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### An Investigation of the Factors Influencing Students' Subject Choices in Jakiri Sub Division of Cameroon

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#### Abstract

Subjects that students chose to offer at the lower and upper secondary schools have a lot of influence throughout the rest of their lives. The study was designed to find out factors affecting students' subject choices in Jakiri subdivision found in Bui division of the North West Region of Cameroon. This study adopted the ex-post factor research design. It was guided by 4 research objectives, 4 research questions, and 4 pairs of hypotheses. A sample of 50 upper secondary (high school) students was obtained through the accidental sampling technique was used for this study. An interview guide and a questionnaire comprising 21 items were the instruments for data collection of the study. The questionnaire was validated by the supervisor and other experts in research methods while the reliability coefficient

yielded and "r" value of 0.75. Data from the two instruments above were analysed using qualitative analyses and descriptive analyses respectively. The results revealed that peer influence, individual attributes, and inspiration from significant others influenced students' subject choices significantly. On the other hand, structural factors influenced students' subject choices but the influence was not statistically significant. Besides, parents' occupation, school environment, Religion, sex, and age were also identified as factors influencing students' subject choices. The study therefore recommends that all the educational stakeholders should play their role well to ensure that students choose subjects in line with their future occupational plans.

**Keywords:** Subject Choice, Significant Others, Peer Influence, Structural Factors, Individual Attributes

#### 1. Introduction

Life is crowded with so many options hence we have to make a choice, Mustapha & Greenan (as cited in Ongang'a, Nkumwa, & Konyango, 2015) [24]. Almost every individual is to face the challenge of the occupational choice problem at one or another time. However, students particularly are to encounter such problems when selecting study programmes. It is widely believed, particularly by students, that selection of study programmes is the major factor, which leads the students to struggle for their desired future career (Sharif, Ahmed, & Sarwar, 2019) [27].

Subjects that students choose have a lot of influence on their careers (Ongang'a, *et al.*, 2015) [24]. Students' choice is a 'dynamic process' rather than a rational decision made at a point in time (Ametller & Ryder, 2015) [4]. Career choice as well as subject choice is a complex decision for students since it determines the kind of profession that they intend to pursue in life. As students try to make career choice while in secondary school, they face problem of matching their career choices with their abilities and school performance (Kochung, & Migunde, 2011) [15] and corresponding subjects.

Education is universally recognized as the answer to socio- economic problems of the world. Nations and individuals look up to education to provide a cure for poverty, ignorance, drought, excessive rainfall, mental deficiency, joblessness, bad government, poor communication system, hunger and inadequate shelter among other things. Every nation of the world aspires towards quality of life and social status (Olamide & Olawaiye, 2013) [22]. Education has a pivotal role in nation as well as individual character building. It is a life line for any society and nation. Education of a child needs multidimensional efforts. Students, teachers, institutes, and parents all have their importance in their process of learning. Parents' education is such a motivating force for a child which paves the way for his/her future. It is an admitted fact that the children of educated parents are more confident, resourceful and experienced than the children whose parents lack education (Khan, Iqbal & Tasneem, 2015) [14].

The subjects that students chose for study at secondary level have a long-term consequence on the qualifications they receive

from their schooling and the careers, they are in a position to contemplate (Guinan, 2001) <sup>[8]</sup>. Adolescent is the only time where a youth's mind is most susceptible to influence, ideas, and values which alters the way a person thinks, acts and perceives things. This is a particularly important moment which affects one's own decision-making processes and career and subject choices (Hashim & Embong, 2015) <sup>[9]</sup>. Subject choice is an integral part of education systems beyond lower-secondary. Appropriate choice of subjects is a vital step in achieving the educational goals of the syllabus. Young people have high ambitions, expecting to be highly educated and have professional careers, yet research has shown that many do not develop coherent plans that can help them achieve their goals.

Students' perceptions of teacher-student interpersonal behaviour is strongly related to student achievement and motivation in all subject areas and that healthy teacher-student interpersonal relationships are a prerequisite for engaging students in learning activities (den Brok *et al.*, 2004; Brekelmans *et al.*, 2000 as cited in Telli; den Brok, & Cakiroglu, 2007 <sup>[28]</sup>). Some of the possible contributors to choice of subjects are: school policy, parental guidance, peer influence, academic ability, intelligence, age, gender, ignorance and accidental choice (Owoyele & Toyobo, 2008) <sup>[26]</sup>. For Hussain *et al.* (2017) <sup>[11]</sup>, aptitude and interest are considered the most important factors with respect to students' subject choices. The relative contribution of each factor could be constrained by aspects both within and outside the school, resulting in using subject choice as a tool for selecting, particularly for the less able students. Berry (as cited in Ongang'a, *et al.*, 2015) <sup>[24]</sup> shows that the key factors that are the major contributors in student selection of subjects include: interest in the subject, perceived usefulness or importance of the subject, ability or success of the subject, career preference, subject combination for further studies, teachers' advice and the teaching strategy. Personality is an important determinant in subject and career choices and further argues that personality encompasses student's mental ability and attitude towards the subject. Mental ability, verbal comprehension, word fluency, numerical ability, reasoning ability and memory must be put in consideration when choosing subjects (Ongang'a, *et al.*, 2015) <sup>[24]</sup>.

The selection of subjects at secondary level is the first and foremost step that might lead students to get desired higher education and achieve successful destination. Some factors such as students' potentiality, previous knowledge, parents' profession and financial position affect their choice of subjects at secondary school level. In addition, students prefer to opt for easy and interesting subjects (Javed, 2018) <sup>[12]</sup>. According to Sharif, Ahmed and Sarwar (2019) <sup>[27]</sup>, mother, father, teacher, further income, future status and societal difference affect students' subject choices.

An incorrect career choice directs all individual efforts and resources into a wrong direction, when not aligned with the expectations; would not only be frustrating but rather draining the individual's energy and wastage of resources. Mismatch of the personality and lack of interest in the subject is dangerous, and could end up into disastrous results in terms of student dissatisfaction, demotivation, lack of productivity leading to increased dropouts and career failure. The study results are indicative of the importance of students counselling sessions and other interventions to provide them with updated knowledge, and information to

create their interest in the right choices and available options (Ahmed, Sharif, & Ahmad, 2017) <sup>[3]</sup>.

Secondary schools today in Cameroon especially in Jakiri subdivision give students the opportunity to either belong to the Arts or the Science starting from form four of the lower secondary. Belonging to one of these classes implies that students have to drop some subjects given the stiff nature of the teaching time table. Some students of the lower secondary in one of the secondary schools in this area told the researcher in a discussion that they want to be medical doctors in future. These students had none of the science subjects except maths among those they were doing. The research also found some students who swap from the Sciences to the Arts class in the upper secondary. All these prompted an investigation to those factors responsible for students' subject choices in secondary schools.

### 1.1 Objective of the study

The main purpose of this work was to investigate factors responsible for students' subject choices in Jakiri subdivision. It also aimed at finding out whether peers, structural factors, individual attributes, and 'significant others' influence students' subject choices.

### 1.2 Specific research questions

1. How do structural factors influence student subject preferences?
2. To what extent do individual attributes influence student subject choices?
3. How do peers influence students' subject choices?
4. To what extent do 'significant others' influence student subject preferences?

## 2. Methodology

The study used the ex-post factor research design. It was done in five secondary high schools in Jakiri subdivision. The sample size was 50 high school students chosen accidentally. Instruments for data collection in this study were an interview guide and a questionnaire. The instruments were validated by the supervision and 4 experts in research methods. The reliability coefficient "r" value of 0.75 for the questionnaire was obtained using SPSS version 20, following a pilot study with 16 high school students who filled the questionnaire. The self-delivery technique was used to conduct and administer interviews and questionnaire respectively. Data from the two instruments were analysed using qualitative analyses and descriptive statistics respectively using SPSS version 20.

## 3. Findings and discussion

The finding of this study for items under peer influences proved that peer influence played a major role in students' subject choices. This is evident from the fact that the mean value 2.78 for the responses on students choosing subjects because their friends gave them good information about the subjects was greater than the acceptable decision level (DL) 2.5. Majority of respondents were teenagers. This finding corroborates that of Echerman and Didow (as cited in Hashim & Embong, 2015) <sup>[9]</sup> who found that students in their teen year are more inclined to be influenced by group norms due to the need to establish a sense of personal identity which is in line with normative expectation of their peers. They also found that peer is a strong factor influencing students in decision making. The result is

supported by Vroom's expectancy theory which assumes that behaviour is the result of conscious choices among alternatives aimed at maximising pleasure and avoiding pain. This is fortified by expectancy (increased effort-increase output), instrumentality and valence. The result is also linked to the third needs of McClelland's n-affil where students tend to choose subjects based on guides from peers. This was in a bit to conform to the norms of their groups.

### Structural factors

The findings from this variable by items showed two items in favour of students' subject choices while three of them disfavoured students' subject choices. Majority of student responses were of the opinion that their teachers played a vital role on their choice of subjects as they guided them on how to choose subjects with a mean value above the DL. Again, majority of student responses accepted that their school counsellors advised them to choose particular subjects with mean value greater than the DL. This finding is in line with that of Ndalichako and Komba (2014)<sup>[20]</sup> who found that the reason for student preference of a particular subject depends on the commitment and support provided by the subject teachers, the availability of teachers and their teaching approaches and relevance of the subject to their daily life experiences. The finding is also in line with that of Omondi (2013)<sup>[23]</sup> who found that the teacher influenced the choice of subjects by students. This influence may come from teacher's teaching methods, styles, strategies, personality, mastery and love of subject matter and other personality traits. This can either cause students to choose or not to choose the subjects depending on how the subject teacher demonstrates the above mention factors and personality traits.

The findings from the other items (7, 9, and 10) rejected that respondent chose their subjects because, their teachers have been talking about their many importance in life, my parent wanted me to do a particular work in life and that my parents asked me to do the subjects. This finding is contrary to that of Ndalichako and Komba (2014)<sup>[20]</sup> who found that students choose subjects based on their relevance to daily life experiences given by the subject teachers. The finding of item 10 is contrary to that of Dimakos *et al.* (2012)<sup>[7]</sup>; Hipkins and Vaughan (2002)<sup>[10]</sup> which found that parents were ranked as the biggest influence on their children's subject choices. The finding of item 9 is contrary to that of McIntosh (2008)<sup>[18]</sup> who reported that parents expectation and aspiration of further studies as having great influence on students' subject preferences.

In all, the overall mean for items of this variable 2.38 was less than but close to the minimum acceptable DL. In this light, majority of responses (139) rejected the influence of structural factors on students' subject choices. This implies that structural factors did not significantly influence student subject choices in this study. This finding is contrary to that of McCrone *et al.* (2005)<sup>[17]</sup> which reported that structural factors play a significant part in decision-making process. The findings on structural factors indicated that when delivered effectively and timed appropriately, career education and guidance appeared to offer scope for equipping young people with the necessary knowledge and skills required to allow them to make informed subject choices. This disparity might be due to different parenting styles, parents' education level, and type of training received by teachers during their pre-service training, and others in

different environments. In conclusion, structural factors did not significantly influence students' subject choices in this study. The result is confirmed by Glasser's choice theory where behaviour is driven by our genes to satisfy our basic needs. In this case, students' choice of subjects is based on their needs and competences rather than rely on teachers, counsellors and parents needs and interests.

### Individual attributes

The mean values for all the 5 items under this variable were found to be equal or more than the acceptable DL. This implies that all the items were accepted as supported by the overall mean value of 3.09 which was far higher than the 2.5 level. Majority of responses to items under this variable were in favour of the influence of individual attributes to students' subject choices while a few were not in favour of the items. Respondents accepted that they chose their subjects (series) because they found them interesting and had an enjoyment value attached to the subjects. This result is in line with that of Abel (2002)<sup>[1]</sup> who reported that students orientate their course-level mostly toward personal interests.

Respondents accepted that they chose their subjects because of the importance (attainment value) of the subjects to them. This finding is in line with that of McCrone *et al.* (2005)<sup>[17]</sup> which reported that student chose subjects based on their apparent usefulness to future careers. The finding is contrary to that of Naugah (2011)<sup>[19]</sup> which reported that girls though aware of the importance of science chose arts subjects due to their negative experiences of science subjects. This might have stem from teaching approaches which were not meeting the students' interests as well as the availability of quality of teachers and the type of personnel and job opportunities found in the community where the school is located. The study of

The study revealed that students chose their subjects because they wanted to attain other goals like high marks (utility value). It was also shown that the relative cost in doing the subjects, and they believe in personal abilities to do well in the subjects caused students to choose the subjects (series). These findings are supported by the fact that besides students' expectation of success, several subject task values (utility value, relative cost, and attainment value) which are connected with different options of choice, are understood to influence students' decisions. In conclusion, individual attributes significantly affected students' subject choices. This result conform Glasser's choice theory which state that almost all behaviour is chosen, and has a purpose. It is also described as "internal control" and "a Biological theory". It states that behaviour is driven by genes. In this regard, learners choose subjects based on latent interest. The result also conform the instrumentality and valence of Vroom's expectancy theory. The n-ach of McClelland's theory is achievement motivated and therefore seeks achievement, attainment and realistic goals.

### Inspiration from significant others

Findings from this variable showed 2 items (17 and 18) with mean values less than 2.5. This implies that these two items were rejected as having significant influence on students' subject choices by respondents. The rest of the items had mean values above the accepted 2.5 and were therefore accepted as having significant influence on students' subject choices. The overall mean value of 2.78 for items under this

variable was above the minimum 2.5 level. Again, majority of responses were in favour of the factors under this variable that influence students' subject choices. This finding is in line with that of Ndlichako and Komba (2014) [20] who found that the choice of subjects by students was influenced by significant others. Parents might have inspired their children in different ways other than wanting their children to be like them in future given that most if not all parents, desire better opportunities for their children compared to theirs. This might have also been the case with teachers inspiring children to aspire to become like significant others in the society apart from becoming teachers. The results confirm McClelland's n-pow as students wanted to occupy

particular professions. The driver of n-pow needs to be influential, effective and to make an impact. It is also linked to n-afil as students choice of subjects was inspired by role models.

In all, inspiration from significant others had the highest influence ( $p = 0.001$ ), followed by peer influence ( $p = 0.009$ ), and individual attributes ( $p = 0.022$ ) on students subject choices. The least objective that influenced students' subjects' choices was structural factors ( $p = 0.262$ )

Research question one: How do structural factors influence student subject preferences?

**Table 1:** Response on peer influence

Statement	SA	%	A	%	D	%	SD	%	$\bar{X}$	ST.D	DL
1. My friends gave me good information about the subjects	12	24	19	38	15	30	4	8	2.78	0.91	A
2. All my friends were doing the subjects	2	4	2	4	16	32	30	60	1.52	0.76	R
3. To compete with my friends who were doing the subjects	2	4	9	18	17	34	22	44	1.82	0.87	R
4. I wanted to continue being with my friends in the same class	4	8	3	6	15	30	28	56	1.66	0.92	R
5. My friends promised they were going to assist me to understand them	6	12	12	24	14	28	18	36	2.12	1.04	R
Total	26	52	45	90	77	154	102	204	9.9	4.50	
Grand Total	71	(142%)			179	(358%)			9.9	4.505	

Research question two: To what extent do individual attributes influence student subject choices?

**Table 2:** Responses on structural factors

Statement	SA	%	A	%	D	%	SD	%	$\bar{X}$	ST.D	DL
6. My teacher told me to do the subjects and become like him/her	5	10	9	18	23	46	13	26	2.12	0.918	R
7. My teacher has been talking about it many importance in life	17	34	31	62	2	4	0	0	3.3	0.544	A
8. I consulted the school counsellor who advised me to do them	13	26	15	30	16	32	6	12	2.7	0.995	A
9. My parents wanted me to do a particular work in life	4	8	10	20	21	42	15	30	2.06	0.913	R
10. My parents asked me to do the subjects	3	6	4	8	20	40	23	46	1.74	0.853	R
Total	42	84	69	138	82	164	57	114	11.92	4.223	
Grand Total	111	(222%)			139	(278%)					
Average									2.384	0.8446	

Research question three: How do peers influence students' subject choices?

**Table 3:** Responses on individual attributes. I chose these subjects because

Statement	SA	%	A	%	D	%	SD	%	$\bar{X}$	ST.D	DL
11. I find them interesting and have an enjoyment value attached to the subjects	25	50	19	38	3	6	3	6	3.32	0.84	A
12. Of the importance (attainment value) of the subjects to me	28	56	20	40	2	4	0	0	3.52	0.58	A
13. I want to attain other goals like high marks (utility value)	5	10	23	46	18	36	4	8	2.58	0.78	A
14. Of the relative cost in doing the subjects	8	16	15	30	19	38	7	14	2.49	0.93	A
15. I believed I have the ability to do well in the subjects	30	60	19	38	0	0	1	2	3.56	0.61	A
Total	96	192	96	192	42	84	15	30	15.47	3.75	
Grand Total	192	(384%)			57	(114%)					
Average									3.094	0.7516	

Research questions four: To what extent do 'significant others' influence student subject preferences?

**Table 4:** Inspiration from significant others. I chose these subjects and not the other because

Statement	SA	%	A	%	D	%	SD	%	$\bar{X}$	ST.D	DL
16. I wanted to occupy a particular profession	33	66	15	30	0	0	2	4	3.58	0.702	A
17. I wanted to be like one of my parents	3	6	10	20	25	50	12	24	2.08	0.829	R
18. My teacher inspired me and I wanted to be like him/her	6	12	13	26	19	38	12	24	2.26	0.965	R
19. I was inspired by one successful person who did the very subjects	14	28	24	48	8	16	4	8	2.96	0.88	A
20. I was inspired by my role model to do the subjects	13	26	27	54	6	12	3	6	3.02	0.803	A
Total	69	138	89	178	58	116	33	66	13.9	4.179	
Grand Total	158	(316%)			91	(182%)					
Average									2.78	0.8358	



### Factors from an open question and interviews

Other factors advanced by respondents for their choice of subjects included love, level of reasoning, God's purpose are not easy barometers to measure as reported by Osborne *et al.* (2003) <sup>[25]</sup>; Binnett (2001) <sup>[6]</sup>; and Jenkins and Nelson (2005) <sup>[13]</sup>, easy understanding, satisfaction derived from lessons, job guarantee, love of real live practical, believe in self, dream of a career, importance this is consistent with the report of Abel (2002) <sup>[1]</sup>; Atweh *et al.* (2005) <sup>[5]</sup>, influence of best grades at the Ordinary level, inspiration by good teachers which is in line with the statement of Atweh *et al.* (2005) <sup>[5]</sup> which states that teachers' reputation or experience is the basis on which some students select their subjects, less expenditure, accountability in earnings, source of motivation, confidence and interest which are consistent with the work of Granville and Diaka (as cited in Nymwange, 2016), service to the community, privilege to do science, and pressure (force) from parents to do particular subjects: This is one of the things which play a great negative influence on the children's psychological and emotional state as supported by Ushie *et al.* (2012) <sup>[29]</sup>.

Again, when students perceived that a teacher possesses good knowledge of subject matter and attitudes towards student, they tend to like the teacher and hence his/her subject. As a result, students will tend to make progress in the subject (Adendiwuru & Tayo, 2007) <sup>[2]</sup> which may imply love, easy understanding, satisfaction derived during lessons, motivation, confidence, and interests which were stated by respondents as other factors influencing their subject choices.

The interviewees reported that;

- Teachers' good teaching methods, guiding talks, community life and others can influence students to choose their subjects. This result is in conformity with inspiration from significant others.
- In case of opportunities in the arts or science, they will not be able to swap from one specialty to the other given that some of them specialised while in the lower secondary and others due to perceived difficulty of subjects in the specialty not chosen.
- Each of them had a particular subject that was most preferable to the other subjects offered. The reason for this ranged from best performance, intention to take it at higher level, through solving of real-life problem to easy understanding all linked to subject task values.
- In terms of importance, arts were more important to some, to some science was more important while others considered both arts and science as having equal importance working together for the growth of the community. From these responses, we can postulate that perception of arts, science, or both as being important can also be a major factor influencing students' subject choices.
- If they become parents, they will not choose subjects for their children given that each person has his/her own personal interests, abilities and future ambitions. Another reason was to avoid future blame from children in case of failure.
- Most of them preferred male teachers to female teachers, to teach them both arts and science subjects. Some reasons for this were indecent dressing of female teachers which tend to distract male students, seriousness of male teachers, too many commitments of female teachers and absenteeism due to pregnancy. This

if strongly considered by students may significantly influence their choice of subjects.

### Other findings

A total of 50 respondents participated in this research work. Considering all of them equal without grouping based on sex or other variables, the number that chose arts subjects 32(64%) was almost double that of those who chose science subjects 18(36%). This result corroborates that of Ndlichako and Komba (2014) <sup>[20]</sup> who found that majority of secondary school students preferred arts subjects. The challenges experienced in learning science accounted for this, and might have been the same reason that accounted for the more number of students offering arts subjects in this piece of work. The result is also in line with the finding of Schreiner (2006) which reported that students indeed value natural science as important for society but were not ready to choose careers in the field.

When the respondents were grouped according to sex, the total number of males offering arts and science subjects was 13 (68.42) and 6(31.58%) respectively. The number of female students for arts and science subjects was 19(61.29%) and 12(38.71%) respectively. Comparing percentages within each of the two sex groups, more males 68.42% offered arts subjects than their female counterparts-61.29%. On the other hand, more females-38.71% offered science subjects than their male counterparts-31.58%. This result suggested that sex (commonly known as gender) influence students' subject choices. This is supported by the fact that the number of males and females were different in the arts and sciences for this study. This finding is contrary to that of Omondi (2013) <sup>[23]</sup> which reported that sex did not influence students' subject choices. Again, going by the various series, the number of males and females were also different with some series dominated by males and others by females, except for S1 which had equal number (2) of males and females. This result contradicts that of Naugh (2011) <sup>[19]</sup> in which the negative experiences of science deterred girls from taking science subjects above the compulsory level, although they were aware of its importance. This disparity might be accounted for in that girl in the present study had positive experiences of science unlike the negative experiences of their counterparts in the study of Naugh (2011) <sup>[19]</sup>. The different environmental settings, availability of well-equipped laboratories, variety of instructional media, teachers' personalities, and way of communication, methods of teaching and others might have accounted for this disparity in the results. The difference in time from 2011 to 2017 may also account for this given that technology improves with time as well as methodology of teaching both theory and practical.

Religion is another factor found to influence students' subject choices in this research work. Those who offered religious studies as a subject were all Catholics. This may be that most or all teachers of Religion were Catholics who focused more on the Catholic teachings.

Among all the schools used in this study, students offering religious studies came from one school; G.B.H.S. Jakiri. This suggested that school may also be a factor influencing students' subject choices. This is supported by the study of Mbithe (2012) <sup>[16]</sup> which reported that school environment influences the choice of subject (Physics) and in this study the subject is religious studies.

Age range was also found to influence student subject choices in this study. Two respondents (aged 25 and above) rejected item 2 which postulated that "I chose these subjects because all my friends were offering them. They also rejected items 4 and 5. On the other hand, some respondents (age range 16-20 and 21-24) accepted on these items. This may be that those in the 25 and above age range already have a strong "will power" and ability to choose what is good for them with minimal or no external influence while those in the other age groups are more likely to be influenced by their friends in the choice of subjects as they are still struggling with identity crisis and role confusion. This is supported by Eckerman and Didow (as cited in Hashim & Embong, 2015) <sup>[9]</sup> in their statement that "students in their teen year are more inclined to be influenced by group norms due to the need to establish a sense of personality and identity which is in line with the normative expectations of their peers.

#### 4. Conclusion

At the end of this study, it was established that peer influence, individual attributes and inspiration from significant others significantly influence students' subject choices in a positive direction with respect to the items that were used to collect data for this work. Individual attributes had the greatest influence on student subject choices given it higher mean value. The influence of structural factors was not significant with respect to items under this variable as indicated by its mean value. These findings are further confirmed by hypotheses testing where the alternative hypothesis was maintained for peer influence, individual attributes, and inspiration from significant others. The null hypothesis was only maintained for structural factors. Other factors such as sex, parents' occupation, school environment, religion, and age range were also found by this study to influence students' subject choices.

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