EFFECTIVENESS OF EMIS FOR STUDENT INFORMATION MANAGEMENT ON MANAGEMENT OF PUBLIC SECONDARY SCHOOLS IN UASIN GISHU COUNTY, KENYA

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ABSTRACT
The government of Kenya implemented a policy advocating for Education Management Information Systems (EMIS). This is because the manual system for managing the students’ record is becoming more cumbersome affecting the management of secondary schools. In this regard the study investigated the influence of EMIS for Student Information Management on Management of Public Secondary Schools in Uasin Gishu County. The study adopted pragmatic philosophical paradigm and employed mixed methods research design with a target population 1334 respondents which included 183 principals, 189 deputy principals, 955 HODs in public secondary schools, 6 Sub-County Directors and 1 County Director of Education in Uasin Gishu County. Kerjcie and Morgan (1970) table was used for determining the sample size of 302 respondents which was proportionately allocated to each stratum. Structured questionnaire was used to collect quantitative data from principals, deputy principals and heads of departments (HODs) while semi-structured interview schedules were used to collect qualitative data from sub-county directors and the County Director of Education. Internal validity was attained by increasing the sample size. Quantitative data was analyzed using descriptive and inferential statistics while qualitative data was analyzed in narratives and themes. Results of data analysis were presented using tables. From the findings, the value of adjusted $R^2$ was is 0.627, an indication that there was a variation of 62.7% on the management of public secondary schools in Uasin Gishu County due to effectiveness and efficiency of EMIS for Student Information Management. There was a significant association between EMIS and management of public secondary schools with $F$ statistics (437.414). Regression coefficient of student information management was .577 with $P<0.05$. This implied that there is a significant relationship between EMIS for student information management and management of public secondary schools. The effectiveness of EMIS for student information management on management of public secondary schools is also premised on the effective communication of student development records and instructional strategies between the management and other teachers precipitating students’ progress. In this regard, the study recommended that public secondary schools must continuously improve on their implementation of EMIS for student information management.

Key words: Student Information Management and Management

BACKGROUND TO THE STUDY

The new millennium heralded rapid technological advancements which have impacted on the management practices of organizations including learning institutions worldwide (Bright & Asare, 2019). This is eulogized by the fact that the number of students admitted to post-primary schools is enormous and it is strenuous to manually manage information about the students’ scores, grading and attendance. Therefore, advancement in information and communication technology today plays a crucial role in streamlining education-related processes to promote solidarity among students, teachers, parents / caregivers and other staff in post-primary school setting (Ademola, et al, 2021). Besides, the use of ICT is further strengthened by that fact that the manual system for managing the students’ record is becoming more cumbersome affecting the academic performance of students. In this regard the explosive growth of computer-based technologies has left a tremendous impact on educational institutions (Manju, 2014).

School management system is meant to enhance the performance of secondary schools with the use of some materials for effective service delivery (Majlinda, & Bekins., 2013). Gabriel and O’Brien (2018) assert that the use of Information Communication Technology (ICT) in school management can better assist school managers in accomplishing their administrative tasks. In this regard, the integration of ICT in management provides administrators and teachers with information required for informed planning, policy making and evaluation (Visscher, 2016). Student information management system is developed by using innovative web based software and database technologies for enhancing education by providing electronic platform in order to collect, record, analyze, report, disseminate, control, monitor and manage students’ data related to education like enrollment, local or centralized exam entries, attendance, grades, transcript, report cards, behavior, assignments, and so forth (Durnali, 2013). The secondary schools benefits from contemporary functionality and empowering features that improve learner outcomes by utilizing a student information system that is genuinely learner-centric. Therefore, effective and efficient utilization of ICT guarantees maximal output from school management. Hence EMIS for student information management have provided an opportunity for effective management of secondary despite the constraints of its implementation.

The student management information system is conceptualized to improve the quality of the system with increased efficiency and accuracy mainly by providing a driven system designed to meet the need and to ease planning, documentation data dissemination and report to relevant authorities (Nakanwagi, 2009). The Student Information Management System (SIMS) is a student-level data collection system that allows school to collect and analyze more accurate and comprehensive information, to meet the state reporting requirements, and to inform policy and programmatic decisions. On the same vein Abdul-Hamid (2014) notes that EMIS without exception to SIMS is a necessary element of an education system that enables policy makers to make critical modifications to the system in order to improve the quality of education. Mugo (2014) states that Education Management Information System is potentially a powerful tool that can contribute to the improvement of management of learning institutions. It can therefore be inferred that integrating EMIS in to school management system guarantee the achievement of educational goals. Gurr (2017) studied the use of EMIS in the management of curriculum and instruction and the study found that the use of ICT by school managers lessened their workload and made the management process to be more effective use of time became more efficient and increased the quality of in-school communication. This in turn led to enhanced supervision of student progress as well as the improvement of school resources management. However, without customized information systems, school operations remain so challenging compromising on effective management of public secondary schools.

From global perspective, EMIS has gained credence in virtually all educational management level. According to Price Waterhouse Coopers (2004) the use of EMIS to address teacher workloads in the United Kingdom, have a significant role to play in improving institutional effectiveness due to its ability to reduce routine administrative duties, improve the effectiveness of support staff, facilitate the transfer of some tasks from
teachers to support staff and enable teachers to plan more effectively and deliver teaching and learning (Ejimofor & Okonkwo, 2022). The Price Waterhouse Coopers (2004) study however pointed out that the reduction of workload is only possible if factors such as the confidence of the users are taken into account.

A study in Union City School District in the USA showed that school-community relations was affected when computers were installed in schools and homes of teachers and parents. This led to improved messaging within stakeholders such as schools, parents, central decision makers and businesses thus fostering accountability, public support and connectivity (Demir, 2016). Fulton County Schools, outside Atlanta City in Georgia, have adopted data-driven decision-making as part of a comprehensive strategic planning process (James-Maxie, 2012). In this plan, everyone is involved right from classroom teachers to principals to administrators. The district data management and analysis systems provide increasingly customized and more frequent information to decision makers (Breiter & Light, 2016). Althobeti (2013) asserted that EMIS can play a role in increasing transparency and accountability in budgeting and financial management, revenue mobilization and expenditure in learning institutions in Saudi Arabia.

In Sub-Saharan Africa, information and Communication Technologies are increasingly present and have been introduced to varying degrees at all educational levels from pre-school to university, and in both formal and informal sectors (Karsenti et al., 2020). However, it is still not utilized in management of schools in other countries. For instance, in South Africa Statistics (2011), only 25.2 per cent of the schools in rural areas had a computer, 7.1 per cent accessed Internet at home, 91.9 per cent had cell phones, and 59.4 per cent had no internet access at all. Township schools are poorly resourced compared to some schools situated in the middle-and-upper class communities (Donohue & Bornman, 2014). Learners from affluent schools are exposed to different types of ICTs both at home and at school. Those from poor townships, farms and rural areas might not be exposed to all the new technologies, hence creating a digital divide among learners.

Bright and Asare (2019) outlined some of the specific tasks in management where Management Information Systems (MIS) could be used including in curriculum instruction, human resource, finance and security in Kumasi Campus in Ghana. In Ethiopia, the ICT strategy envisages the integration into the learning, teaching, and administration of the school system through EMIS. But only 40% of schools in Ethiopia have computers. Besides, most of the schools that do have computers are in Addis Ababa, creating a major rural-urban divide should the strategy be implemented within the context (Siska et al.2020). The Government of Kenya through the MoE developed a policy on establishment of an EMIS in schools in 2005 (Ndiku et al, 2014). The Government education institutions identified the student management information system (SMIS) as a key contributor for building trust and confidence for the general education institutions in the heart of any nation or state (Karanja, et al , 2019). Student management information system has not been fully implemented in all schools as a result, there is no uniformity in data management in schools leading to a tendency by schools to only keep those variables required by the MoE for reporting purposes. Hence, school administrators may be tempted to relax in creating a student data base and adopt ad hoc decision making. Thus, there have been an increase in the number of institutions experiencing management problems and cases of student riots pose the question whether school administrators do understand that ineffective use of data for planning as well as in their decision making on a regular basis has an effect on their management (Ndiku et al, 2014). Available studies on the use of technology in education in Kenya Njoroge et al. (2017), Odhiambo, (2017), Ocharo and Kennedy (2017) with limited studies on EMIS in school management of public secondary schools in the Kenyan context. It is against this background information the study sought to examine influence of the use of EMIS on secondary school management in Uasin Gishu County.
LITERATURE REVIEW

Influence of EMIS for Student Information Management on Management of Public Secondary Schools

The use of a student information management system is essential to education (Hualiang, 2015). In addition to significantly reducing the workload of the staff involved in the relevant activity, an effective information and performance management system's content is crucial to managers and decision-makers in schools. Ngoma (2009) notes that as SIS become more integrated operational tools in schools, many school districts have to make decisions about the extent to which SIS affects student achievement and about the most appropriate SIS to adopt. According to Durnali (2013) student information management system significantly affects management of secondary schools.

Nwobodo et al (2017) studied on appraisal of security and safety in public secondary schools and adopted a descriptive survey design. The study was carried out amongst teachers in public secondary schools in Enugu State. Two instruments were used for data collection in the study namely, Check list and Questionnaire on Safety and Security Management in Public Secondary Schools. A sample size of 351 respondents was used for the study. This sample was drawn using multi stage sampling technique. Research questions 1 & 2 were answered using frequency and percentage while research question 3 was answered using mean and standard deviation. Results obtained from the study showed that the security devices for improving security in public secondary schools are not generally available, the emergency responses plans for managing safety threats in public secondary schools in Enugu State are not adequately available, the respondents agreed on the adequacy of all the 9 items on security measures that should be adopted in managing school plants. However the study didn’t point out how this affects the management of the secondary schools.

Ayeni and Orhewere (2021) assessed Safety Intelligence and Security Management in Public Secondary Schools in Epe Local Government Area, Lagos State. The research adopted a descriptive survey design. The respondents were selected via simple random sampling. Four hundred participants including 19 principals and 381 students were the targeted population for this study. Findings from the study showed that majority of schools have the basic safety and security apparatus but lack the knowledge and experience to employ them in the event of a disaster. Results also show that there is no subject in the school curriculum from kindergarten to secondary level that teaches on safety and security management. Public secondary schools in Epe LGA do not also have constituted disaster management committees or an emergency management plan. Most students however do not know how to use safety and security gadgets in their school premises. However the study was not conducted in the Kenyan context and didn’t focus on management of public secondary schools as a result of EMIS for safety and security.

Ngoma (2009) explored the effectiveness of student information management system in Managing Student Performance in the state of North Carolina in the United States. The survey was conducted using semi-structured interview. Besides, a questionnaire was administered electronically to a group of 80 public school teachers and administrators for a return rate of 25 %. Respondents were selected in a systematically random fashion. From the findings, although many school districts are implementing Student Information Systems (SIS), there is little empirical evidence about whether SIS use can improve student performance. The use of SIS significantly improves student performance.

Durnali (2013) studied the Contributions of E-School, a Student Information Management System, to the Data Processes, Environment, Education and Economy of Turkey. The study adopted a desk research approach and discusses how student information management in Turkey's Education has been handled before and after E-school system. The study concluded that the system helps the administrators, teachers and policy makers make accurate, fast analysis and decisions about such as immediate needs and development of education system by enabling them to carry out their task easily, efficiently, and timely manner. As a result, it helps them focus on
the educational aspect more, the learning needs of students. However the study was a desk research and data not collected by involving participants which provided a gap for the current which filled the gap by using a mixed method approach.

METHODOLOGY

Research Methodology: It is essentially the “how” a certain piece of research is conducted in practice (Brooks & Normore, 2015). Methodology is the framework which is associated with a particular set of paradigmatic assumptions that are used in conducting research. More specifically, it deals with the methods a researcher employs when designing a study to guarantee accurate outcomes that meet the goals and objectives of the investigation (Dawadi & Giri, 2021). The study adopted a mixed-method methodology. A mixed-method methodology combines qualitative and quantitative methodologies to integrate both their strengths and obtain rich results (Creswell & Clark, 2018). This approach is beneficial because it allows each methodology to counteract the weaknesses of the other (Dawson, 2019)

Target Population: According to Gupta and Gupta (2022) population is a set of all objects that have some common set of predetermined characteristics with respect to some research problem. The target population for the study was principals, deputy principals, HODs in public secondary schools, County Directors and Sub-County Directors of education. The accessible population for the study was 1334 respondents which included 183 principals, 189 deputy principals, 955 HODs in public secondary schools, 1 County Director and 6 Sub-County Directors of education in Uasin Gishu County as presented in table 1 below.

Sample size: Sample size is the number of observations used for determining the estimations of a given population (Kumar, 2018). Kerjcie and Morgan (1970) table was used for determining the sample size. Thus, the sample size of principals, deputy principals, HODs in public secondary schools was calculated while complete enumeration was used for County Director and Sub-County Directors for education. Thus, from a target population of 1327 respondents a sample of 302 respondents was arrived and distributed proportionally according to Neyman’s allocation formula Singh and Micah (2013) to maximize survey precision, given a fixed sample size. With Neyman’s allocation, the best sample size for cluster h was:

\[ n_h = \left( \frac{N_h}{N} \right) n \]

Where,

\[ n_h \] - The sample size for cluster h,

\[ n \] - Total sample size,

\[ N_h \] - The population size for cluster h,

\[ N \] - The total population

Hence, distribution was as follows; the respondents were selected using simple random sampling.
Table 1: Sample size by Sub County

<table>
<thead>
<tr>
<th>Sub County</th>
<th>Tot no. of Ps</th>
<th>Sample size for Ps</th>
<th>No. D/Ps</th>
<th>Sample size for D/Ps</th>
<th>No. of HODs</th>
<th>Sample size for HODs</th>
<th>Total sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ainabkoi</td>
<td>22</td>
<td>5</td>
<td>22</td>
<td>5</td>
<td>150</td>
<td>34</td>
<td>44</td>
</tr>
<tr>
<td>Kapseret</td>
<td>17</td>
<td>3</td>
<td>18</td>
<td>4</td>
<td>85</td>
<td>20</td>
<td>27</td>
</tr>
<tr>
<td>Kesses</td>
<td>39</td>
<td>9</td>
<td>40</td>
<td>9</td>
<td>195</td>
<td>45</td>
<td>63</td>
</tr>
<tr>
<td>Moiben</td>
<td>32</td>
<td>7</td>
<td>34</td>
<td>8</td>
<td>160</td>
<td>36</td>
<td>51</td>
</tr>
<tr>
<td>Turbo</td>
<td>30</td>
<td>7</td>
<td>32</td>
<td>7</td>
<td>150</td>
<td>34</td>
<td>48</td>
</tr>
<tr>
<td>Soy</td>
<td>43</td>
<td>10</td>
<td>43</td>
<td>10</td>
<td>215</td>
<td>49</td>
<td>69</td>
</tr>
<tr>
<td>TOTAL</td>
<td>183</td>
<td>41</td>
<td>189</td>
<td>43</td>
<td>955</td>
<td>218</td>
<td>302</td>
</tr>
</tbody>
</table>

Data Collection Instruments: According to Burns and Grove (2005) data collection is defined as the precise, systematic gathering of information relevant to the research purpose or the specific objectives, questions, or hypotheses of a study. Data was collected by use of a questionnaire and an interview schedule.

Data Analysis: Responses to the survey items were coded 1-5 depending on the importance of each as the statements were summed together for a composite score per category and eventually used for statistical analysis. Inferential statistics was used to reach conclusions and make generalizations about the characteristics of populations based on data collected from the sample with 95% as the level of confidence with the aid of SPSS software version 25.0. Simple linear regression analysis was used to determine the influence of EMIS for student information management on the management of schools. Analysis of Variance (ANOVA) was used to test the significant amount of variance in the dependent variable. Regression analysis was used to test the hypothesis for this study. This explains the relationship between the independent or predictor variable and the dependent or criterion variable. In this case it explains the relationship between public secondary schools management and its predictor variable as indicated in the equation.

The simple linear regression model

\[ Y = \beta_0 + \beta_1 X_1 + \varepsilon \]  

While \( \varepsilon \) is an error term at 95% confidence level

The researcher used data condensation mode of analysis to extract important themes from qualitative data from the county and sub county directors. The researcher interrogated themes in light of the objectives of the study. The study highlighted subtle variations within the themes by summarizing the information pertaining to each theme, and capturing the similarities and differences in respondents’ responses within each category. To show the categories, which appear more important, the analysis counted the number of unique respondents who referred to certain themes. The occurrence of two or more themes together consistently, indicates connections and suggests a cause-and-effect relationship.

DATA PRESENTATION ANALYSIS, INTERPRETATION AND DISCUSSION

Influence of EMIS for Student Information Management on Management of Secondary Schools in Uasin Gishu County

The study sought to understand the nature and level of student information management in public secondary schools from the administrators’ perspectives. This aimed at gaining an understanding of the current state of student information management and how they affect management of secondary schools in Uasin Gishu County. The results are presented below in table 2.
Table 2: Descriptive Statistics on EMIS for Student Information Management

<table>
<thead>
<tr>
<th>Statement</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ attendance has improved</td>
<td>0.0</td>
<td>3.4</td>
<td>20.6</td>
<td>43.5</td>
<td>32.4</td>
<td>4.05</td>
<td>917.8</td>
</tr>
<tr>
<td>Students’ health records can be tracked easily</td>
<td>0.4</td>
<td>10.3</td>
<td>11.5</td>
<td>46.2</td>
<td>31.7</td>
<td>3.98</td>
<td>939.9</td>
</tr>
<tr>
<td>Utilization of student information on student discipline management support</td>
<td>0.0</td>
<td>6.5</td>
<td>18.3</td>
<td>33.6</td>
<td>41.6</td>
<td>4.10</td>
<td>923.0</td>
</tr>
<tr>
<td>The system helps in monitoring fee payment of the students</td>
<td>0.0</td>
<td>9.2</td>
<td>12.2</td>
<td>43.9</td>
<td>34.7</td>
<td>4.04</td>
<td>915.0</td>
</tr>
<tr>
<td>The students’ performance has been effectively monitored</td>
<td>0.0</td>
<td>6.5</td>
<td>11.1</td>
<td>49.2</td>
<td>33.2</td>
<td>4.09</td>
<td>835.0</td>
</tr>
<tr>
<td>There is easy retrieval of students’ academic performance records</td>
<td>6.1</td>
<td>10.3</td>
<td>8.8</td>
<td>43.9</td>
<td>30.9</td>
<td>3.83</td>
<td>1.15</td>
</tr>
<tr>
<td>Records of students’ extra-curricular activities, including awards and achievements are accessible</td>
<td>0.0</td>
<td>3.1</td>
<td>9.2</td>
<td>46.2</td>
<td>41.6</td>
<td>4.26</td>
<td>750.0</td>
</tr>
<tr>
<td>The student performance has improved</td>
<td>0.0</td>
<td>5.7</td>
<td>18.7</td>
<td>43.9</td>
<td>31.7</td>
<td>4.02</td>
<td>858.0</td>
</tr>
<tr>
<td>Administrators are notified about irregularities in student attendance</td>
<td>0.8</td>
<td>4.2</td>
<td>17.9</td>
<td>44.3</td>
<td>32.4</td>
<td>4.04</td>
<td>863.0</td>
</tr>
<tr>
<td>Students’ information system helps in providing referral for deviance cases</td>
<td>11.0</td>
<td>1.15</td>
<td>8.8</td>
<td>30.9</td>
<td>37.8</td>
<td>3.73</td>
<td>1.36</td>
</tr>
<tr>
<td>Records of past and currently written examinations are accessible</td>
<td>8.0</td>
<td>9.2</td>
<td>17.2</td>
<td>36.3</td>
<td>36.6</td>
<td>3.99</td>
<td>988.8</td>
</tr>
<tr>
<td>Student information system is functional thus statistics on students easily made available</td>
<td>3.1</td>
<td>8.4</td>
<td>18.3</td>
<td>42.0</td>
<td>5.1</td>
<td>28.2</td>
<td>1.02</td>
</tr>
</tbody>
</table>

| Student Information Management | 4.00 | .550 |

Key: SD= strongly disagree; D= disagree; N= Neutral; A= agree; SA= strongly agree; M=Mean; SD= Standard deviation Source: Research Study, 2022

From the findings 75% of the respondents agreed and strongly agreed that students’ attendance has improved while 3.4% were in disagreement and 20.6% undecided (M=4.05, SD=.817). Besides students’ health records can be tracked easily according to 77.9% who were in agreement while 10.7% were in disagreement (M=3.98, SD=.939). In addition, respondents were in agreement that student information systems can be utilized in supporting the management of student discipline (M=4.10, SD=.923). Besides, the respondents were in agreement that the system helps in monitoring fee payment of the students (M=4.04, SD=.915). In this regard parents or students can be invoiced, payments can be made and controlled from one place by the school. This is because Student Information System has accounting features as maintaining a general ledger, billing, receivable details, project funding and accounting details (Luke, 2022). According to the above 82.4% of the respondents agreed (49.2%) and strongly agreed (33.2%) that students’ performance has been effectively monitored while disagreed at 6.5% (M=4.09, SD=.835). In addition, respondents agreed (43.9%) and strongly agreed at (30.9%) that there is easy retrieval of students’ academic performance records and disagreed at (10.3%) strongly disagreed (6.1%) (M= 3.83, SD=1.156). Besides 87.8 % of respondents are in agreement that records of students’ extra-curricular activities, including awards and achievements are accessible (M=4.26, SD=.750). The student performance has also improved according to 75.6% of the respondents who were in agreement (M=4.02, SD=.858). In addition, 77.1% of the respondents agreed and strongly agreed that administrators are notified about irregularities in student attendance (M=4.04, SD=.863). This is key in assisting the schools in monitoring the students’ attendance and make data-driven decisions to improve their academic performance. According to majority of the respondents 68.7% are in agreement that students’ information system helps in providing referral for deviance cases (M=3.73, SD=1.361). In addition the observation of the County and Sub county Directors on discipline cases amongst students, one of the respondents noted that.
“Discipline cases have been on the decline since students are aware that their deviant behaviors are tracked and documented for future reference. Based on records and tracking of indiscipline cases, students reform and deviant cases are on the decline” (ED, 3)

The administrators were in agreement that records of past and currently written examinations are accessible with 36.6%, 36.3 % strongly agreeing and agreeing respectively while 10% in disagreement (M=3.99, SD=.988). Finally, the respondents were in agreement that student information system is functional thus statistics on student easily made available (M=3.84, SD=1.027). In the overall student information management had a mean of 4.00 and standard deviation of .550. Essentially, a student information management allows the school to make data points for lots of areas in one place so that it’s easy to keep track of progress and performance (Luke, 2022). In response to the interview question “How has student information management system affected the administrative performance of the public schools”

One of the respondents noted that:

“Schools have been able to capture student information with ease, retrieval of student information has made student management very easy. The data has enabled the government to accurately allocate resources for bursaries and government capitation. Student behavioral records have been easy to store and retrieve” (ED, 5)

Therefore student information system is functional thus statistics on students is easily made available. The implications of these results are that the management of public secondary schools should ensure that the use of student information management system is potentiated so as to enhance effectiveness in management of public secondary schools.

The study hypothesized that:

H01: There is no statistically significant influence of EMIS for student information management on management of public secondary schools in Uasin Gishu County

The findings in terms of model summary, ANOVA and regression coefficients showed the effectiveness of EMIS for student information management on management of public secondary schools.

Table 3: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.792a</td>
<td>.627</td>
<td>.626</td>
<td>.245</td>
<td>1.796</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), EMIS for Student information management

b. Dependent Variable: Management of Public Secondary Schools

From table 3 above, the R-value showed a simple correlation value of the independent variable to the dependent variable, which was 0.792. This indicates that the independent variable and the dependent variable have a clear positive correlation. According to R squared value EMIS for Student information management (independent variable) clarified .627 or 62.7 percent of the variation in the dependent variable (Management of public secondary schools) in the model. The value of adjusted R squared was 0.626 an indication that there was variation of 62.6 percent on management of public secondary schools due to changes in student information management system at 95 percent confidence interval. This shows that 62.6 percent changes on management of public secondary schools in Uasin Gishu County could be attributed to student information management. The statistical significance of this value was reported in the ANOVA table 4 where the analysis results revealed the following:
Table 4: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>26.323</td>
<td>1</td>
<td>26.323</td>
<td>437.414</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>15.646</td>
<td>260</td>
<td>.060</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>41.969</td>
<td>261</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Management of Public Secondary Schools
b. Predictors: (Constant), EMIS for Student information management

Results in table 4 above revealed a significance of F statistics (437.414) is 0.000 which is less than 0.05. This implies that there is a significant relationship between EMIS for student information management and management of public secondary schools. The null hypothesis was tested and indicated that there is a statistically significant influence of student information management on management of public secondary schools in Uasin Gishu County, hence the rejection of the null hypothesis. This finding was supported by Forrester (2019); Durnali (2013) and Ngoma (2009) who also found a significant effect of student information management on management of schools.

The regression coefficients table 5 below showed the contribution of the independent variable to the dependent variable.

Table 5: Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>1.733</td>
<td>.111</td>
<td>15.576</td>
<td>.000</td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>Student Info</td>
<td>.577</td>
<td>.028</td>
<td>.792</td>
<td>20.914</td>
<td>.000</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Finally, from the data in Table 5 above, the study established regression equation was Y = 1.733 + .577X1.

Therefore, management of public secondary schools in Uasin Gishu county = 1.733 + .577 Student Information Management.

The above regression equation revealed that holding EMIS for student information management to a constant zero, effectiveness of management of public secondary schools in Uasin Gishu County would be at 1.733 units. A unit increase in EMIS for student information management would lead to an increase in effectiveness of management of public secondary schools by a factor of B=0.577, P<0.05.

Thus, effective use of EMIS for student information management significantly influences effective management of public secondary schools. This is further underscored by the pragmatic verification of the alternative hypothesis. In this regard it can be concluded that student information management provides the relevant intelligence that enables the right decisions to be made at the right time for effective management of public secondary schools. Therefore EMIS for student information management has major long-term effects. It makes managing student information procedures for school, educational administrators, policy makers and teachers simple. EMIS for student information management procedures function quickly and efficiently reducing the need for bureaucratic processes. For instance keeping track of the student class attendance, academic performance, extra-curricular activities, awards, health records and student discipline management are now easier. The effectiveness of EMIS for student information management on management of public secondary schools is also premised on the effective communication of student development records and instructional strategies between the management and other teachers precipitating student’s progress. These altogether culminates to effective management of public secondary schools due to effective generation of student data to facilitate development of alternative solutions for sophisticated management problems. Madiha
(2013) underscores that MIS led to better accessibility to information and therefore has a positive impact on management of schools.

CONCLUSION AND RECOMMENDATION
Courtesy of the pragmatic verification of the alternative hypothesis, EMIS for student information management significantly influences effective management of public secondary schools. In this regard, EMIS for student information management is important in coordinating and scheduling communications for parents, administration and teachers geared towards students’ progress that is crucial in enhancing effective management of public schools. Student information management provides the relevant intelligence that enables the right decisions to be made at the right time for effective school management. This is premised on the positive attitude of the school administration towards adoption of information communication technology in management of the human resource as enshrined in the Unified Theory of Acceptance and Use of Technology by Davis (2016). Thus, continuous improvements on Student Information Management remains essential for sustenance of effective public secondary schools management. In this regard, the study recommends that public secondary schools must continuously improve on their implementation of EMIS for student information management.

REFERENCES


