Extent Of Usage of Collected Student Data in Career Choice in Kenya

ROBERT MASIKA[1], DR. RICHARD RONO[2], DR. ROBERT KATI[3]

[1] *Department of Information Technology, School of Computing and Informatics, Kibabii University Bungoma, Kenya.*

[2] *Department of Computer science, School of Computing and Informatics, Kibabii University Bungoma, Kenya.*

[3] *Department of Science and Mathematics Education, Faculty of Education and Social Science, Kibabii University, Bungoma, Kenya.*

Abstract- ***This study investigated the extent to which student data collected in secondary schools in Kenya is used in career choice. After admission in form one, a student undertakes a four-year study program and at the tail end selects a career to pursue later. During the admission process and throughout their stay in the school, a lot of student data is usually collected and stored either in the school database, in students' files kept by various departments and/or in the online platforms e.g., National Educational Management Information System (NEMIS) etc. However, it is possible to collect data and fail to use it to guide decision making and this can result in wastage of a precious asset of these institutions. The population of the study were career masters/mistresses and deputy principals in charge of academics. Stratified random sampling was used to select 50 secondary schools and a sample of 60 participants. The collected data were analyzed using descriptive statistics using frequency tables. The study findings revealed that schools do keep data on family background, career aspiration and academic data but leave out data on student personality and job opportunities which are key drivers of career choice. The most common data in secondary schools is academic data (65%) which is majorly used to guide learner progress (77.5%). This data is mainly collected during continuous assessment (57.5%) and is kept under the custody of the director of studies (52.5%). Though majority of the respondents (85%) believed that data collected has an effect on the student career choice, it was noted that the available student data isn't used directly to guide career choice. This is because most of the collected data is stored in offline storage systems which limit access. However, majority respondents (95%) believe that data collected can help improve student career choice. The fact that inadequate data is collected and it isn't accessed easily then it follows that the decisions made in the school aren't based on fact. The study therefore concluded that there is low usage of student data in career choice. The study recommends that secondary schools should ensure that comprehensive student data is collected and stored in portable formats to increase access and usage. This data should form the basis for career choice by the students. This finding will help to enhance student data collection in schools which in turn will improve the career decision making leading to appropriate career choices.***

Indexed Terms- ***Career Choice, Student Data, Data Usage, Decision Making.***

I. INTRODUCTION

In life people are constantly faced with situations where they must make choices and sometimes, they do so by basing on insufficient or lack of information of the available alternatives. The quality of the decision made is highly dependent on the available information. A decision on career choice for a secondary school student is so critical since it's the main determinant of their profession and greatly impacts them throughout their life (Mberia and Midigo, 2018). A number of studies have come up with findings which show that there exist great disparities between the courses which most college students are admitted to and their natural preferred choices ((Mudulia, 2017; Wabwoba and Mwakondo

2011; Ojenge and Muchemi, 2007). The course studied by a student leads to the career that the student pursues.

Traditionally, career was seen to comprise a single occupation and was limited to paid employment but currently it is viewed as on-going process of learning and development aimed at acquiring values that can enhance individual development (Gyansah and Guantai, 2018). But as quoted by Gyansah and Guantai (2018), Super (1988) gives five career developmental stages namely: the growth stage, the exploration stage, the establishment stage, the maintenance stage, and the declination or disengagement stage.

The growth stage period is characterized by self-affirmation and the children are greatly influenced by their family, school and society. In the exploration stage children engage more in self- examination, schooling and analysis of various career options. The establishment stage is characterized by individuals getting employed and finding a niche. Then in the maintenance stage one holds on to their position and progressively update their skills and finally in the disengagement stage the individual prepares for retirement (Gyansah and Guantai, 2018; Super, Thompson, and Lindeman, 1988).

In the Kenyan system of education, the process of selecting a career starts with subject selection at either form one or two. The subjects selected by the learner at these two levels form the basis upon which the student will choose the course to be studied at the university/college which is an activity they undertake during their final year in high school (Kemboi et al., 2016; Too, 2017). After the release of Kenya Certificate of Secondary Examination (KCSE) results the students are usually accorded another chance to revise the course selected. Another final chance is given on admission to the university when a window of inter-faculty and inter-university transfer is given.

It is worth noting that after completing their KCSE, the majority of learners have no clear picture of the career that is suitable for them. This is clearly shown in the number of secondary school graduates who present themselves for revision of the selected courses even up to the time of joining or learning in the university (Too, 2017).

In the course of learning a lot of student data having a variety of features is accumulated. The quantity and quality of this data is what guides the student in selecting the career to be pursued. A study done by Ndiku et al (2014) on student data management in Kenyan secondary schools found that managers of various schools aren't aware of how student data can be used to enhance effective decision making. Some of the reasons which are attributed to this underutilization of this data are: lack of knowledge on data analysis and use (Cromey, 2000), poor record keeping culture in the learning institutions (Ndiku et al, 2014), lack of data analyzing capacity and failure to recognize the importance of data in decision making (MoEST, 2005; Ndiku, 2014).

Over the years a number of scholars have identified the main factors that influence career choice among them is Too (2017) who identifies the following as the main determinants: personal interest; academic ability and aptitude; personality; and opportunities after graduation. The factor that has a larger value of accumulated data becomes the main determinant of the type of career which the learner selects. With proper career guidance based on documented data, a student can be able to do a thorough analysis of available options in relation to the mentioned factors and come up with the most appropriate career to pursue. This study sought to determine whether the usage of student data could be accounting for disparities experienced in career choice.

II. METHODS

The study specifically investigated the usage of collected student data in career choice in secondary schools in Bungoma County. It also investigated the type of data available in the schools. In order to answer the above objectives, the study raised broad research questions which it sought to answer.

The research used survey research design and quantitative approach was used to provide numerical data for providing solutions to the research questions. The study investigated the extent of usage of collected student data in career choice Bungoma County. The

county was used as a proxy for other counties in Kenya. Since schools operate under the same regulations provided by the ministry of education in the country, therefore the county gives a fair representation. The career masters/mistresses were chosen since they are the ones who are charged with the responsibility of guiding learners in selecting the career when they exit this level. Similarly, the deputy principals' were chosen because they are the ones who oversees the whole process of career selection. The accessible population for the study was the deputy principals and career masters/mistresses in

Bungoma County. Since the county has different categories of schools, stratified random sampling was used to equitably select schools as per table 1:

Table 1: Sampling of Schools per Category

Type of School	Total No of Schools	Category of Schools				Number Selected
		National	Extra-County	County	Sub-County	
Boys	37	1	2	5	-	8
Girls	61	1	2	5	-	8
Mixed	269	1	-	4	29	34
Total	367	3	4	14	29	50

Purposive sampling was used to select 50 career masters and 10 deputy principals from the sampled schools as shown in table 2 below.

Table 2: Sample Frame

Category	Sampled
Career Masters/Mistresses	50
Deputy principals	10
Total	60

The preferred method for collecting data was questionnaire and interviews schedule. The questionnaires were formulated based on the objectives of the study and were used to gather information from the career masters/mistresses. Structured interviews were used to collect data from deputy principals. Interview was preferred as a validation tool to the questionnaire as it provided an insight into the data collected by the questionnaire in the process of understanding the basic concepts and requirements from problem domain. The research instruments were pretested through pilot study in a population that didn't take part in the main study to ascertain the effectiveness of the instruments. The study got a reliability coefficient index of 0.869 which was considered to be high enough to judge the reliability of the instrument.

The researcher first obtained approval letter from school of graduate studies of Kibabii University used it to seek for permission from National Commission for Science Technology and Innovation (NACOSTI). The researcher then sought for permission from the Ministry of Education, Bungoma County and hand delivered the questionnaires to the target respondents and also reached out

specific respondents for a physical interview sessions. The respondents were able to respond to the questionnaires and they were returned for the analysis purpose.

All the 50 questionnaires were hand delivered. Some respondents filled the questionnaires instantly while others requested to be given more time to complete. For this group the researcher made arrangements to collect the questionnaires later. However, this created a loop hole that made some of the respondents to fail to return the questionnaires. All the data that were collected were used for the intended purpose only.

III. RESULTS

The data collected was cleaned to identify the missing and incomplete questionnaires. Of the 50 questionnaires dispatched to the randomly sampled schools, only 45 questionnaires were collected representing a response rate of 90%. Out of the 45 questionnaires that were collected only 40 (80%) were completely filled. Mugenda (2012) notes that a response rate of 50% or more is adequate. Guided by these thoughts from renowned research academic giants, the response rate for this study was considered to be sufficient in forming conclusions and generalization of the study population.

FINDINGS AND DISCUSSION

The main objective of this study was to determine the extent of usage of available data in career choice among secondary school students in Bungoma County. To achieve this objective the study collected data in order to understand: the nature of student data collected in secondary schools, reasons why secondary schools collect student data, how collected data is used to achieve target objective, whether collected data has effect on student career path or improve the way student choose their career, whether students fill or file career declaration form during admission and orientation. The study collected data on the nature of information collected pertaining students. To achieve this, the respondents were asked to indicate the students' data that is available in their schools and the results were summarized as in Table 3.

Table 3: Student Data Available

		Frequency	Percent
Valid	Family background	10	25.0
	Academic Data	26	65.0
	Career Aspirations	4	10.0
	Total	40	100.0

The results in table 3 indicates that most of the student data that is available in secondary schools is academic data at (65%) followed by family background data at (25%). Data on career aspiration

at (10%) was the least stored in schools. This implies that majority of the schools keep academic related data of students and there is little attention on data related to other attributes such as career aspiration and family background. The findings concurs with that of Ndiku et al (2014) concerning student data management in schools in which they found out that majority of the schools studied stored inadequate data which compromise the quality of the decisions made in the school system.

- How Data is collected

The study went further to understand how students' data is collected. To achieve this, the respondents were asked to indicate how the student data in their various schools is collected. Table 4. summarizes the findings.

Table 4: How Student Data is collected

		Frequency	Percent
Valid	During Admission	13	32.5
	Continuous Assessment	23	57.5
	Specialized Form	4	10.0
	Total	40	100.0

As depicted in table 4, most of the data collected in secondary schools is done during continuous assessment process at (57.5%), during admission process at (32.5%) and (10%) using specialized forms. This also reveals why most common data collected is academic data.

- Custodian of Data

During data collection process, the respondents were asked to indicate the custodian or the person in-charge of students' data storage in schools. The respondents' data was as tabulated in table 5.

Table 5: Custodian of Student Data

		Frequency	Percent
Valid	Deputy Principal	10	25.0
	Director of Studies	21	52.5
	Career Master/ mistress	9	22.5
	Total	40	100.0

The results in table 5 reveals that the main custodian of student data in schools is the director of studies at (52.5%), followed by deputy principal in-charge of academics at (25%) and the

career master/mistress at (22.5%). This implies that directors of studies have higher understanding of students based on the available student data in most schools visited in Bungoma and have higher influence on student academics and career mentorship and/or career paths. However, in some schools, deputy principal academics is well position about students since they have enough data about students stored within their custody.

The study further sought to understand how various students' data is stored across secondary schools in Bungoma. To achieve this objective, the respondents

were asked to indicate how students' data is stored in their respective schools and the results were compiled and tabulated as in table 6.

Table 6: How Data is Stored

		Frequency	Percent
Valid	Individual Files	24	60.0
	Common Files	11	27.5
	Soft Copy	5	12.5
	Total	40	100.0

Table 6 reveals that most schools in Bungoma County store students' data in individual student's files which was supported by (60%), in common students' files at (27.5%) and (12.5%) in soft copy material. Since most data is stored in individual student's files and alternatively in common students' file there is a likelihood of low level of access to data by interested parties since most of this storage formats are not flexible and minimizes data access and share-ability of the same.

The study further inquired on the reasons why most schools collect students' data. The responses were compiled and summarized as in Table 7.

Table 7: Reason for Data Collection

		Frequency	Percent
Valid	Subject placement	1	2.5
	Guiding and counseling	5	12.5
	Career Guidance	11	27.5
	Tracking Student progress	17	42.5
	As a matter of procedure	6	15.0
	Total	40	100.0

Table 7 indicates that the majority of the schools collect student's data as a way of tracking

their academic progress (42.5%), 27.5% for career guidance, 15% as a matter of procedure, 12.5% for guiding and counseling and 2.5% for subject placement. This implies that most student's data is not directly centered on career guidance at (72.5%), and in some school's data is collected just as a routine with no specific intent to use. This is in agreement with the findings of Ndiku (2014) that state that due to inadequacy of the data collected in schools decisions made in the school aren't based on fact. The study went further into determining how the data collected is used to achieve the intended goal for the respondents and their responses were as in Table 8.

Table 8: How the Collected Data Achieves the Goal

	Frequency	Percent
Cluster Subjects	1	2.5
Monitoring Students' Progress	31	77.5
N/A	7	17.5
Subject Selection	1	2.5
Total	40	100.0

Table 8 reveals that majority of the respondents at (77.5%) agreed of using collected data on monitoring learner progress, (17.5%) of the respondents were undecided on what exactly the collected data is used for and (2.5%) noted that collected data is used for cluster subjects and subject selection. This implies that a good proportion of the collected data is geared at making academic related decisions. This was supported when the respondents were asked of the effect of data collected on student career as in Table 9.

Table 9: Effect of Data Collected on Student Career

			Percent
Valid	Yes	34	85.0
	No	6	15.0
	Total	40	100.0

Table 9 indicates that majority of the respondents (85%) agreed that the data collected has an effect on the student career choice, 15% believed it doesn't have. The same respondents' responses on whether the collected data can help in improving student career choice were tabulated as in Table 10.

Table 10: Data collected that can Help Improve Student Career Choice

		Frequency	Percent
Valid	Yes	38	95.0
	No	2	5.0
	Total	40	100.0

The results in the table 10 show that most respondents at (95%) agreed that the data collected can be used to help improve career choice while, 5% disagreed of data being useful in career choice. This implies that most of the data collected can help improve the students' career choice, student's talents, career guidance the rest for subject placement and among others. Respondents also agreed that learners fill career declaration forms during form one admission.

CONCLUSIONS AND RECOMMENDATION

- Study Summary

The purpose of pursuing this study was to determine the extent of usage of student data in student career choice in various secondary schools in Bungoma County. The study data was collected through self-administered questionnaires to career masters and deputy principal in charge of academic in some sampled schools in Bungoma, Western Kenya. The objective of the study intervened on how secondary schools collect student data, how collected data is used to achieve target reasons, whether collected data has an effect on student career path or improve the way student choose their career and whether students fill or file career declaration form during admission and orientation. The collected data were codded, cleansed and analyzed. In the data analysis, descriptive statistics and inferential statistics were used. The descriptive statistics involved frequency measures of central tendencies that is to say percentage, mean and standard deviation. The inferential statistics involved tests like correlation and regression analysis. Data obtained from descriptive statistics was reported, summarized in the frequency distribution table. The Secondary data, often known as secondhand data, was reviewed from existing data or data gathered by other scholars in order to gain insight into the primary information search.

It was noted that secondary schools do keep data on family background, career aspiration and academic data but leave out data on some important attributes like student personality and job opportunities which are key drivers of career choice. The most common data in secondary schools is academic data (65%) which is majorly used to monitor learner progress (77.5%). The data is mainly collected during continuous assessment (57.5%) and mostly kept under the custody of the director of studies (52.5%). Though majority of the respondents (85%) believed that data collected has an effect on the student career choice, it was noted that the available student data isn't used directly to guide career choice. This is because most of the collected data is stored in offline storage systems which limit access. However, majority respondents (95%) believe that data collected can help improve student career choice.

- Conclusion from the Study

The study revealed that data is available in secondary schools but it's limited in variety. This data is stored in formats which aren't portable thus limiting access and it is mainly used in monitoring learner progress. The fact that inadequate data is collected and it isn't accessed easily then it follows that the decisions made in the school aren't based on fact. The study therefore concluded that there is low usage of student data in career choice.

- Recommendation from the Study

This study recommends that secondary schools should ensure that comprehensive student data is collected, analyzed and stored in portable formats to increase access and usage. This data should form the basis for career choice by the students.

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