

The Relationship between Career Aspiration and Academic Performance of Students in Public Secondary Schools in Nairobi County, Kenya

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Abstract— Understanding the relationship between career aspiration and academic achievement of the secondary schools' students could inform education stakeholders about how best to offer relevant career support to facilitate smooth transition from school to further education and to the world of work. This study aimed to better understand whether career aspiration predict academic performance among secondary school students in Kenya. The Self-determination theory and the Social Cognitive theory formed the theoretical framework in this study. The sample of this study consisted of 397 form four students who were drawn from Nairobi County. Career aspiration questionnaire was used for data collection. The data was analyzed qualitatively and quantitatively, guided by the study objectives. A correlation research design was adopted for the study. The hypotheses on the relationship between career aspiration and academic performances was tested using Chi-Squire inferential statistical test that was carried out at.05 level of significance. The findings indicated some evidence of a significant relationship between career aspiration and academic performance ($X^2= 11.85$, $df= 4$, $P = 0.019$,). The study concluded that career aspiration is a real phenomenon that affected students' academic performance in 2017 KCSE examination. A major implication and recommendation of the study was that all stakeholders in education should work together in enhancing schools and homes environments for fostering the development of career aspiration. Further research should also consider other determinants of career aspiration such as quality and quantity of career guidance available to students, schools' resources and facilities, teaching pedagogy as well as students' personality.

Keywords— Career Aspiration, Academic Performance and Career Guidance.

I. INTRODUCTION

Career aspiration play a significant role in shaping an individual's study behavior. Career aspirations therefore, boosts students' academic motivation leading to improved student's academic excellence.

Career aspirations can be contextualized from both the present and future perspectives. In this respect, career aspiration assists students to identify and set goals for the future, while being inspired and actively involved in the present study behavior toward those goals. Consequently, the construct of career aspirations is unique in that it combines the motivational components of the present (inspiration) with the future (ambitions) hence warrant studying.

According to Kisilu, Kimani and Kombo (2012), career aspiration are the desires, dreams, ambitions, career thoughts by young individuals that inspire what they anticipate to study

and engage in the world of work. According to investigations, if better career aspirations are shaped at school level, the better the performance and likelihoods of achieving the same (Nyugen & Blomberg, 2014; Nabil, 2015; Gorard, See & Davies, 2012; Rose & Baird, 2013; Brown, Launder & Ashton, 2010; Pugh, 2017).

A recent study conducted by Dar (2019) conveyed that 17.83% of youths revealed low career aspirations while 58.33% falls in moderate level of career aspirations. This is despite the fact that the reality of unstable and changing job market of the 21st century is increasingly demanding for a highly educated and inspired workforce. Consequently, Peila-Shuster (2017) declares that students in the 21st century, to a larger extent than before are likely to face their life courses with unclear or blurred career-life due to uncertain academic performance.

It is demonstrated that adolescents who feel despondent and foresee a negative future may be more likely to participate in risky behaviors while those who perceive a greater sense of career self-efficacy might feel better armed to make healthier choices and sidestep risky behaviors, even in the face of peer pressure (Bandura, 1977). Academic performance therefore plays an important role in producing the best quality graduates who are responsible for a country's economic and social development (Jibeen & Khan, 2016; Brackett, Divecha, & Stern, 2015). Contemporary conditions therefore indicate the need for special attention to students' career aspiration which can motivate individuals to better educational consequences.

According to Super's (1990) theory of career development, high school students are at the exploration stage of career development which encompasses crystallizing and specifying their occupational favorites while also making initial decisions about their career choices. Subsequently, Career development forms an essential part of a learner's overall development, predominantly during adolescence (12-20 years). This is when significant biological, cognitive, social and emotional changes take place (Robinson & Diale, 2017).

According to McDaniel (2016), secondary schools' students are in adolescence stage which is critical time in the life path when individuals develop career expectations which influence later educational and occupational accomplishment in adulthood. Additional studies in developed countries have proven that career aspirations are mostly inculcated at secondary school level and they influence academic

performance (Nabil, 2015; Nyugen & Blomberg 2014; Erikson, 1959). It is this early career thoughts that are fundamentally translated into career aspirations and develop work-related identity that help in selecting a future career.

A longitudinal study that lasted for 10 years with Australian youths (Nyugen & Blomberg, 2014) clearly indicated that the better the career aspirations formed at school level, the better the possibilities of succeeding in academic performance. This was echoed by research findings by Feliciano, Oliveira and Taveira's (2014) with Portuguese students. On the other hand, Chung, Bergen and Wong (2017) study found that career aspirations may reflect an adolescent's sense of identity, hope for the future, and self-efficacy, all of which are linked to academic performance. Thus, education policy makers should consider embedding more career information within the curriculum in order to inculcate career aspiration and design palliative interventions early enough.

Recent inquiries showed that, individuals who are academically motivated set high career goals, achieve higher grades, cheat and procrastinate less, and show lower academic burnout (Bong, Hwang, Noh, & Kim, 2014; Harvey, Milyavskaya, Hope, Powers, Saffran & Koestner, 2015; Thorpe & Netteelbeck, 2014). This was affirmed by Hafsyman's (2015) findings that career aspirations were greater for upper division honors students compared to lower division honors students indicating a reciprocal relationship between career aspiration and academic performance. An earlier study by Cheng (2012) also demonstrated this reciprocal relationship.

A study by Igere (2017) on career choice and its influence on academic performance of library and information science students in the University of Benin in Nigeria using the entire population as sample, revealed that majority of the student's performance was on average because they failed to be admitted to the courses they had initially chosen and had aspired for. This indicated a relationship between career aspiration and future academic performance of the students. A local study in Kenya by Mettol and Kisilu (2016) with a university in Western Region of Kenya supported previous findings by establishing that it was easier for the students to excel in something that they had aspired than doing a career for the sake of earning a living. Further research by Karen, Tamara, Frederic, and Phillip (2018) authenticated the previous findings.

To improve the students' academic performance, they should have an autonomy to align their career interest as indicated by Self Determination Theory. This will ignite intrinsic and autonomous extrinsic motivation which is related to academic performance and correlate to career aspirations. This is in consistent with Bandura's Social Cognitive Theory (1989) which states a reciprocal relationship between academic performance and self-efficacy which are prerequisite to better career aspirations.

However, selected studies found no solid evidence that raising career aspirations can lead to higher school accomplishment since some students tend to hold high aspirations even beyond what the labor market can support (St Clair, Kintrea & Houston, 2013). Nabil's (2015) study partly supported the previous studies outcomes indicating that

having high aspirations without being able to achieve them would negatively influence students by causing disappointment, frustration and arguable social withdrawal, or at least would result in a 'lost talent'. The findings were consistent with an earlier study by Galyon *et al.*, (2012) whose findings suggested that investing in raising aspirations of students might only work in some cases and among some students. Almon, and Matisidisco (2012) research with South African university students failed to demonstrate any relationship between career aspiration and academic performance. This mixed finding necessitates further explorations.

The Republic of Kenya has traditionally attached supreme importance to education as a means to national development. Toward this end, the Constitution of Kenya, 2010, has provided for Free and Compulsory Basic Education while Vision 2030 under the Social Pillar pointed out education and training as the means that will drive the country by transforming it into industrialized middle-income economy and empowering human resources. The education goals of vision 2030 highlight on the delivery of universally competitive quality education, training and research for development. Given the importance of education in cultivating the quality and productivity of the workforce, and the importance of institutions of learning as turning point where career identities and aspirations are formed and developed, it is vital to investigate the factors that influence the secondary schools' students' academic outcome so as to enhance them.

II. RESEARCH PROBLEM

Academic performance for students is one of the key goals of schools' system for it strongly link students to positive outcomes in fulfilling a productive future life. However, declined performance trend has been registered in Kenya Certificate of Secondary Examinations (KCSE) examinations in 2013, 2014 and 201 where the students who attained C+ grade and above which is the minimum qualification to university were 123,365; 169,492; 149,717 respectively (Aduda, 2016). In 2016 and 2017, only 88,929 (15.41 %) and 70,073 (11.6%) of the candidates attained C+ grade and above respectively. Declining performance trends has also been reported in Nairobi County, irrespective of the high levels of schools' infrastructure, manpower resources, exposure to technological advancement, and reasonable socio-economic background of the students. For instance, for the years 2014, 2015, 2016 and 2017 students who attained university entry grade (C+ and above) were 6975 (31%), 7511(32%), 5125(20%) 4263 (16%) respectively. In 2016 and 2017 the candidates registered the lowest mean grade from the earlier 5.1 (C grade) to 3.978 and 3.65 (D grade) respectively in the history of this County (KNEC, 2018). This may have far reaching implications for the student in terms of missing more rewarding career opportunities embedded in further education, inadequate manpower to the country as well social-economic wastage which is of great concern to all stakeholders in education.

III. OBJECTIVE OF THE STUDY

The objective of the study was to determine the relationship between career aspiration and academic performance of public schools’ students in Nairobi County, Kenya.

IV. METHODOLOGY

The correlation design was adopted for this study through which the researcher assessed the statistical relationship between career aspiration and academic performance of the students. Correlation design not only determines the strength and direction of that relationship, but can make predictions about one variable from the other as well. The degree of this relationship is expressed as a correlation co-efficient (Mugenda & Mugenda, 2003).

In this study, the dependent variable was the form four students’ academic performance which was measured using the 2017 Kenya Certificate for Secondary Education (KCSE) that is set, marked and standardized by legal examining body in Kenya (National Examination Council Examination) for the form fours (KCSE). This is a transitional examination from secondary schools to post- secondary institutions of learning and it determines one’s career related course in the university. Independent variable in this study was the levels of career aspirations measured using items in the questionnaire.

The sample consisted of 397 participants drawn from accessible population of form four students from 12 out of 84 public secondary schools. This represent 14% of the total number of public secondary schools in Nairobi County. This is considered enough in social science study which recommend a minimum of 10% (Gay,1981). The participants had been registered by Kenya National Examination Council (KNEC) to sit for KCSE, 2017. The sample was obtained through simple random and stratified sampling for mixed schools using Yamane (1967) formula for determining sample size. This formula is also considered appropriate for a large and known population size.

The Yamane formula is stated as:

$$n = \frac{N}{1 + N[e]^2}$$

Where n is the corrected sample size, N is the population size and e (0.05) is the desired level of precision (margin of error). A 95% level of confidence is assumed. Calculation of sample size was done as follows;

$$N = \frac{26477}{1 + [26477 \times 0.0025]} = 394$$

The sample for the current study (397) is slightly more than the one recommended by Yamane (1967). The tools of this study were questionnaire and document analysis for 2017 KCSE results. According to Orodho (2004) questionnaire are commonly used to collect important and quality information from any sample.

V. ANALYSIS OF FINDINGS

Qualitative and quantitative data were attained from the questionnaire and then scored and coded for statistical analysis

using Statistical Packages for Social Sciences – SPSS – software. The null hypothesis was tested at.05 level of significance using Chi-square inferential statistical test.

In order to establish whether academic performance is related to career aspiration, descriptive statistic of students’ academic performance was computed as shown in Table 1.

Table 1. Descriptive Statistics of Respondents’ Academic Performance

Points	N	Range	Minimum	Maximum	Mean	Sd	Skewness
Equivalent to Mean Grade Obtained	397	11.00	1.00	12.00	4.92	2.56	.63
Valid N	397						

Note.min = minimum; max= maximum; sd= standard deviation; sk= skewness Sd = standard deviation

Table 1 illustrate a positive coefficient of skewness (.63) indicating that majority of the respondents scores were below the mean score (Mean = 4.92) signifying poor academic performance. Respondents’ KCSE level of academic performance was calculated and findings and displayed in Table 2.

Table 2. Distribution of Respondents KCSE Levels of Academic Performance

	Frequency	Percent
Low	224	56.4
Average	123	31.0
High	50	12.6
Total	397	100.0

Table 2 show that only 50 (12.6%) respondents had high academic performance (B grade and above) while the low level (D grade and below) formed the majority of the total respondents (224, 56.4 %). Indeed, this is a reflection of poor academic performance in Nairobi County, a trend echoed by Mweteleli’s (2015) study.

Students’ awareness of career option was also calculated. Students were asked to indicate whether they are aware of career options that are available to them or not. The findings are found in Figure 1.

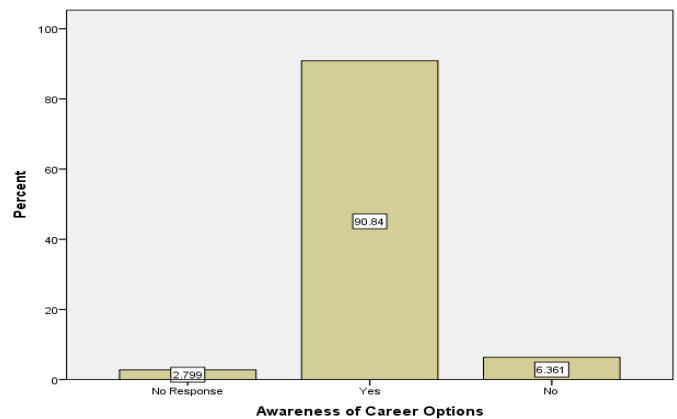


Figure 1. Distribution of Respondents’ Awareness of Career Options

Findings of the analysis found in Figure 1 demonstrate that majority (360, 90.84%) of the students have the understanding of the various career possibilities for long-term employment.

This could have resulted from the students' exposure to their urban formal and informal world of work. It is also notable that a small percentage (2.8 %, 11) of the students were unresponsive and only 6,38 % (26) registered lack of awareness of career options.

Analysis of the respondent's levels of career aspiration was done and the data is availed in Figure 2.

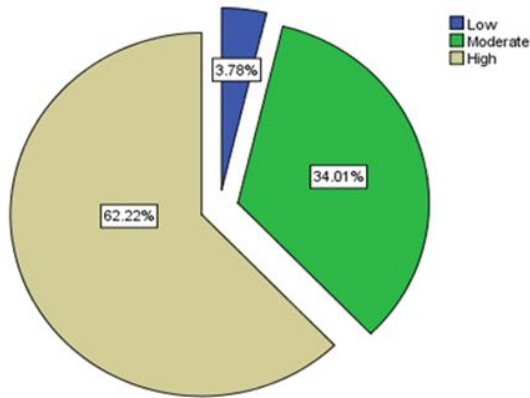


Figure 2. Distributions of Respondents' Levels of Career Aspirations

Figure 2 depict a high career aspiration for majority of the respondents (62.22%) and just over a third (34%) of the total respondents reported moderate levels of career aspiration. A minority of 3.8 % registered low career aspiration. This could suggest that students are potentially aspiring to careers but might be lacking academic motivation necessary to achieve them. Levels of career aspiration and academic performance was determined and results presented in Table 3.

Table 3. Levels of Career Aspiration and Academic Performance

Level of Academic Performance	Level of Career Aspirations	Level of Career Aspirations			Total
		Low	Moderate	High	
Low	F	14	82	128	224
	% within Level of Academic Achievement	6.2	36.6	57.1	100.0
Average	F	1	36	86	123
	% within Level of Academic Achievement	0.8	29.3	69.9	100.0
High	F	0	17	33	50
	% within Level of Academic Achievement	0.0	34.0	66.0	100.0
Total	F	15	135	247	397
	% within Level of Academic Achievement	3.8	34.0	62.2	100.0

Note. f = frequency; % = percentage

The findings presented in Table 3 show that level of academic performance correlates with levels of career aspiration. Low academic performance level had the most respondents in with low career aspiration (14, 6.2%). Surprisingly, respondents with low academic performance spread across all the levels of career indicating that high career aspirations may not always translate into academic success may be due to lack of academic abilities and motivation. The moderate and high level of academic performance also corresponds with the levels of career aspiration.

Levels of career aspirations and academic performance mean was calculated and findings are shown in Table 4.

Table 4. Level of Career Aspirations and Academic Performance Mean

Level of Career Aspirations	Number of Respondents	Percentage (%)	Academic Performance mean (points)
Low	15	3.8	2.73
Moderate	135	34	4.70
High	247	62.2	5.17

Table 5 present an association between the levels of career aspiration and academic performance mean of the students. It is also evident that a high majority of 247 students were in the category of high level of career aspiration with academic performance mean of 5.17. On the other hand, 137 students fell in moderate level with academic performance mean of 4.7 and only 15 students were in the low level with a mean of 2.73. High career aspiration therefore is a predictor and prerequisite for high academic performance mean of the secondary school students.

Chi-Squire inferential test was used to assess the relationship between career aspiration and academic performance and the findings are presented in Table 5.

Table 5. Chi-Squire Test for the Relationship between Career Aspiration and Academic Performance of the Respondents.

	Chi-Square Tests		
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.846 ^a	4	.019
Likelihood Ratio	14.500	4	.006
Linear-by-Linear Association	6.776	1	.009
N of Valid Cases	397		

a. 2 cells (22.2%) have expected df less than 5. The minimum expected f is 1.89.

Note. df = degree of freedom

The output in Table 5 provides a statistical hypothesis test for the hypothesis that career aspiration and academic performance are independent of each other. The results of chi-square test for the relationship between students' career aspiration and academic performance at $\alpha=.05$ revealed the presence of a significant relationship between career aspirations and the secondary school students' academic performance ($X^2 = 11.85$, $df= 4$, $P = 0.019$, $P<0.05$). The null hypothesis was therefore rejected.

VI. DISCUSSION

These findings implied that the levels of career aspiration may be used to predict academic performance of students. This finding is consistent with previous studies which indicated that irrespective of education levels and different study locations, career aspiration was found to be positively correlated to academic performance (Rebecca *et al.*, 2014; Hafsyhan *et al.*; 2015, Fericiano *et al.*, 2014); Igere, 2017), Mettol & Kisilu, 2016; Nyugen & Blomberg, 2014; Hafsyhan, 2015).

A longitudinal research conducted by Nyugen and Blomberg (2014) evidently indicate that the better the career aspirations formed at school level, the better the possibilities of achieving the same through academic performance.

Hafsyah (2015) study using a sample from the university found that aspirations were greater for upper division honors students compared to lower division honors students and higher academic involvement was related to higher aspirations. Career aspiration therefore needs to be enhanced among the students as one of the strategies of improving academic performance in all levels of schooling.

A study by Feliciano et al. (2014) on Portuguese students concluded that career exploration is prerequisite to career aspiration and a facilitative condition for better academic performance. This idea is mirrored by Creed *et al.*, (2011) and a local study by Mettol and Kisilu (2016). Education stakeholders therefore should invest in policy statements encouraging career exploration programs in order to facilitate the desired academic outcome.

However, an earlier study by Almon, and Matisidisco (2012) contrasted the findings of the current study. Using a purposive sample of 133 1st and 2nd university students from South Africa found that a relationship between career aspiration and academic performance was not significant. Lack of randomization of sample and context into which the study was taken could have caused this difference.

It was possible that students have varied career aspiration but the criteria they have regarding achievement of their career goals are not clear. Students are less likely to translate their career aspiration into goals, and their goals into actions, when they perceive their efforts to be impeded by insurmountable barriers or inadequate support systems. For this reason, educators have a profound responsibility in ensuring that secondary school students aspire to study subjects that increase their chances of academic success. Specific student groups may be limited by subject selection underpinned by low aspirations. Such need career information and exposure to be encouraged in their pursuits.

VII. CONCLUSION

The results of this study presented some evidence of the existence of the relationship between career aspiration and academic performance. In this respect there is a need to nurture the learners' career aspirations from an early age by exposing them to various career choices in the constantly changing world of work. This will help the students to channel their academic endeavors towards the right career and meet the demand of the 21st century for competency and productivity. These may be obtainable when informed career decision is made at secondary school level where the students make subjects selection which determines their future careers. The schools' career guidance that is based on personal assets of the students' remains the only vehicle to argument career aspiration. Education stakeholders should also challenge the long-held articulations of traditional gendered careers or stereotypes so that students can explore wider educational opportunities. To ensure the long-term prosperity of any nation, we must renew our collective commitment to excellence in education and development of students' talents by enhancing career aspiration among the students.

REFERENCES

- [1] Aduda, D.(2016, December, 30th). "Alliance Girls Crowned KCSE Queens..." Daily Nation, pp. 2
- [2] Almon, S., Matisidiso, N. (2012). Factors Influencing Students' Career Choices and Aspirations in South Africa. *Journal of Social Science*, 33(2), 169-178.
- [3] Bandura, A. (1989). Regulation of Cognitive Process through Perceived self-efficacy. *Developmental Psychology*, 25, 729-73
- [4] Bong, M., Hwang, A., Noh, A., & Kim, S. I. (2014). Perfectionism and motivation of adolescents in self-Efficacy and Academic performance. *Journal of Educational Psychology*, 106(3),711-729.
- [5] Brackett, D., Divecha, D., Stern, R. (2015). Teaching teenagers to develop their emotional intelligence. *Harvard Business Review*. <https://hbr.org/2015/05/teaching>.
- [6] Chang, E., Lee, A., Byeon, E., & Lee, S. M. (2015). Role of motivation in the relation between perfectionism and academic burnout in Korean students. *Personality and Individual Differences*, 82, 221–226.
- [7] Creed, P., Tilbury, C., Buys, N., & Crawford, M. (2011). The career aspirations and action behaviors of Australian adolescents in out-of-home-care. *Children and Youth Services Review*, 33(9), 1720-1729.
- [8] Dar, I. A. (2019). Influence of academic streams on career aspirations of Kashmiri adolescents. *The International Journal of Indian Psychology*, 7(2), 38–45. [Google Scholar]
- [9] Erickson, E. (1959). *Young man Luther: A study in psychoanalysis and history*. New York: Norton.
- [10] Feliciano, H. V., Iris, M. O. & Maria, C.T. (2014). *Students' Engagement in School, Academic Aspirations and Career Exploration of Portuguese adolescents*. 8th International Technology, Education and Development Conference Proceedings. <https://www.researchgate.net/publication/319087652>, pp.7545-7553
- [11] Gorard, S., See, B. H. & Davies, P. (2012). *The Impact of Attitudes and Aspirations on Educational Attainment and Participation*, York, Joseph Rowntree Foundation.
- [12] Galyon, C. E., Blondin, C. A., Yaw, J. S., Nalls, M. L. & Williams, R. L. (2012). The relationship of academic self-efficacy to class participation and exam performance. *Social Psychology of Education*, 15(2), 233-249. doi:10.1007/s11218-011-9175-x
- [13] Hafsyah, A.S. (2015). *Educational and Career Aspirations of University Honors and Non-Honors Students*. Doctoral Dissertations Connecticut Graduate School of University of Connecticut.
- [14] Harvey, B., Milyavskaya, M., Hope, N., Powers, T. A., Saffran, M., & Koestner, R. (2015). Affect variation across days of the week: Influences of perfectionism and academic motivation. *Motivation and Emotion*, 39 (4), 521-530.
- [15] Igere, A. M. (2017). Career choice and its influence on academic performance of library and information science students in a Nigerian University *Journal of Information and Knowledge Management*, 8 (2), 90-98.
- [16] Jibeen, T. & Khan, M. A. (2016). Development of an Academic Achievement Risk Assessment Scale for Undergraduates: Low, Medium and High Achievers. *Multidisciplinary Journal of Educational Research*, 6(1), 23-50. doi:10.17583/remie.2016.1697.
- [17] Karen, A. B., Tamara, O., Frederick, F. & Phillip., J. (2018). A study of the correlation between STEM career knowledge, mathematics self-efficacy, career interests, and career activities on the likelihood of pursuing a STEM career among middle school students. *International Journal of STEM Education*, 5 (22), 1-15. <https://doi.org/10.1186/s40594-018-0118-3>.
- [18] Kenya National Examination Council (KNEC) (2018).
- [19] Mettol, J.M. & Kisilu, K. (2016). Influence of Career Preference on Academic Performance and Graduation of male students: A Case Study of a University in Western Region of Kenya. *Journal of Research in Humanities and Social Science*, 4 (8), 9-20.
- [20] McDaniel, A. (2016). The role of cultural contexts in explaining cross-national gender gaps in STEM expectations. *European Sociological Review*, 32, 122–133. doi: Mugenda, O. and
- [21] Mugenda, A.G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts press.
- [22] Mutweleli, S.M (2015). *Academic Motivation and Self-regulation as Predictors of Academic Achievement of Students in Public Secondary Schools in Nairobi County, Kenya*. Kenyatta University, Nairobi,

- Kenya. Unpublished Doctor of Philosophy Thesis of Kenyatta University, Kenya
- [23] Nabil, K. (2015). Students' Aspirations, Expectations and School Achievement: What really matters? *British Educational Research Journal*, 4 (5),731-748.
- [24] Nairobi County Education Office. (2018). *KCSE analyses 2014-2017*
- [25] Nguyen, N & Blomberg, D (2014). The role of aspirations in the educational and occupational choices of young people, NCVET, Adelaide. Briefing Paper, 29. Retrieved from <https://www.ncver.edu.au/research-and-statistics/publications/all-publications/the-role-of-aspirations-in-the-educational-and-occupational-choices-of-young-people>
- [26] Orodho, J. A. (2004). *Techniques of Writing Research: Proposal and Reports in Education and Social Sciences*. Nairobi: Masola Publisher.
- [27] Peila-Shuster, J. P. (2017). Fostering hope and career adaptability in children's career development. *Early Child Development and Care*, 1–11. doi: 10.1080/03004430.2017.1385610
- [28] Pugh, S. (2017). Teaching career skills to undergraduates: Using context- and problem-based learning to increase commercial awareness for chemistry undergraduates. *Science Education*, 95(3), 458-476. Retrieved from <https://eic.rsc.org/feature/teaching-career-skills-to-undergraduates/2500262.article.race/ethnicity>.
- [29] Rebecca N. D., Paul J. C., Bergen, B. N., Mitchell, D. W. (2017). What do you want to be when you grow up? Career Aspirations as a Marker for Adolescent Wellbeing? *The official journal of pediatrics*, 17(2), 153-160. doi:
- [30] St Clair, R., Kintrea, K. & Houston, M. (2013). Silver bullet or red herring? New evidence on the place of aspirations in education, *Oxford Review of Education*, 39(6), 719–738.
- [31] Thorpe, E., & Netteelbeck, T. (2014). Testing if healthy perfectionism enhances academic achievement in Australian secondary school students. *Journal of Educational and Developmental Psychology*, 4(2). <http://dx.doi.org/10.5539/jedp.v4n2p1>.
- [32] Yamane, T. (1967). *Statistics: An Introductory Analysis*, (2nd ed). New York: Harper & Row