

# Autonomy And Attitude Towards School As Correlates Of Learners' Academic Performance In Kitui County, Kenya

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*Abstract: Performance of students in Kenya Certificate of Secondary Education in Kitui County has been consistently low and below the national mean score from 2010 to 2018. The low performance has been attributed to many factors. This study investigated how learner autonomy and attitude towards school relate to secondary school students' academic performance in Kitui County, Kenya. The study was guided by sociocultural theory. Correlational research design was employed in the study. The study involved 165 form three students (76 males and 89 females,  $M_{age}=18.78$  years, ranging from 16 to 23 years) drawn from 10 public secondary schools in Tseikuru Sub County, Kitui County, Kenya. Data were collected using adapted learner autonomy scale (Chan, Humphreys & Spratt, 2002) and attitude towards school scale (Farnsworth et al., 1991). Participants' academic performance was obtained from their end of term examinations scores. The findings established that both learner autonomy and attitude towards school had positive significant correlations with academic performance. Recommendations on how teachers and other educational stakeholders can promote learner autonomy and positive attitude towards school are given.*

**Keywords:** Learner Autonomy, Attitude towards School, Academic Performance.

## I. INTRODUCTION

In each education system, there is established criteria of evaluating the performance of learners. This evaluation is very important because learners' performance is used as an indicator of the quality of education which a country is offering (Oluminde, Olusola & Taofeek, 2015). The academic performance of learners in different levels of education has many other significances. Kapur, (2018) asserts that education is one of the major assets that can spur development of communities and nations. This view has been held by Umar, Fugur and Liu (2015) who argued that economic, social, political, cultural and technological development of a country requires much investment in education and that changes in all the aforementioned aspects of development are preceded by revolution in education. Continued poor performance of learners in a society halts the progress of all the sectors of

economy and such society experiences little or no development at all (Benjamin, 2013).

Performance of the learners at secondary level of education is much emphasized in most of the existing research studies (Benjamin, 2013; Kapur, 2018; Oluminde et al., 2015; Wanyama, 2013). This level of education is crucial because it's the bridge between the primary level and institutions of higher learning. The learners' performance at this level determines the institutions of higher learning which a learner qualifies to join as well as the course which the learner will pursue (Kapur, 2018). Depending on the varied performance of learners, some join colleges to pursue diploma courses, others join technical and vocational institutes to do diploma and certificate courses while the best performers join universities to undertake various degree programmes.

Concerns have been raised across the world on falling standards of education. This has been signaled by students' poor performance especially in external examinations (Umar

et al., 2015). Many students are affected by low performance in academics (Garn & Jolly, 2014). The low performance has frustrating effects on both the students and their parents and guardians because failure in education is viewed as a failed investment (Benjamin, 2013). In addition, as Kapur (2018) notes, the learners who fail in examinations especially at secondary level are likely to miss opportunities in institutions of higher learning. Due to much importance which is pegged on education, scholars have indulged into exploring how the various factors influence performance of learners at various levels of education. It's against this background that this study was done to establish how learner autonomy and attitude towards school relates students' performance in academics.

Learner autonomy is a practice of being independent, controlling oneself in learning tasks and taking responsibility towards learning activities (Hashemian & Soureshian, 2011). Autonomy in learning originated from the works of Holec, (1981) who was later referred to as the father of learner autonomy. Holec (1981) defined learner autonomy as the ability of a learner to make decisions regarding educational aspects and follow those decisions. Learner autonomy has positive psychological effects whereby a learner experience freedom when pursuing learning tasks. The learner decides what to study, which assignment to complete at a given time, which goal to set and how to accomplish the set goals (Ata, Nguyen, Driver & Thorkilden, 2015). Autonomous learners do not require much intervention of teachers in most learning tasks (Kabiri, Nosratia & Mansouri, 2018). These learners work hard out of their intrinsic motivation, invent new ideas and focus on performing well without fear of failure. In classroom environments where teachers promote autonomy, the learners feel sense of belonging and competent to do well (Ata et al., 2015). Most of the earliest research on how learner autonomy relates to learners' performance focused on the field of second language learning. It is only recently that the focus changed and studies started looking at how learner autonomy influences academic achievement of learners in other subjects as well as in the overall performance of the learners (Kabiri et al., 2018). The need to conduct more studies on how learner autonomy influences the academic performance of learners is well aligned with one of the global goals of education in the 21<sup>st</sup> century which is to produce more self-regulated and independent learners who can take charge and control their own learning (Pudiquet, Balualua, Tumacder, Matulay & Derilo, 2019).

There is empirical evidence from Chile (Correa-perez & Sanhueza-jara, 2019), Iran (Afshar, Ali & Rahimi, 2014), Libya (Abidin, Alzwari & Mohamed, 2012), Malaysia (Ng, Confessore, Yussof, Aziz, & Lagis, 2011), Nepal (Joshi, 2011; Paudel, 2019), Nigeria (Onwu & Wuave, 2014), Persia (Hashemian & Soureshian, 2011), United Arab Emirates (Dundon, 2012) and United States of America (Ata et al., 2015) among other parts of the world that learner autonomy related positively to learners' performance in academics. Notably, Previous studies on the relationship between learner autonomy and academic performance at different levels report contrasting findings. While learner autonomy correlated positively to high school students' performance in sciences (Hagger & Hamilton, 2018), it had no significant correlation with pre-service teachers' performance (Pudiquet et al., 2019).

Attitude towards school refers to the opinion and beliefs which the learners hold towards the school and learning in it (Veresova & Mala, 2016). Learners' beliefs and opinions can be positive or negative. Attitude of the learner determines how the learner thinks and behaves towards the school and activities which are happening within the school (Abidin et al., 2012) and has an impact on academic performance (Candeias, Rebelo & Oliveira, 2010). Research shows that learners who performed poorly at school are likely to express a negative attitude towards the school and hold an opinion that studying at such a school won't guarantee them success in future (Candeias et al., 2010). Such learners constantly complain of the inadequacies in the school such as few facilities, low number and incompetency of teachers and inconducive environment for learning. Such learners put little or no effort in their studies and end up performing poorly in academics. On the contrary, learners with positive orientation towards the school always show commitment in their studies. These learners like their school and always put much effort in their studies aiming to perform well as well as maintaining a good image of their school. These learners are also proud of being associated with their school and are likely to perform better (Chio et al., 2015; Mata, Monteiro & Peixoto, 2012).

Although previous studies have shown that learner autonomy and attitude towards school influence the academic performance of the learners, evidence from some parts like East Africa, remain underrepresented in the existing literature. This study addressed the gap in literature by investigating whether there is a correlation between learners' autonomy, attitude towards school and academic performance in Kitui County, Kenya.

## STATEMENT OF THE PROBLEM

For the last nine years (2010 to 2018), Kitui county has posted low mean score in Kenya Certificate of Secondary Education examination compared to the national mean score. From the analysis of Examination results for Kitui county, it was observed that the county mean score ranged between 4.52 and 5.67 out of the maximum possible score of 12.00 points for the nine years. This is an indication that the performance has been below average for the entire period. The data presented in table 1 shows the county mean score for the years.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
M/Score	4.74	4.82	4.59	5.15	5.07	5.67	4.52	4.89	5.10

Table 1: KCSE Performance in Kitui County from 2010 to 2016

The trend of performance presented in table 1 may be interpreted as low performance. The consistent low performance prompted the researchers to conduct a study on factors influencing the performance of the secondary school students in Kitui county. Therefore, the central problem which this study seeks to address is establishing how learner autonomy and attitude towards school relates to secondary school students' academic performance in Kitui County.

## OBJECTIVES OF THE STUDY

This study was guided by the following objectives:

- ✓ To establish the relationship between learner autonomy and secondary school students' academic performance.
- ✓ To measure the extent of relationship between attitude towards school and students' academic performance.

#### ALTERNATIVE HYPOTHESES

The following alternative hypotheses were formulated as per the objectives of the study.

Ha<sub>1</sub> There is a significant relationship between learner autonomy and secondary school students' academic performance.

Ha<sub>2</sub> Students' attitude towards school significantly relates to their academic performance.

#### THEORETICAL FRAMEWORK

This study was based on sociocultural theory (Vygotsky, 1978). This theory describes human learning as a social process which takes place in the cultural context. Learners acquire knowledge from interacting with more experienced people such as their teachers or parents. The place where learning takes place is the one which is referred as the cultural context and it can be home or the school. Learning is facilitated by tools which can either be physical or psychological. Such tools include language and resources within the school. Absence of the tools hinders learning. Vygotsky developed the concept of Zone of Proximal Development (ZPD). ZPD is the gap between the knowledge which the learner has and the knowledge which the learner is able to acquire when assisted by other more capable people (Vygotsky, 1978).

Vygotsky referred to the more experienced person whom the learner draws knowledge from as More Knowledgeable Other (MKO). In school context, the teacher is the MKO. It's the responsibility of the MKO to gauge the ability of the learners and help them to acquire knowledge as their ability permits. Vygotsky (1978) opined that socialization promotes cognitive development. The socialization occurs at social level which involves interaction between the learner and MKO and individual level which involves integration of the learnt concepts in one's mental structure. Integration of new knowledge extends the ZPD.

Vygotsky also introduced the concept of scaffolding. Scaffolding process involves helping a learner from the state of not knowing anything till a learner acquires mastery of a concepts. The teacher models desired learning tasks and gradually shifts the learning responsibility to the learner (Christmas, Josiah, & Kuzdai, 2013). The teacher dismantles the scaffold once the learner has internalized the problem solving processes. Any learner who has fully benefited from the scaffolding process no longer needs the assistance of the teacher after the scaffold has been dismantled.

Tharp and Gallimore (1990) developed a model for operationalizing the ZPD in teaching and learning. The model has four stages. The first stage involves helping a learner to acquire knowledge. A learner who is in this stage mostly relies on assistance from the MKO. The second stage is characterized by performance of learning tasks using the knowledge acquired in the previous stage. Autonomy starts

emerging in this stage because the learner is able to do some learning tasks on his/her own. The third stage is marked by improved performance of tasks. Full development of autonomy is noted in this stage. The last stage is known as deautomatization of performance. This is repetition of learning tasks using past knowledge. A learner who has undergone the four stages successfully becomes fully autonomous. Autonomy motivates learners to interact with tools at school, enjoy pursuing learning tasks on their own and consequently develop a positive attitude towards their school.

Sociocultural theory links the variables of this study in that learners who practice autonomy will pursue learning tasks independently and enjoy the learning process thus developing a positive attitude. Practice of autonomy combined with positive attitude towards the school will extend the learners' ZPD eventually leading to improved performance of the learners in academics.

#### II. REVIEW OF RELATED LITERATURE

The reviewed literature looks at how learner autonomy relates to academic performance and the relationship between attitude towards school and learners' academic performance.

A study done in South America by Bravo, Intriago, Holguin, Garzon and Arcia (2017) correlated learners' level of autonomy with the performance of the learners in English. The study involved 862 undergraduate students (425 males, 437 females, M<sub>age</sub>= 20.5years) from 10 public universities. Only those universities where English was taught as a compulsory subject were involved. Data were collected using learner autonomy scale by Spratt et al. (2002) and end of semester English scores. The results indicated that learner autonomy correlated positively with learners' performance in English. Highly autonomous learners' performed better in English than less autonomous learners.

In a study at Tribhuvan University in Nepal, Joshi (2011) studied the perceptions of students and lecturers' about the influence of autonomy on performance in English. This study involved 80 students pursuing masters degree and six English lecturers. The study used a mixed methodological design and data were collected using questionnaires and interviews. The study established that both students and their lecturers held the belief that learner autonomy had a significant influence on performance in English. However, this study did not establish the extent and direction of relationship between the two variables.

Onwu and Wuave (2014) studied how academic achievement of undergraduate students is affected by learner autonomy at the University of Agriculture, Markrudi, in Benue state of Nigeria. A total of 74 students were sampled to participate in the study using posttest quasi experimental design. It was established that there was significant difference in academic achievement of the learners in the experimental group and those in the control group. Therefore, it was concluded that learner autonomy positively impacts on learners' academic achievement.

In Pakistan, a study by Malik and Rizvi (2018) aimed at determining the correlation between learner autonomy and secondary school students' performance in Mathematics. In

the study, learner autonomy was measured using the classroom environment instrument while academic achievement was derived from the learners' examination scores in Mathematics. The study found that learner autonomy had no significant correlation with learners' performance in Mathematics.

In Philippines, Pudiquet et al., (2019) did a study to explore whether learner autonomy correlates to academic achievement of pre service teachers. 143 teacher trainees pursuing Bachelor of Secondary Education and Bachelor of Elementary Education degrees at Bambang campus of Nueva Vizcaya University were involved. Descriptive correlational research design was used and a sample of 85 participants was randomly selected. The correlation between autonomy and academic achievement was not significant among the pre service teachers.

Veresova and Mala (2016) explored the relationship between attitude towards school and secondary school students' academic achievement in Slovak Republic. A sample of 269 students (123 girls; 146 boys;  $M_{age}=17.69$  years; range=17-19 years) was involved. The learner s' average score in the main subjects namely Mathematics, English language and Slovak language was used as an indicator of academic achievement. The study reported a statistically significant Correlation between academic achievement and attitude towards school. This implies that when learners have a positive attitude towards their school, they are likely to perform well in academics. On the contrary, negative attitude towards the school may lead to poor performance of the learners.

A similar study investigated the relationship between learners' attitude towards the school and academic achievement in a random sample of 362 secondary school students in the Gondar region of Ethiopia (Asrat, 2017). Academic achievement was inferred from the analysis of 2016 examinations. A positive and significant correlation between the two variables was established.

In a study in three universities in China, Chio et al., (2015) investigated whether students' academic achievement was influenced by their attitude towards school. The study involved a convenient sample of 135 undergraduate students (80 females; 55 males). The results indicated that learner autonomy scores strongly and positively correlated with the learners' academic achievement scores. It was concluded that attitude towards school is a significant predictor of the students' academic achievement.

Li (2012) studied how attitude related to overall performance of the undergraduate students in Hongkong universities. A sample of 153 students pursuing an applied social studies course were involved. The study reported a significant positive correlation between the two variables.

In Kenya, a research focusing on how learner autonomy and attitude influenced their performance in Biology was done among secondary school students in Eldoret municipality, Uasin Gishu County (Mukhwana, 2013). The sample comprised of 200 form three students and 25 Biology teachers from 10 secondary schools. The findings established that learner autonomy and attitude correlated positively to their performance in Biology and that the two variables are good predictors of learners' performance in Biology. However,

the study focused on the influence of the variables on performance in a specific subject.

The literature reviewed has focused on how learner autonomy and attitude towards school influence the performance of the learners in academics at both secondary and university levels of education. However, some studies looked at performance in a specific subject such as Mathematics, English and Biology or performance in a specific course. The overall performance of the learners was not much looked at. In addition, most of the studies were done outside Kenya calling for a need to do similar research in Kenya. Therefore, there is a gap for further research to explore how the two variables influence the overall academic performance of students in Kenyan setting.

### III. METHODOLOGY

This study used a correlational research design. The choice of the design was informed by the intention of the researcher to establish how learner autonomy and attitude towards school relates to learners' academic performance in Kitui County, Kenya. The researcher did not intend to manipulate variables and to establish causal relationships among them.

#### PARTICIPANTS

The participants of this study were 165 form three students (Boys=76, Girls=89) randomly selected from 10 public secondary schools in Kitui county. The sample had mean age of 18.17 years (S.D=1.35) with a range of 16 and 23 years. The 10 secondary schools were purposively selected from Tseikuru Sub County which had consistently recorded low performance in the Kenya Certificate of Secondary Education (KCSE) from 2010 to 2018.

#### RESEARCH INSTRUMENTS

Data collection was done using a questionnaire consisting of two scales. The questionnaire had three parts. The first section of the questionnaire sought the background information of the participant such as the name of the school, category of the school, admission number, sex and age. The other two sections were the scales; learner autonomy scale (Chan, Humpreys & Spratt, 2002) and attitude towards school scale (Farnsworth, Jang, Krohn, Lizzote & Thornberry, 1991). Attitude towards school scale measures the agreement of the youth on the importance of schoolwork. The target group of respondents for this scale should be the learners who are above grade seven. The developers of this scale established its internal consistency reliability to be .81. This value of internal consistency reliability indicates that the scale is a reliable tool for collecting data among form three students.

#### DATA COLLECTION

Authorization to conduct this research study was obtained from Graduate School of Kenyatta University and National Commission for Science, Technology and Innovation.

Afterwards, clearance to collect data from secondary school students in Kitui County was obtained from the locale's County Director of Education and the County Commissioner.

A pilot study was conducted using 23 from three students from one secondary school which was excluded during the actual data collection. The aim of the pilot study was to confirm the reliabilities of the adapted scales. The pilot study results confirmed the tools to be reliable for use in data collection.

A specific date for data collection at each school was arranged by the researchers and the school authorities. The questionnaires were administered to the students during the school days immediately at the end of the normal lesson sessions. Filling of the questionnaires took 30 minutes. Participants volunteered to participate after a briefing session on the intention of the research and assurance of confidentiality and no harm to the participants. The class teachers were requested to assist in administering the questionnaires to the students. After completion and collection of the questionnaires, the participants were thanked for their acceptance to participate in the research.

Data on academic performance of the participants were collected from the teachers' records. The academic performance was indicated by the learner's average score in the examination sat at the end of the second term in 2019.

#### DATA ANALYSIS

Because the internal examinations sat in the 10 schools were different, the academic performance scores were standardized to Z-scores to enable comparison. The collected data were coded and keyed into the SPSS program for analysis. Pearson product moment correlation test was used to establish the extent and direction of relationship between each of the two correlates and academic performance.

#### IV. RESULTS

In order to establish the relationship between learner autonomy and academic performance, the scores of the participants in the learner autonomy scale were correlated with the learners' academic performance scores. The results of the correlation are shown in table 2.

VARIABLES	Autonomy	Academic Performance
Autonomy	1	.281
Academic Performance	.281	1
No. of Participants	165	165

*Correlation is significant at 0.05 level*

*Table 2: Relationship between Learner Autonomy and Academic performance*

The results obtained show that there is significant positive relationship between learner autonomy and academic performance. Null hypothesis had been formulated that "there is no significant relationship between learner autonomy and learners' academic performance." This hypothesis was tested at 0.05 level of significance using Pearson product moment correlation. The correlation results were positive and significant. Therefore, the null hypothesis was rejected. It was held that learner autonomy significantly relates to learners' academic performance.

The second objective of this study was to measure the extent of relationship between attitude towards school and learners' performance in academics. Correlation was done between attitude towards school scores and academic performance scores and the results are presented in table 3.

VARIABLES	Attitude Towards School	Academic Performance
Attitude Towards School	1	.121
Academic performance	.121	1
No. of Participants	165	165

*Correlation is significant at 0.05 level.*

*Table 3: Relationship between Attitude towards school and Academic performance*

The results presented in the table show that there is significant positive correlation between attitude towards school and learners' academic performance. The hypothesis that "there is no significant relationship between attitude towards school and learners' academic performance" was tested at 0.05 level of significance using Pearson product moment correlation. The results were that the correlation between attitude towards school and academic performance was positive and significant. The hypothesized relationship that there is no significant relationship between attitude towards school and learners' academic performance was not supported. It was held that attitude towards school is a positive correlate of academic performance of the learners.

#### V. DISCUSSION OF THE FINDINGS

The findings on how learner autonomy relates to academic performance showed that there is a significant positive relationship between the two variables. This means that more autonomous learners are likely to perform better in academics compared to less autonomous learners.

These findings are consistent to the findings of some studies which were previously conducted on the relationship between the two variables. Onwu and Wuave (2014) had obtained similar findings from a study that looked at how learner autonomy influenced the academic achievement of undergraduate students in a university in Nigeria. Similar findings had also been reported by Bravo et al., (2017) when they studied how performance of university students in English was influenced by learner autonomy.

In a study that looked at whether autonomy can predict the academic adjustment of first year undergraduate students, it was found that learner autonomy positively correlated to academic performance of the learners (Girreli, Fabio, Lucidi, Cozzolino & Maurizio, 2018). This study had sampled 388 participants who had a mean age of 21.38 years. In addition to showing a positive correlation between autonomy and academic performance, it was established that learners' academic adjustment can be effectively predicted using learner autonomy.

A study done by Ata et al., (2015) reported existence of a positive correlation between learner autonomy and academic performance. This study was done among high school and university students in Chicago area. A total of 800 participants aged between 14 and 21 years completed questionnaires. Analysis of the collected data yielded the above reported findings.

The reported findings of the current study were contrary to the findings of some previously conducted studies. A study by Pudiquet et al., (2019) among pre service teachers doing different degree courses had found that learner autonomy had insignificant correlation with the trainees performance in academics. In another study which focused on secondary school students, Malik and Rizvi (2018) reported that learner autonomy had no significant correlation with the learners' performance in Mathematics.

The current study has established that attitude towards school relates positively to learners' performance in academics. This implies that learners who have positive attitude towards their school are likely to do well in their academics. On the contrary, learners who possess negative attitude towards their school are likely to register low scores in their academics thus translating to poor performance. These findings are in line with the findings of the previous studies which related these two variables.

The previous studies which were done among secondary school students reported a positive correlation between attitude towards school and academic achievement. These include a study by Veresova and Mala (2016) among secondary school students in Slovak Republic and a study by Asrat (2017) among Ethiopian students. In these studies, attitude towards school was identified as a positive correlate of academic achievement. The findings were also in line with the findings of a study conducted among Chinese students (Chio et al., 2015). In this study, it was established that attitude towards school correlated positively to learners' academic achievement. Also consistent to the findings of this study are the findings of a study by Li (2012) among university students in Hongkong. In this study, the students' scores in social studies course were correlated with the attitude towards school scores and it was found that there was significant positive correlation between the two sets of scores.

## VI. CONCLUSIONS

This study has established that learner autonomy and attitude towards school relate positively to learners' performance in academics. Learner autonomy should be promoted in order to improve the academic performance of the learners. Learner autonomy can be promoted by giving learners more opportunities to pursue learning tasks on their own and enriching learning environments with teaching-learning materials which can be utilized by the learners in the learning process. Teachers should use of learner centered methods of teaching because these methods increase engagement of the learners thus improving learner autonomy.

Positive attitude towards school has been associated with improved performance of the learners in academics. The results of this study have shown that attitude towards school is a positive correlate of learners' performance. Therefore, teachers should inculcate positive attitude among the learners by ensuring that the school is a child friendly environment. Learners in such environments will love their school and enjoy being identified with it. These learners may work hard to promote a good image of their school and this translates to improved performance in academics.

## VII. RECOMMENDATIONS

This section presents recommendations for both policy and further research.

### Policy Recommendations

- ✓ Since learner autonomy has been found to relate positively to secondary school students' performance, teachers should use learner centred methods of teaching in order to give students more opportunities to practice autonomy.
- ✓ Because positive attitude towards school was found to be a significant and positive correlate of students' academic performance, learning environments should be enriched with resources for the learners to like their school and develop a positive attitude towards their school.

## RECOMMENDATIONS FOR FURTHER RESEARCH

Further research may consider finding out whether there are gender differences in practice of autonomy and orientation of attitude towards school among the secondary school students.

## REFERENCES

- [1] Abidin, J.Z., Alzwari, H., & Mohammad, M.P. (2012). English as a foreign language student's attitude towards learning English: the case of Libyan secondary school students. *Asian Social Science*, 8(2), 119-134. DOI: 10.5
- [2] Afshar, H.S., Ali, R., & Rahimi, M. (2014). Instrumental motivation, critical thinking, autonomy and academic achievement of Iranian English as a foreign language learners. *Issues in Educational Research*, 24(3), 281-298. Retrieved from <https://www.researchgate.net/publications/273597480>. Date accessed: 23rd December 2019.
- [3] Asrat, D. (2017). The relationship between students' attitudes towards school, Values of education, achievement motivation and academic achievement in Gondar secondary schools, Ethiopia. *Research in Pedagogy*, 7 (1), 30-42. DOI: 10.17810/2015.46.
- [4] Ata, D., Nguyen, H., Driver, P. & Thorkildsen, T. (2015). Preserving Autonomy and Interest mediates Adolescents' Academic Performance. *Interdisciplinary Undergraduate Research Journal*, 14-28. Retrieved from <https://journals.uic.edu>. Date accessed: 20th December 2019.
- [5] Aziz, N.A., Confessore, G.J., Foen, S., Lagis, N.M., & Yussof, Z. (2011). Learner autonomy and academic performance among undergraduates. *International Journal of Social Sciences and Education*, 1(4), 669-679. Retrieved from <https://www.researchgate.net/publication/285011696>. Date accessed: 20th December 2019.
- [6] Benjamin, A. (2013). The impact of performance assessment on students' interest and academic performance in science. (Unpublished master's thesis). University of West Indies. Retrieved from [www.uwi.edu](http://www.uwi.edu). Date accessed: 18th December 2019.

- [7] Bravo, C.J., Intriago, E.A., Holguin, J.V., Garzon, G.M. & Arcia, L.O. (2017). Motivation and Autonomy in learning English as a foreign language: A case study of Ecuadorian college students. *English Language Teaching*, 10 (2), 100-113. doi:10.5539/elt.v10n2p100.
- [8] Candeias, A.A., Rebelo, N. & Oliveira, M. (2010). Students' attitude towards learning and school- A study of exploratory models about effects of socio-demographic and personal attributes. Retrieved from <http://www.projectored.uevora.pt/documents/LICE.pdf>. Date Accessed: 20th November 2019.
- [9] Chan, V., Humphreys, G., & Spratt, M. (2002). Autonomy and Motivation: Which comes first? *Language Teaching Research*, 6(3), 245-266. doi:10.1191/1362.168802.lr10609.
- [10] Chio, I., Chu.S., Lee, H., Lei, C., Tsai, K., & Wang, J. (2015). A study of learning pressure, learning attitudes and academic achievement among Macau undergraduates. *Canadian Social Science*, 11(9), 1-5. DOI: 10.3968/7488.
- [11] Correa-perez, R. & Sanhueza-jara, M. (2019). Characterization of autonomous work in a Chilean English pedagogy program. Teachers and freshman's perspectives. *Educare*, 23 (1), 1-23. doi:<http://dx.doi.org/10.15359/ree.23-1.4>.
- [12] Christmas, D., Josiah, M., & Kuzdai, C. (2013). Vygotsky's Zone of proximal development theory: What are the implications for mathematical teaching? *Greener Journal of Social Sciences*, 3(7), 371-377.
- [13] Dundon, P.G. (2012). The effect of learner autonomy on students' performance in GCSE mathematics in private school in Dubai. (unpublished masters thesis). The British University in Dubai. Retrieved from [www.buid.ac.ae](http://www.buid.ac.ae). Date accessed: 17th December 2019.
- [14] Farnworth, M., Jang, S.J., Krohn, M.D., Lizzote, A.J., & Thornberry, T.P., (1991). Delinquent peers, beliefs and delinquent behavior: A longitudinal study of interactional theory. *Criminology*, 32, 47-83. doi:10.1111/j.1745-9125.
- [15] Garn, A.C. & Jolly, J.L. (2014). High Ability Students' Voice on Learning Motivation. *Journal of Advanced Academics*, 25(1), 7-24. DOI: 10.1177//1932202x13513262.
- [16] Hagger, M.S. & Hamilton, K. (2018). Motivational Predictors of Students' Participation in out of school Learning Activities and Academic Attainment in Science. An Application of Trans contextual Model using Bayesian Path Analysis. *Learning and Individual Differences*, 67, 232-244. doi: 10.1016/j.lindif.2018.09.002.
- [17] Hashemian, H. & Soureshian, K.H. (2011). The interrelationship of autonomy, motivation and academic performance of Persian second language learners in distance education contexts. *Theory and Practice in Language Studies*, 1(4), 319-326. doi:10.4304/tpls.1.4.319-326.
- [18] Holec, H. (1981). *Autonomy and Foreign Language Learning*. Oxford: Pergamon.
- [19] Joshi, K.R. (2011). Learner perceptions and teacher beliefs about learner autonomy in language learning. *Journal of Nepal English Language Teachers Association*, 16(1), 13-29. Retrieved from <https://www.nepjol.info>. Date accessed: 15th December 2019.
- [20] Kabiri, M., Nosratinia, M. & Mansouri, M. (2018). The relationship between EFL learners' autonomy, anxiety and their motivated strategies for learning. *Journal of Applied Linguistics and Language Research*, 5(1), 253-268. Retrieved from [www.jallr.com](http://www.jallr.com). Date accessed: 15th December 2019.
- [21] Kapur, R. (2018). Factors influencing the students' Academic Performance in Secondary Schools in India. Retrieved from <https://www.researchgate.net/publication/324819919>. Date accessed: 15th December 2019.
- [22] Li, L.K. (2012). A study of attitude, self-efficacy, effort and academic achievement of city university students towards research methods and statistics. *Students' Educational Journal*, 1(1), 154-183. Retrieved from <https://www.sswb.cityu.edu.hk/download/E-Journal>. Date accessed: 15th December 2019.
- [23] Malik, R.H. & Rizvi, A.A. (2018). Effects of Classroom Learning Environment on Students' Academic Achievement in Mathematics at Secondary Level. *Bulletin of Education and Research*, 40(2), 207-218. Retrieved from <https://files.eric.ed.gov/fulltext>. Date accessed: 16th December 2019.
- [24] Mata, L.M., Monteiro, V., & Peixoto, F. (2012). Attitudes towards Mathematics: Effects of individual motivational and support factors. *Child Development Research*, 10(2), 100-110. Retrieved from <https://files.eric.ed.gov/fulltext>. Date accessed: 10th December 2019.
- [25] Mukhwana, W.J. (2013). The role of student related factors in the performance of Biology subject in secondary schools in Eldoret municipality. *Journal of Emerging Trends in Educational Research and Policy Studies*, 4(1), 64-73. DOI: 10.11555/2012/876028.
- [26] Oluminde, O., Olusola, O., & Taofeek, S. (2015). Parents and students interest as determinants of students' academic performance in agricultural science in selected secondary schools in Oyo state, Nigeria. *International Journal of Academic Research in Progressive Education and Development*, 4(4), 11-20. Retrieved from <https://www.questia.com/read/1p3-3091493081>. Date accessed: 16th December 2019.
- [27] Onwu, I.C., & Wuave, J.A. (2013). Effect of learner autonomy on undergraduate students' achievement in a system of linear equations in a university of agriculture, Makurdi, Benue state, Nigeria. *Journal of Research and Methods in Education*, 4(2), 24-27. DOI:10.6007/IJARPE/v4-i/1864.
- [28] Paudel, J. (2019). Learner autonomy practices in English language teaching in an EFL context. *Journal of NELTA Gandaki*, 1, 53-61. Doi: <https://doi.org/10.3126/jong.v1i0.24460>.
- [29] Pudiquet, F.G., Balualua, M.C., Tumacder, C.G., Matulay, L.T. & Derilo, R.C. (2019). Autonomous learning, Metacognitive Awareness and Science Academic Achievement of Pre-service Teachers. *International Journal of Research and Review*, 6(5), 25-31. DOI: 10.4444/ijrr.1002/1080.
- [30] Tharp, R., & Gallimore, R. (1990). *Teaching mind in society: Teaching, schooling and literate discourse*. In

- L.Moll (eds.), Vygotsky and education: Instructional implications and applications of socio-historical psychology. (pp175-205).Cambridge, MA: Cambridge university press.
- [31] Umar, H.M., Fugu, Y.A. & Aliyu, H.M. (2018). Prediction of Academic Performance in Biology among Public Senior Secondary School Students in Kwara State, Nigeria. *International Journal of Education and Research*, 6(12), 79-90. Retrieved from [www.ijern.com](http://www.ijern.com). Date accessed: 11th December 2019.
- [32] Veresova, M. & Mala, D. (2016). Attitude towards School and Learning and Academic Achievement of Adolescents. *The European Proceedings of Social and Behavioral Sciences*. 870-876. DOI:10.15405/epsbs.2016.11.90.
- [33] Vygotsky, L.S. (1978). *Mind in Society: The development of higher psychological- processes*. In M. Cole, V. John-steiner, S. Scribner, & E. Souberman (eds.), Cambridge, MA: Harvard University press.

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