Kano State, Nigeria. The study will provide necessary framework for finding the controllable causes for obtaining poor marks in examination and also change the perception of students to break the consistency of low GPA. The findings and

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recommendations of the study will be beneficial and equally provide valuable sources of information to students, faculty members, advisors, parents, university counselors and future researchers. University students will benefit from the findings by getting effective pathway to prevent failure and they will also be offered the necessary assistance on how to develop productive and positive perception which will help them to improve their academic performance.

2.0 REVIEW OF RELATED LITERATURE

2.1 Attribution for success and failure

Narayana (2008) explained the meaning of attribution as an inspiration that person's own awareness for failure or success. It is defined as the total effort the individual will pay on his action in the future. Zimmerman and Schunk (2006) explains attribution theory as the cases pupils perceive of educational results for themselves. Perceived reasons of event results are called attributions. Persons generate attributions for causes of their own actions. The connection between locus of control and education engagement was introduced by Rotter's (Adeyemi, 2001).Locus of control is type of understanding in monitoring actions and consequences. (Randel, Collins & Johnson, 2018). Rotter (1966) highlights that the variance between internal and external factors and how persons think of a plan for the upcoming affair and answer. Those who believe that they can handle the occasions that happen, internal traits incline to have great enthusiasm and promise (Domino, Wingreen, & Blanton 2015). To attain accomplishment or disappointment; it is hard to blame others for the disappointment. Equally, people with external intention think they have no hold over what occurs to them, so they encounter other external circumstances for their attainment or disappointment. Dispositional attributed people use all their means and think hard to attain their targets. Dispositional locus of control people have a propensity of occurrence individual replications of the actions that happen to them and the people attributed externally have observed themselves to have less control over prospective situations (Rittle-Johnson, Schneider, 2015).

The internal attributed persons are more energetic and determined than external attributed people when aligning with their goals and achievement. The effect of locus of control on time ahead of behavior can be described over expectancy theory (Cahyadi, Hendryadi, and Mappadang, 2021). The attribution use to explain causal suggestion to describe the behaviors of self and others (Heider, 1958). A study has discovered attributions about educational success or failure and this research confirmed that self-serving attributions happen often in educational backgrounds where students incline to attribute educational successes to internal and stable roots and attribute academic disappointment to external and unstable causes (Miller & Ross, 1975)

Weiner (1986) defined attributional principle of success as an inspiration in what way educational performance, prospects of later performance, and emotional responses to execution, are all followed by connecting attributions. Weiner (1979) suggested that 3 dimensions: 1, Locus - attributions about attainment to internal and external caused. 2, Stability - attributions of performance to stable and unstable reasons. 3, controllability - attributions of performance which are individual's control and which are not under individual control.

Weiner (1985) explained a basic psychological law linking perceived open stability to expectancy change. If a product of an event is attributed to a stable cause, then that result will be foreseen with growth assurance in the future."Many research showed that failure in attribution due to stable reason was established to result in greater expectation of future.

2.2 The relation between attribution and achievement

Bhat andBhardwaj (2014) opined Academic success as skills or knowledge established in the university topics are generally decided by marks allocated by faculty members. It was found in Dictionary of Psychology Chaplin (1959) that "educational achievement is a listed level of accomplishment in academic work as calculated by the faculty members from uniform tests." Academic attainment of learners is an aspect of their total behavior. It is the creation of the communication of the learners, with a faculty member within his/her atmosphere like a university. Academic attainment has a lot of aspects in terms of concerning a number of stages. Academic attainment affect the learner's perception by exposing him to how others judges him. For instance, an individual who exerts energy on social events clearly depicts how sociable he is. Chaplin (1959) in dictionary of Psychology alsostated that GPA received in a test makes a significate change to a learner. GPA motivates the learner's evaluation of self and portrays as a sign of whether he is liked or disliked. GPA specify success or failure which indicates the chance of future accomplishment. GPA helps to understand whether astudent is smart or otherwise. Garcia and Garcia (2021) explored the achievement trait that prevail inuniversity students within their connection with academic success. They pointed out that individuals who give meaning to their existence tend to pursue cause-and-effect associations in order to clarify their own performance, other individuals' and the events that bounded them. Oghojafor, Olayemi, and Oluwatola (2012) posit that individuals create casual arrangements to clarify the incident around them and to make implication considering the internal attribution and external attribution.Based on Heider's suggestions, Weiner (2010) applied the theory of attribution to comprehend the origin of success and failure concerning to academic attainment. It explained that this concept refers to an event of individual causality, it is not essentially searching the real sources of actions. Attribution is a course of casual awareness that varies by a person or group. It is dissimilar considering if attribution is made to one's own behaviour (Weiner, 2010). Some scholars have stated that the students' psychological structure of a positive self-concept, during their academic phase, takes success in learning environments and social and emotional circumstances (Eccles, 2009).Attribution theory suggest that designs of attributions are related to individuals' achievement (Meece 2006). Though earlier researches have observed cultural variances

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in attributions, some researches have observed cultural differences, few researches have shown the relation with real achievement. Researches have exposed that attribution training can progress academic success, by training students to be persistent (Perry &Weingerg, 1993).Similarly, some researches of attributions have observed the connection between attributions and achievement in educational settings.Some research studies have shown mixed findings of stability with helplessness theory (Liu, 2009). Longitudinal research observed that effort attributions forecast greater upturns in success over time where ability attributions do not. Some studies found that ability attributions for attainment and disappointment predict better than effort attribution (McKenzie, 2001). On the other hand, some researchersfound that ability and effort attributions similarly lead to achievement (Watkins, 2001).It was found that ability was the great forecaster of success.Hsieh and Schallert(2008) stated that attributing achievement to ability inspires persistence, beliefs and self-efficacy. Bong (2004) explained that ability attributions are forecasters of some type of attainment but not attainment in general. He further recommended that when individuals are elucidated in their general attainment, their effort is the greatest forecaster of success. This statement is tallying with the observations of Weiner (1985) theory and Liu (2009). Research has shown that attributing outcomes influences learners' achievement. Martin and Dowson (2009) opined that attributing success to family impact was linked to higher GPA, where attributing disappointment to these influences were linked to lower marks. Study has not shown a steady relation between instructor attributions and achievement (Costes, 1994). Liu (2009) observed that attributing one's success to others was linked with failure outcomes overtime. Weiner (2010) in his theory stated that attributing success to an external, uncontrollable attribution reduces self- efficacy and expectancy of influence results. Weiner (2010) applied the attributional theory to comprehend the roots of achievement and disappointment related to academic attainment. It elucidates that this study refers to an occurrence of individual causality, which is not always about referring the real causes of actions.

3.0 HYPOTHESES

1. There is no positive influence and noteworthy correlation between external attribution and academic attainment of university students.
2. There is no positive influence and substantial correlation between internal attribution and academic attainment of university students.
3. There is no positive influence and important correlation between perception and academic achievement of university students.
4. There is no positive influence and major correlation between attitudes and academic achievement of university students.

4.0 MATERIAL AND METHODS

4.1 Participants

The population in this study consisted of 100, 200, and 300 level university students in Kano state, Nigeria with low GPA which was determined by their semester result. There are four (4) universities/undergraduate college at Kano state Nigeria namely; Bayero University (BUK), Sa'adatuRimi College Education (SRCOE), Skyline University Nigeria (SUN) and Yusuf MaitamaSule Nigeria (YUMSUK). The four universities/undergraduate colleges include federal, state and private universities. At Bayero University Kano (BUK). The target population estimate will therefore be determined after administration of the instrument with the help of research assistants.

4.2 Measuring instrument

Purposive sampling technique will be used in drawing up the sample of the study. The instrument for data collection is a researcher self-developed questionnaire. The Instrument named Student Attribution Questionnaire (SAQ) is characterized into four dimensions. Dimension 1- External attribution and GPA, Dimension 2- Internal attribution and GPA, Dimension 3- Perception and GPA and Dimension 4- attitude and GPA. The tool locus of control and classifying external, internal attribution, perception, and attitudes dimension comprised of 40 items. The questionnaire was made using 5 subscales based on External, Internal, Perception, and Attitude factors on Likert type 4 scale. Authentication study was made through Cronbach alpha and that has indicated a strong connection for consistency of the Effect ofattribution onacademic accomplishment. (Islam, Abubakar, Abubakar, Bhaumik, 2022).

4.3 Procedure

Descriptive and inferential statistics were used to answer Research Questions and simple frequency and percentage was used to answer demographic variables of the study. The hypotheses were answered using regression analysis as the dependent and independent variables were counted on continuous data and the relationship was based on multiple variables. The students GPA was converted to 100% to provide basis for comparing it with the subscales in the questionnaire.

5.0 RESULTS

Table 5.1 Identify External Factors (situational attribution) and Academic Achievement

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Variables	B	Std.	Beta	T	Sig.
1.Constant	27.919	2.629		10.620	.000
Identifying External Factor (Situational Attribution)	.001	.080	.001	.011	.991

Predictor (constant) Situational attribution. Dependent variable CGPA p<0.05

Table 5.1 above presents the data regarding the Identifying External Factors (situational attribution) and academic accomplishment of university students. In this case, B = 27.919, with a standard error of .001. The significance of the gradient is shown in the score in this case t = 10.620, at p = .000. Therefore, to Identify External Factors (situational attribution), scores has been observed to have weak contribution to the variance of educational attainment of university students scores in Kano State, Nigeria.

Table 5.2: Model Summary of linear regressions

Model	R	R.Sq.	Adjusted R square	Std.Error of estimate	R.Square Change	F	df.	Sig.
1	.001	.000	.003	7.46841	.000	.000	368	.991

Table 5.2 above presents simple linear regression correlation between the variables expressed by R = .001). The proportion of variance in the outcome variable Identify External Factors (situational scores). That can be explained by the predictor variable as illustrated by R square (R2 = .000) of all variances. To identify External Factor (situational attribution) and academic achievement scores, the analysis indicates that the regression model is significantly weak and Identifying External Factors (situational attribution) do not predict academic performance at = .000, p = .991

Table 5.3: Impact Dispositional Attribution and Academic Achievement of university students

Variables	B	Std.	Beta	T	Sig.
1.Constant	26.930	2.503	.211	10.759	.000
Identifying Internal Factor (Dispositional Attribution)	.032	.077	.021	.412	.681

Predictor (constant) Dispositional attribution. Dependent variable CGPA p<0.05

The table 5.3 above shows that identifying internal factors (Dispositional Attribution) and students GPA which was made using regression analysis the beta value which indicated level of predication. The result from the table therefore concludes there is significant strong correlation which exist between internal factor (Dispositional Attribution) and GPA among university students in Kano state, Nigeria with internal beta value recorded at .211. This showed that internal attributions (Dispositional Attribution) slightly predict GPA attainment among university students in Kano State, Nigeria.

Table 5.4: Model Summary of linear regressions

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Model	R	R.Sq.	Adjusted R square	Std.Error of estimate	R.Square Change	F	df.	Sig.
2	.421	.000	.302	7.4666	.000	.170	368	.032

Predictor (constant) Dispositional attribution. Dependent variable CGPA p<0.05

Table 5.4 above presents simple linear regression correlation between the variables is expressed by R = .421). The proportion of variance in the outcome variable (dispositional scores). That can be explained by the predictor variable is illustrated by R square (R2 = .000) of all variances; dispositional attribution and academic achievement scores. The analysis indicates that the regression model is significantly strong, as F value .170 is recorded at 26.930 which showed a statistically significant contribution towards predicting the dispositional attribution and predict academic performance at = .000, p = .032.

Table 5.5: Impact Perceptions and Academic Achievement of university students

Variables	B	Std.	Beta	T	Sig.
1.Constant	26.243	2.503	.001	9.839	.000
Identifying Perception	.055	.085	.034	.647	.518

Predictor (constant) Perception. Dependent variable CGPA p<0.05

Table 5.5 above presents the data regarding the perception and academic achievement of university students in Kano State, Nigeria. In this case, B = 26.243, with a standard error of .001 and the significance of the gradient is shown in the score in this case t = 9.839, at p = .000. Therefore, perception scores have been observed to have moderate contribution to the variance of academic achievement of university students in Kano State, Nigeria.

Table 5.6: Model Summary of linear regressions

Model	R	R.Sq.	Adjusted R square	Std.Error of estimate	R.Square Change	F	df.	Sig.
3	.334	.001	.102	7.46418	.001	.170	368	.055

Predictor (constant) Perception. Dependent variable CGPA p<0.05

Table 5.6 presents simple linear regression correlation between the variables as expressed by R = .334). The proportion of variance in the outcome variable (Perception scores) can be explained by the predictor variable as illustrated by R square (R2 = .001) of all variances; Perception and academic achievement scores. The analysis indicates that the regression model is significantly moderate as F value .418 is recorded at 26.243 which showed a statistically significant contribution towards predicting the Perception and predicting academic performance at = .000, p = .055

Table 5.7: Impact of Attitudes and Academic Achievement of university students

Variables	B	Std.	Beta	T	Sig.
1.Constant	26.243	2.503	.001	9.839	.000
Identifying Attitudes	.055	.085	.034	.647	.518

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Predictor (constant) Attitude. Dependent variable CGPA p<0.05

Table 5.7 above presents the data regarding the Impact of attitude on academic achievement of university Students in Kano State, Nigeria. In this case, B = 28.646, with a standard error of .071. The significance of the gradient is shown in the score as t = 12.756, at p = .000. Therefore, the impact of attitude scores has been observed to have significant contribution to the variance of academic achievement of university students in Kano State, Nigeria.

Table 5.8: Model Summary of linear regressions

Model	R	R.Sq.	Adjusted R square	Std.Error of estimate	R.Square Change	F	df.	Sig.
4	.116	.000	.102	7.46741	.000	.100	368	.000

Predictor (constant) Attitude. Dependent variable CGPA p<0.05

Table 5.8 above presents simple linear regression correlation between the variables as expressed by Regression R = .116. The proportion of variance in the outcome variable impact of attitude scores and that can be explained by the predictor variable as illustrated by R square (R2 = .102) of all variances; situational attribution and academic achievement scores. The analysis indicates that the regression model is significantly weak and the impact of attitude do not predict academic performance at = .000, p = .022

6.0 FINDINGS
Identifying External Factors (Situational attribution) scores has been observed to have weak contribution to the variance of academic success of university students. Internal attributions (Dispositional Attribution) slightly predicts GPA attainment among university students in Kano State, Nigeria. Perception scores has been observed to have moderate contribution to the variance of academic achievement. Attitude scores has been observed to have significant contribution to the variance of academic success.

7.0 RECOMMENDATIONS FROM THE STUDY
Advisors, teachers, parents should help students to understand that external reasons are beyond their control sometimes, so Advisors, teachers, parents should support external attributed students to change their perception. Students should focus more on internal controllable attribution to improve their GPA. Parents, advisor and teachers should also investigate students' perception towards their Low GPA and counsel them to change their perception towards internal (dispositional) controllable attribution from situational (external) attribution. Advisors, teachers and parents should motivate students to have positive perception towards their ability to improve their GPA.

8.0 REFERENCE

Adeyemi. B. T., (2001). The impact of leadership style on organizational growth. *Work Study*.

Bhat, H. N., & Bhardwaj, R. (2014). The Concept of Academic Achievements. *International Journal of Education and Science Research Review IJESRR*, 1(6).

Bong, M., (2004). Academic motivation in self-efficacy, task value, achievement goal orientations, and attributional beliefs. *Journal of Educational Research*, 97, 287-297.

Cahyadi, A., Hendryadi, H., &Mappadang, A. (2021). Workplace and classroom incivility and learning engagement: the moderating role of locus of control. *International Journal for Educational Integrity*, 17(1), 1-17.

Chaplin, J. P. (1968). *Dictionary of psychology.*

Domino, M. A., Wingreen, S. C., & Blanton, J. E. (2015). Social cognitive theory: The antecedents and effects of ethical climate fit on organizational attitudes of corporate accounting professionals a reflection of client narcissism and fraud attitude risk. *Journal of Business Ethics*, 131(2), 453467)

Eccles, J., (2009). Who am I and what am I going to do with my life? Personal and collective identities as motivators of action. Educational psychologist, 44(2), 78-8).

García y García B. E., (2021) 'To What Factors do University Students Attribute TheirAcademic Success?', *Journal on Efficiency and Responsibility in Education and Science*

Heider, F. (1958). The psychology of interpersonal relations. New York: Wiley

Hsieh, P. H. P., &Schallert, D. L. (2008). Implications from self-efficacy and attribution theories for an understanding of undergraduates' motivation in a foreign language course. *Contemporary Educational Psychology*, 33, 513-532

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Islam, N. I., Abubakar, U. S., & Bello, M. (2023). Social Vices: Causes and Counselling Remedies: *International Journal of Emerging Research in Engineering, Science, and Management*, Vol. 2, Issue 1, pp.01-07, doi.org/10.58482/ijeresm.v2i1.1)

Islam, N. I., Abubakar, U. S., & Bello, M., (2023). Influence of Study Skills Training in Reducing Poor Study Habits among School Students: *International Journal of Emerging Research in Engineering, Science, and Management,* Vol. 2, Issue 1, Vol. 2, Issue 1, pp.38-43, doi.org/10.58482/ijeresm.v2i1.7)

Islam. S. N, Abubakar. U. S, Abubakar M.B., Bhaumik. A (2022), Validation of Students Attribution Questionnaire (Saq) for Assessing Influence of Attribution on Academic Achievement of Undergraduates of Universities in Kano State, Nigeria:*Journal of Positive School Psychology*, Vol.6, No. 5, Page No. 7578-7584

Randel, A. E., Galvin, B. M.., Collins, B. J., & Johnson, R. E. (2018). Changing the focus of locus of control: A targeted review of the locus of control literature and agenda for future research. *Journal of Organizational Behavior*, 39(7), 820-833.)

Rotter, J. (1966) Generalized expectancies for internal versus external control of reinforcement', *Psychological Monographs*, Vol. 80, No. 1, pp. 1-28.

Costes, K., B. E., &Schnider, W., (1994). Self-concept, attributional beliefs, and school achievement: A longitudinal analysis. *Contemporary Educational Psychology*, 19,199-216.

Liu, K. Cheng, Y. Chen, Y., & Wu, Y., (2009). Longitudinal effect of educational expectations and achievement attributions on adolescents' academic achievements. *Adolescence,* 44, 911-924.

Miller, D.T., & Ross, M., (1975). Self-serving biases in the attribution of causality: *Fact or fiction. Psychological Bulletin*, 86, 93-118.

Meece, J. L., Anderman, E.M., Anderman, I., H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of psychology*, 57, 487-503.

Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research*, 79, 327-365.

McKenzie, K., & Schweitzer, R. (2001). Who succeeds at university? Factors pre-dicting academic performance in first year Australian students. *Higher Education Research and Development*, 20,21-33.

Narayana, R. K. V. S. S. (2008). Attribution theory: *Application in academic context*. Knol. https://doi.org/10.1007/978-0-387-79061-9_267

Oghojafor, B. E. A., Olayemi, O. O., Oluwatula, O. O., &Okonji, P. S. (2012). Attribution theory and strategic decisions on organizational success factors. *Journal of Management and Strategy*, 3(1), 32.

Perry, R.P., Hechter, F., Menec, V. H., & Weinger, I., E. (1993). Enhancing achievement motivation and performance in college students: An attributional retraining perspective. *Research in higher education*, 43, 687-723

Rittle-Johnson, B., Schneider, M., & Star, J. R. (2015). Not a one-way street: Bidirectional relationsbetween procedural and conceptual knowledge of mathematics. *Educational Psychology Review*, 27(4), 587-597

Watkins, D., & Gutierrez, M. (2001). Causal relationship among self-concept, attributions, and achievement in Filipino students. *The journal of social Psychology*, 130, 625-631.

Weiner. B., (1985). An Attributional Theory of Achievement Motivation and Emotion, *PsychologicalReview* 92(4):548-73

Weiner, B (1986). An attributional theory of motivation and emotion. New York: Springer-Verlag.

Weiner, B. (2010). The development of an attribution-based theory of motivation: A history of ideas. *Educational psychologist*, 45(1), 28-36)

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92, 548-573.

Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of educational psychology*, 71(1), 3.

Zimmerman, B., & Schunk, D. (2006). Competence and control beliefs: Distinguishing the means and ends. *Handbook of educational psychology*, 2, 349-356.

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Eur. Chem. Bull. 2023, 12 (Si6), 3484 – 3490