Linkage between parents’ gender and students’ academic determination in secondary schools in Laikipia County, Kenya

Eshphan W. Kingori
School of Education Laikipia University, Kenya
keshphan@gmail.com

Abstract
The study was based on McClelland’s Achievement Motivation Theory and it used ex post facto research approach to collect data through a questionnaire. The study’s target population was 375 form three and four students in 106 public secondary schools in the County who were randomly selected from a targeted population of 11,580 students. Nominal scale data were analyzed through percentages and frequency counts while ordinal scale data were analyzed by use of χ² statistic at .05 alpha level of confidence using the Statistical Package for the Social Sciences (SPSS). The study revealed that students from female-headed household demonstrated a higher level of academic determination compared with their counterparts from male-headed households (p > .05). This finding has an important lesson on increasing students’ academic determination, which among others includes the need for schools to come up with students’ based guidance and counselling programmes which should pay more attention to students from unfavourable home backgrounds specifically, male headed households.

Keywords: Academic Determination, Parental Gender, Students’ Level of Mastery Experience.
The attainment of higher educational standards goes a long way in assisting individuals same as countries to reduce levels of poverty and must of necessity impact positively on national economic development. Moreover, according to Adetungi and Oladeji (2007) the noted high rate of socio-economic development in the western world is attributable to superior literacy levels. This is primarily because, advanced literacy levels, which is known to correlate highly with academic determination, enhances critical judgement and development of entrepreneurial skills which are critical for the choices an individual makes in every sphere of life.

Findings generated by a study carried out in Kenya shows that Kenya in the 21st century is faced with myriad of new challenges of meeting greater public demand for quality education and training both as a human right and as an essential area of investment (Republic of Kenya, 2015). It can therefore be concluded that formal education is one of the most reliable predictors of economic growth in a nation. In the same line of interrogation, it needs to be mentioned that formal education in Kenya needs to address both access and transition challenges as well as low academic achievement challenges for the country to attain the projected middle level economic status as stipulated in her Vision 2030 growth agenda (UNICEF, 2015).

According to UNESCO (2013), the possibility of Kenya attaining the projected middle level economic status by the year 2030 may turn out to be a mirage if the students’ low academic achievement in the Kenya Certificate of Secondary Examination (KCSE) exit examination is anything to go by. This is not a far-fetched observation if we take cognizance of the fact that the proportion of candidates in Laikipia County who attained minimum university entry point (Grade C+) averaged at 28% for the period running between 2009 and 2013. This implies that nearly 72% of candidates could not directly transit to university level of education in the aforementioned period (2009-2013). This scenario is aptly captured in Table 1.

**Table 1**

<table>
<thead>
<tr>
<th>Year</th>
<th>C* and above</th>
<th>Grades C and above</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>27.21</td>
<td>72.79</td>
</tr>
<tr>
<td>2010</td>
<td>26.85</td>
<td>73.15</td>
</tr>
<tr>
<td>2011</td>
<td>29.12</td>
<td>70.83</td>
</tr>
<tr>
<td>2012</td>
<td>28.36</td>
<td>71.64</td>
</tr>
<tr>
<td>2013</td>
<td>27.47</td>
<td>72.53</td>
</tr>
<tr>
<td>Average</td>
<td>27.80</td>
<td>72.18</td>
</tr>
</tbody>
</table>

Source: KNEC, 2015

The data captured in Table 1 appears to suggest that there could be some underlying causal factors that may be impacting negatively on students’ performance in KCSE examination in the County. There is a need to mention that one of the critical correlates of educational performance is the level of students’ academic determination (Gutman & Schoon, 2012). The causal link between learners’ level of determination and their ability to excel in school is grounded on the premise that the former (determination to excel) triggers motivation to achieve highly in school so as to reach the targeted educational goal or ambition for that matter.
Parents’ Gender and Students’ Academic determination

The debate on the role played by household head’s gender on learners’ motivation to learn has attracted many a scholar. However, research on the nexus between gender of the household head and children’s success in school has generated mixed results. For instance, Chapman, Laird, KewalRemani’s (2011) study demonstrated that children from two-parent households had a higher motivation to achieve in school compared with children from female headed families. The study observed that this motivation variance accounted for differential performance (in favour of two-parent household children) in standardized aptitude tests. This finding concurs with that of a previous study by Van Laar and Sidanius (2001).

Moreover, some studies (see for example, McLanahan & Schwartz, 2007; Richardson, 2009) have reported that children from female headed households are at a higher risk of being engaged in disruptive behaviour including early sexual activities compared with their counterparts from male headed families. Suleman, Aslam and Hassan (2015) have further observed that chances of being expelled from school and the likelihood of dropping out prematurely are higher among children brought up in families which are headed by females in comparison with their counterparts in male headed households. These personal as well as family background characteristics seems to reinforce the view that children from male headed two parent families have a higher likelihood of being more motivated and thus excel in school as opposed to their colleagues from female headed households.

Statement of the Problem

Evidence accruing from the foregoing background to the study, appears to suggest that that the desired learning outcomes in Kenya’s secondary education may not be realized in Laikipia County as attested to by low level of students’ performance in KCSE examination. It has also emerged from the background information that the household head’s gender may be a critical antecedent in regard to the students’ level of academic determination and consequently, their educational achievement in KCSE exit examination. However, the extent to which this variable could be at play in Laikipia County is not yet known. This is the knowledge gap that this study sought to fill with a view to generating insights that could offer guidelines to the relevant stakeholders on how to address the problem. This study has generated a useful insight that may be of great assistance to different stakeholders in the Ministry of Education (MOE) in their endeavour to enhance students’ academic determination and hence performance in public secondary schools. This insight would not only be ultimately beneficial to students in the study area but also in other parts of the country in the sense that secondary schools’ principals might gain useful knowledge in respect to ways in which schools’ guidance and counselling departments can be revamped with a view to enhancing their capacity to initiate intervention strategies for enhancing students’ academic aspiration and hence academic performance in Laikipia County.

The study was premised on the reasoning that students’ academic determination is contingent upon household head’s gender. Specifically, the study postulated that students who hailed from household headed by females (independent variable) stood a high likelihood of developing high levels of students’ academic determination (dependent variable) and vice versa. The study similarly postulated that the influence of the independent variable on the dependent variables focused by the study may be moderated either positively or negatively by three extraneous variables. These are prevalent attitude towards formal education in the community, level of educated unemployment in the community, and level of an individual student’s mastery experience. The conceptualized relationship between the independent, dependent and extraneous variables subsumed in the study is presented in Figure 1.
The basic idea in the conceptual framework model depicted in Figure 1 is that even in a situation where independent variables are unfavourable, students’ academic determination is likely to be high if the extraneous variables are favourable and vice versa.

**Theoretical framework**

This study was rooted in achievement motivation theory which was developed by McClelland following his extensive research on human motivation in Harvard University (McClelland, 1961). The theory postulates that human beings have three types of basic motivational needs: the need for achievement (success), the need for affiliation (for example, rewarding relationships), and the need for power (e.g., wealth, ability to influence others and so on). The theory further points out that the three basic motivators are acquired and shaped over time through one’s experience in life. Put differently, the three motivating drivers are products of our culture and life experiences (Brunstein & Maier, 2005). However, the current study confined itself to the need for achievement (academic success) for as has been explained by Quaglia and Cobb (1996), it has a high impact on students’ academic aspiration.

The need for achievement denotes the urge to realize one’s goals and also be recognized for attaining the goals. This is the need that drives an individual to sustain his/her efforts in order to achieve the objectives that he/she wants to achieve. People in general and students in particular who are motivated by achievement need, the theory holds are characterized by the tendency to set moderately difficult goals. In short, their core interest is to excel, and be recognized (through positive feedback) by others, particularly significant others by avoiding low reward, low risk tasks and difficult to achieve high risk undertakings (Stahl, 1986).

**Purpose of the Study**

The purpose of the study was to investigate the extent to which gender of the household head could be influencing students’ level of academic determination in public secondary schools in Laikipia County, Kenya.

**Research Objectives**

The study sought to achieve the following objective:
To determine whether gender of the household head has any influence on students’ academic aspirations in public secondary schools in Laikipia County, Kenya.

**Research Hypothesis**

This study tested the following null hypothesis at .05 alpha level.

\[ H_0: \text{Gender of the household head has no statistically significant influence on students’ academic aspirations in public secondary schools in Laikipia County, Kenya.} \]

**Research Methodology**

The study utilized the *ex post facto* research design. This is a research design which is utilized in a situation whereby the independent and dependent variable(s) have already interacted. In this regard, the investigator cannot manipulate the independent variable(s) so as to determine its/their effects on the dependent variable(s). Consequently, the effect of interaction between the independent and dependent variables is determined retrospectively (Miles, Huberman & Saldana, 2014). The *ex post facto* research design was deemed ideal for this study owing to the fact that besides describing and generating conclusions from nominal scale data, the study also undertook to determine retrospectively the extent to which parents’ gender could be influencing students’ academic determination in the study area.

**Population of the Study**

Population is conceived by Parahoo (2014) as the total number of units from which data can be collected such as individuals, events or organizations for the purpose of making informed conclusions about the population. At the commencement of data collection, records in Laikipia County Education Office (2016) indicated that there were 106 public secondary schools (6 boys only, 7 girls only and 93 coeducational) in the study area. The records further showed that the enrolment in Form Three and Form Four stood at 5,840 and 5,740 respectively. The study therefore, targeted 11,580 students in the study area. It is worthwhile to mention that the Form Three and Form Four students were targeted for they had been in secondary school for a longer period as opposed to their Form One and Form Two counterparts. Therefore, the influence of household head’s gender and school’s examination performance status on students’ aspirations was presumed to be higher on Form Three and Form Four students compared to their counterparts in lower classes.

**Sampling Procedure and Sample size**

The study utilized two probability sampling designs, namely stratified random sampling and simple random sampling. Stratified random sampling is conceptualized by Mendoza and Dustin (2016) as a method of data collection that entails dividing the population into its constituent subgroups (strata) and then selecting subjects from each stratum using simple random sampling. Simple random sampling as postulated by Patel, Doku and Tennakoon (2011) on the other hand involves allocating a letter (or a number) to every subject in the accessible population. The letters, which may be written on small pieces of papers are placed in a container and the researcher picks the subjects randomly until the required sample size is attained.

The initial step in selection of students to participate in the study entailed random stratification of schools from which to sample the students on the basis of whether a school was single sex or co-educational. Out of the total number of 106 schools in the study area, six were boys’ only; seven were girls’ only while 93 were coeducational. Based on Krejcie and Morgan’s (1970) table for determining sample size (n) from a given population (N), the ideal
sample size in a population of 106 subjects is 86 cases. This represents 81% of the total number of cases in the entire population. In this regard, 81% of schools in each schools category were selected through simple random sampling. This entailed writing names of school in a given category on small pieces of paper. The papers were put in a basket and 81% cases selected at random. This sampling procedure generated a total of 84 (4 boys only, 5 girls only and 75 co-educational) secondary schools. Similarly, students in each selected school in the three school categories were selected through simple random sampling using the 81% sampling fraction. This was accomplished through writing names of students on small pieces of paper. The papers were put in a basket and 81% cases drawn randomly. Based on the Krejcie and Morgan’s (1970) table the ideal sample size (n) from 11,580 is 375. Therefore, the total number of participants who were expected to participate in the study was 375.

Data Analysis
The mass of data collected in the field was converted into numerical codes whereby each code represented a response category. The codes were transferred manually to a code sheet and subsequently fed into a computer. The data was thereafter analyzed using the Statistical Package for Social Sciences (SPSS) programme version 22.0. The starting point in regard to data analysis involved the use of descriptive statistics, namely frequency counts and percentage which were used to analyze nominal scale data, specifically respondents’ biodata.

The second data analysis level was directed towards determination of whether gender of the parents had any statistically significant influence on students’ academic determination. This level of analysis was accomplished through chi square ($\chi^2$) test. This entailed computation of respondents’ means in the 21 Likert scale items which targeted data for students’ on academic determination.

In order to compute the means, responses for individuals in a given sub-population were summed up and divided by the number of respondents in the group. The means pertaining to academic determination were expected to range from a minimum of 1 to a maximum of 5. Based on the anticipated range of mean scores, Level of Academic Determination (LAD) index was formulated so as to act as a guide for interpreting respondents’ level of academic determination. This formulation grouped the means into four levels of academic determination namely, very low, low, high, and very high as shown in Table 2.

<table>
<thead>
<tr>
<th>Mean Score</th>
<th>LAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- 1.99</td>
<td>Very Low</td>
</tr>
<tr>
<td>2- 2.99</td>
<td>Low</td>
</tr>
<tr>
<td>3- 3.99</td>
<td>High</td>
</tr>
<tr>
<td>4- 5.00</td>
<td>Very High</td>
</tr>
</tbody>
</table>

Cramer’s $V$ test (post-test) was also carried out to determine the strength of association between home and school contextual factors and students’ academic aspiration

Results and Findings
The main purpose of the study was to determine whether gender of the household head had any influence on students’ academic determination. The study presumed that the independent
variable had an influence on students’ academic determination and to this end an attempt was made to refute or confirm this supposition.

**Gender of the Family Head**
The study explored the gender of family head where respondents hailed from. Information pertaining to this aspect of respondents’ background information is highlighted in Table 3.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Respondents’ Distribution by Household Head’s Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender of the Household Head</td>
<td>f</td>
</tr>
<tr>
<td>Male</td>
<td>194</td>
</tr>
<tr>
<td>Female</td>
<td>143</td>
</tr>
<tr>
<td>Total</td>
<td>337</td>
</tr>
<tr>
<td>Source: Field Data</td>
<td></td>
</tr>
</tbody>
</table>

The data displayed in Table 3 shows that over half of respondents (58%) were from male headed families. Another significant proportion of respondents (42%) were in female headed families. This finding is a portrayal of patriarchal nature of Kenyan society in which majority of households is headed by men (Institute of Economic Affairs Kenya, 2008).

**Gender of the Household Head and Students’ Academic Determination**
The objective of the study aimed at establishing whether gender of the household head has any influence on students’ academic determination. To achieve this objective, a null hypothesis (HO$_1$) was developed and stated as follows:

HO$_1$: Gender of the household head has no statistically significant influence on students’ academic determination in public secondary schools in Laikipia County, Kenya.

This hypothesis presupposed that distribution of respondents from male and female headed households in the four mean score ranges would be equal. To confirm this supposition, chi square test was carried out at .05 alpha level with a view to determining whether, respondents’ distribution in the four categories of scores would be independent of gender of household head. The results generated by the $\chi^2$ test are summarized in Table 4.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Respondents’ Distribution by Gender of the Household Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution of Respondents by LAD Mean Scores</td>
<td></td>
</tr>
<tr>
<td>Gender of Household head</td>
<td>1- 1.99</td>
</tr>
<tr>
<td>Male</td>
<td>30(15)</td>
</tr>
<tr>
<td>Female</td>
<td>22(15)</td>
</tr>
<tr>
<td>Total</td>
<td>52(15)</td>
</tr>
<tr>
<td>(Figures in parenthesis represent percentages)</td>
<td></td>
</tr>
<tr>
<td>$\chi^2$ = 3.035; df= 3; p&gt;.05; Cramer’s V= .055</td>
<td></td>
</tr>
</tbody>
</table>
An inspection of the data presented in Table 4 shows that the number of respondents from male and female headed households increased towards the upper range of LAD mean scores. Further, examination of the row totals indicates that majority of respondents in the two sub-populations scored in the 3-5 range of mean scores. For instance, out of the 194 respondents from male headed household 68% were in the 3-5 mean score range. The corresponding proportion for the 143 respondents from female headed households was 70%.

The foregoing revelations indicate that although respondents from the female headed households scored higher than their counterparts in the male headed households, the difference was minimal. This observation is supported by the obtained $\chi^2$ value which shows that the association between gender of the household head and students’ academic determination was weak (Cramer’s V=.055) and not statistically significant ($\chi^2= 3.035; \text{df} = 3; p> .05$). The tested null hypothesis had indicated that gender of the household head and students’ academic aspiration were not related. Since the computed $\chi^2$ was not significant, the null hypothesis was accepted at .05 $\alpha$ level and conclusion made that students’ level of academic determination was not dependent on gender of the household head.

The finding that gender of the household head had minimal effect on respondents’ academic determination is in agreement with Lee and Kushner (2008) study which among other findings observed that there were no discernable benefits relating to academic aspiration and school achievement among children in male and female headed households. Nonetheless, the study noted that daughters in single-father homes were more likely to outperform their colleagues (in terms of academic determination and school achievement) in comparison with children in other parents and child combinations backgrounds.

**Conclusion**

The study sought to explore whether household head gender has any influence on students’ academic determination. The study hypothesized that students’ level of academic determination was contingent upon parental gender and conclusions drawn from this investigation is discussed herein below. The study demonstrated that respondents in female-headed households had a higher academic determination compared with their colleagues in male-headed households. This finding implies that students in single-mother families may be more determined academically in school in comparison with students in male-headed households. On the basis of finding of this study and conclusion arrived at, the study recommends that in view of the fact that respondents in female-headed household had a higher level of academic determination compared with their counterparts from male headed households, there is a need for the relevant stakeholders in the county, for instance religious organizations, county government, faith based organizations and local political leaders to engage men with a view to sensitising them on the value of responsible parenthood. This will go a long way in changing men’s attitude towards their children’s education whose additive effect on students’ motivation cannot be overstated. Moreover, community based organizations in the county need to determine factors that could be linked to the relatively low level of academic determination among students in male headed households. This will go a long way in formulating strategies for plugging any identified performance gaps among male parents/guardians in the county with an aim of ameliorating academic performance.
References

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