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New Online Examination Registration Challenges to School Head Teachers in Kenya

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Abstract:

A descriptive research survey design was undertaken to assess the new online examination registration challenges to public primary schools. Candidates for Kenya certificate primary education Examinations were registered manually before the new directive online registration. Innovation diffusion theory was used in this study. A descriptive research design was employed. The target population included 58 public schools from which 10 schools were purposively sampled, and 100 teachers were selected using a simple random sample. Data collecting instruments were checked using the test-retest method. Pearson Moments correlation(r) was used to test the reliability of the instrument. The reliability coefficient was found to be 0.8, indicating a strong correlation between the measures. Data were analyzed using statistical package for social (SPSS) Version 22.0 and presented in tables and charts. The study found out the challenges varied from one school to another and include long queues at the market centers, internet interruption, cost involved, and inadequate ICT infrastructure. The study recommended that public schools be connected with the internet and power backups such as generators and solar panels to speed the registration process without experiencing power – interruptions.

Keywords: Challenges, online registration, examination

1. Introduction

The migration to the digital platform in this 21st century has increased the use of technology tools in supporting the daily activities and operations in the social environment. Many organizations have shifted to online transactions. Customers no longer need to queue long lines to receive services initially provided manually. Like any other organization, schools have not been left out, especially in the management of examinations. Head teachers have been encouraged to register their students to embrace technology and adapt online transactions such as paying school operating expenses, school fees and registration of students for national examinations.

Online registration is the process of registering students for examination using a platform of e-electronics such as computers. This process is also referred to as e-registration. According to Ojerried and Kolo (2009), Online registration generally entails an interactive method of processing admission, application forms, students' enrollment, selecting courses, payment of school fees, and entry of students' data. One is not regarded as a bonafide student or candidate of an institution if he is not registered online.

The main objective of online registration is it provides a platform to head teachers, students, and other stakeholders to manage the examination registration process at their comfort. This process also allows head teachers to focus less on paperwork It also helps to manage student's data, which can easily be accessed for decision making. Despite the many benefits of registering students, African online schools face challenges with the cost of ICT infrastructure and weather patterns. Electricity etc. while registering students online (Sara el, 2010).

Like any other country, head teachers in Kenya have been bestowed with management roles of coordinating, directing, and implementing the government programs. This makes them have a large workload. Initially, registration of students was manual, whereby the head teacher, with support from staff members and students, could use pencils to shade the registration forms. At times, some students could miss sitting for the exam due to these errors. Olusina (2011) posits that some of the mistakes occurred because of mismanagement of students' registration and academic records. Odede and Oloko (2013) in their study reported that apart from the errors, the Kenya national examination council failed to respond to some of the queries raised through short messages on manual systems effectively. Therefore, there was a need for online operations to be engaged for effectiveness and efficiency (Mativo, 2009)

Okoye, (2015) conducted a descriptive study on online registration challenges faced by open and distance learners of Nigeria's open national university. The study found out that those main online registration challenges are lack of internet service, computer illiteracy, high cost of internet services, network problems, insufficient power supply, and delay in posting money from the bank to student e-wallet variations in course codes and course titles.

Bigirima; Jagero and Daudi, (2015) Study of an Inquiry into the impact of information and Communication Technologies (ICTs) on the enrolment, Registration, Examination clearance, and Access to Results of students at African University, Mutare Zimbabwe. 41.9% of the respondents rated ICT's effectiveness on E-registration as average, 23% to be good. They further explained that they experienced long queues during the registration process, and the process is cumbersome; they felt led to time wastage and delays. Using technology for students' registration is supposed to be fast and effective in saving time for curriculum instructions and other administrative duties.

MaDEtovu (2007) studied the availability and accessibility of ICT in managing students' academic affairs at Makerere University. In this study, it was established the use of entering student's marks was cost-effective. The researcher in this study acknowledges that e-registration had not been fully implemented due to limited network access and inadequate ICT facilities that the system could not detect errors. Registering students online require the adequacy of this facility for significant results. This is in line with the study conducted by Bigirima (2015), who noted that the frequency of power interruption was the major challenge in registering students online in Universities in Zimbabwe. Odero et al. (2013) conducted a study on the effectiveness of e-registration on Kenya certificate of secondary examination performance. The researchers established that other factors such as pin rejection, log in difficulty, and no feature, go back to the portal.

The Kenyan government has invested a lot in the field of education in terms of ICT. This is for it needs to have a knowledgeable society that competes with other nations worldwide. Sessional Paper No 1 of 2005 identified ICT as a tool to be used in school for communication and instruction purposes, government support of SDGs' sustainable development goals. One of the objectives is to provide Quality and Equality in education for sustainability. The Constitution of Kenya article numbers 43, 53, 54, 55, and 56 recognizes ICT as a tool that can be used in economic development. The government has also embarked on funding the provision of high-speed and reliable Internet service, which is aimed at turning Kenya into a knowledge base economy by 2017 (Wakobiand Muthoki, 2013). Kenya National Examination Council (KNEC) has made the registration of the Kenya Certificate of Primary Education (KCPE) and Kenya Certificate of Secondary Education (KCSE) online. Hence, school administrators are required to use the internet for this service (KNEC, 2011). The government instructed Primary school head teachers to open Kenya National examination portal and register candidates online (KNEC 2011). The move was welcomed as a remedy for enhancing effectiveness during the registration period and reduces some of the errors that had been found in the manual system. However, with the advent of online registration, Head teachers still experience delays as some of the activities are conducted manually. Errors such as the omission of candidates' details continue to occur on the Nominal Rolls. The Kenya national examination council's intention of introducing online registration was to enhance effectiveness during the examination process. However, this is still to be realized. This now prompts the researcher to investigate the Effectiveness of Online KCPE Registration.

1.1. Purpose of the Study

The study's purpose was to assess the New Online Examination Registration to school head teachers in Kenya and the results will provide solutions on the registration process.

1.2. Problem Statement

Online registration improves efficiencies and eliminates unnecessary paperwork; it also saves time for head teachers to handle other administrative duties in school. However, there is evident that online registration of KCPE candidates in Kenya has proved to be a nightmare to schools than expected. The Kenya national examination has continued to extend registration dates, as many schools do not meet the deadlines set. In the Khwisero sub-county Majority of the head teachers who do not meet the deadlines of registration. Long ques are observed at the market centers during the registration period. They are often seen moving from one office to the other at the County offices, correcting the errors manually. This has prompted the researcher to investigate the challenges that head teachers undergo during KCPE registration in the Khwisero sub-county.

1.3. Research Questions

The following research question guided the study. What are the challenges facing the head teachers in the adoption of the new method of registering candidates online?

1.4. Theoretical Framework

The study was guided by the innovation diffusion theory developed by Everest Rodgers (2003) while undertaking writing his thesis in Agriculture. However, Rodgers considered technology to be tractors and other machine tools used on the farm. Many fields, including education, have adopted it. In his study, Rodgers defined innovation to be something new and diffusion to be something that can be fused or adopted. He believed people are skeptical about embracing change, especially when a new idea is introducing. Head teachers may fear to embrace the newness of technology because they are not sure of the outcome. Rodgers (2003) identified four elements of diffusion as i) Innovation ii) channel iii) Time iv) Social system.

Rodgers (2003) describes an innovation as an idea, practice, or project that is perceived as new by an individual on another unit of adoption. By nature, people fear the embracing change that comes with innovation head teachers are not an exception as they are not sure of the outcome. Registering candidates online is perceived to be a new idea that has come as a result of technology. To reduce uncertainty, the Head teachers should be informed about the new system's possible effectiveness and challenges.

1.4.1. Channels

A channel is how a message gets from the source to the Receiver Rodgers (2003, P204). There are two types of channels, namely Mass media channel and interpersonal channel. Mass media channels include I.C.T. tools such as hardware and software that the principal should be provided to enable the registration process to be effective.

1.4.2. Communication

Rogers (2003) defines communication as a process in which participants create and share information to reach a mutual understanding. head teachers need to be sensitized, trained

1.4.3. Time

Rogers (2003) argues that including the time dimension in diffusion research illustrates one's strength. The government is expected to ensure the adequacy of I.C.T. infrastructure to reduce wastage of time caused by looking for I.C.T. tools. In this model, teachers must be assured that they will not incur any added cost while registering candidates online.

1.4.4. Social System

Rogers (2003) defines a social system as a set of interrelated units engaged in Joint problem solving to accomplish a common goal. Effective use of the New- online registration systems depend on various components that work in harmony and these components include skilled workforce, adequacy of infrastructure staff, and leadership. Conceptual Frame work

1.5. Conceptual Framework

The conceptual framework is a diagrammatic representation of the variables and their relations towards each other in the study. The independent variables are head teachers challenges whose indicators are categorized into three parts; ICT skills, ICT infrastructure, and technical support, while the dependent variable is New Online Registration, indicators included exam registration and utilization of ICT tools. The intervening variables are the location of schools, student populations, and government policies. The arrows clearly show if the head teachers are skilled in using ICT tools, challenges in the registration process will be minimal. Similarly, the adequacy of ICT infrastructure and technical support will enable the head teachers to utilize the facilities rather than spending a lot of time in the cyber.

2. Literature Review

2.1. Online Registration in Schools in Kenya

Registration of examination candidates was conducted manually in both primary and secondary schools until 2009. Manual registration involved using people's physical skills and energy to fill the data and shed data entries. The tools that were used were non-technical. There were a lot of errors that occurred and also proved to be costly to the end-user. Many problems were noted, including mismanagement of students' academic records and mismanagement of courses registered (Olasina, 2011). This attracted the attention of the major stakeholders.

In 2009 the then Minister of Education, while releasing KSCE examination results, gave a directive that all candidates for Kenya certificate secondary School should be registered online to enable the end-user to control data entered and enhance the principal's efficiency. In 2010 the exercise was piloted to all secondary schools. E- registration also affected primary schools as Primary Education caters to the largest number of pupils in Kenya's Education System. In 2011 Kenya National Examination Council issued a circular to Primary school head teachers to register their candidates online. However, despite the government's efforts to embrace ICT in the Education Sector, it is still facing some challenges, including a limited rural electrification level, power disruption, and many others. (Republic of Kenya; 2005:80).

This study sought to determine the challenges facing online registration of Kenya Certificate of Primary Education in Public Primary Schools in Khwisero, Kakamega County.

2.2. Benefits of E-Registration

The world is going technological; modern-day businesses are conducted and facilitated through telephones, fax machines, and computer communication networks through the internet. This phenomenon has given birth to contemporary e-commerce, e-government, e-medicine, e-banking, and e-education, amongst others, to enhance efficiency and effectiveness in service delivery.

There are various benefits that the organization is likely to witnessed when registering students online, such as

- One can register students online from any comfort zone of his choice such as cyber, the house, office, vehicle so longer us he has the correct details and is connected to the internet or Wi-Fi
- Using an electronic device is fast and convenient, and this helps in saving time for the teacher to continue with other administrative duties.
- The system helps organize and manage data, and it is easy to notice an error and correct it immediately.
- Online registration is a user enabler; it does not need the creator to access the information; one can access information any time
- The feedback of the data entered is immediate' so long as all the details have been keyed on correctly., and the results obtained can be used for decision making

- It simplifies the registration process through the web-enabler, user-friendly wizards and digitizes all supporting document

3. Methodology

The researcher used a descriptive survey research design; Target population comprised 58 head teachers and 474 teachers in public primary schools of Khwisero sub-county Kakamega County. Purposive and Simple random sampling method was used to obtain a sample of 10 headteachers and 100 teachers. The purposive method was used in selecting headteachers based on the number of years they had served in the school: questionnaires, interview schedules, and checklists were used as research instruments to collect data from the respondents—the questionnaires filled by the teachers according to the study's objectives. Interview guides provided in-depth information about the study objective, and the checklist enabled the researcher to observe the availability of the school's infrastructure.

4. Findings

4.1. Respondents Participation in the Registration Process

Respondents were asked if they participated in using ICT (online registration) in registering of KCPE candidates. The results shown in Table 1: 100% of the head teachers participated and presented candidates for KCPE registration however, number of candidates registered for KCPE varied from one school to the next as follows 10%, (n=1) had over 60 candidates, 30%, (n=3) had between 41-60 candidates, 20%, (n=2) had less than 20 registered KCPE candidates while a majority of 40%, (n=4) had between 21-40 wrote KCPE candidates. This implies that all schools registered students online, and they may have experienced online challenges.

4.2. Challenges Experienced in the Process of Using ICT to Register KCPE Candidates

The researcher sought to find out some of the challenges experienced during online registration; from the results, 20% cited lack of internet access while 23% said lack of electricity. A more significant percentage, 57%, did not mention any challenge, which means most of the head teachers have mastered the use of technology apart from the inadequacy of power and internet bundles, making the process time-consuming.

4.3. Time Used in Registering Candidates Online by Schools

The respondents were asked about the time spent on registering candidates online. Results showed registration of candidate online in Khwisero district varied from one primary school to the next 20%, (n=2) of the head teachers used 3 days to complete registering, 30%, (n=3) used 5 hours, 20%, (n=2) used 12 hours while 30%, (n=3) used less than hours to register. From the findings, it was clear that some schools took up to five days in the registration process. Hence, suffering from wastage of time in a process that could have taken a few minutes or hours to accomplish if the person is responsible had adequate knowledge of handling it. However, a larger number of candidates in some of the schools in the district may explain the long registration period. Besides, the time taken to receive feedback from the KNEC website varied. 70% of the respondents received the feedback immediately, while 30% experienced some delays. This may be as a result of the traffic jam during the registration period.

5. Discussions

Based on the findings, despite ICT being with us for a long time, some school head teachers experienced challenges such as lack of internet and lack of electricity. This is similar to Okoye (2015) in his descriptive study on Online registration challenges faced by Open and Distance learners, found out that the main difficulties experienced were internet services, delays of feedback, and insufficient power supply. Those students who had internet access did not face and challenge; however, there was a delay in receiving the input due to the course codes' variations. Those who had contra views may have attributed to the student population and accessibility of the internet as most schools did not have computers in their schools, so they relied on the cyber at the markets. The study took place in rural Kenya, where the weather pattern is unpredictable power interruption frequently occurred, which affected the registration process as one had to start afresh.

Regarding time spent on the registration process, the respondents revealed variations in time as some of the head teachers spend less than one day and others more than five days. This was mainly because of the queues they experienced in the market places seeking assistance to be helped to register to meet the deadlines placed by KNEC. This challenge is in line with Birgirima et al. (2015) in their study of an inquiry into the impact of information and communication technology on enrolment and registration of examination. Found out that students experienced long queues during the process leading to wastage of time that they would have used in their studies. Some of the head teachers who spent more days in the registration process attributed the delays in receiving feedback from the Kenya national examination.

The few head teachers who spent few hours regarded the system to be fast because of the system's capacity in ascertaining and correcting errors committed during the registration process with ease, which was not the case with the old previous system, which was subject to numerous errors that occurred during the registration process such as mismanagement of students' academic records, mismanagement of courses registered for, among others (Olasina, 2011) However it is important for the Government to boost their equipment to avoid inconveniences that are caused during the registration period.

Majority of the head teachers who regarded who faced difficulties in the registration process attributed their response to the fact that, their schools lacked the capacity to use the system based on lack of vital resources. Most of these

schools lacked ICT infrastructures like the computers while those that had, the existing ones were so few making the process to take a longer time to register all the pupils. The existing computers were also old and slow due to their obsolescence slowing the process and limiting the internet speed, which is a key aspect of the new online registration process. Another factor which was due to limited ICT knowledge among teachers making it difficult for them to key in pupils' details into the system with ease

6. Conclusion

As the finding reveals, there were mixed reactions to the challenges experienced during online registration. A few of the respondents found the process beneficial in the time spent compared to the previous manual system, where they spent more time filling the papers incurring high expenditure on registration materials. They also found the process to be convenient to them as they could register candidates even in their homes past the regular working hours. However, there are compelling reactions from the other respondents who believe that online registration is still ineffective regarding time spent; observations showed that they spent much time at the cyber, which lasted to several days without getting the feedback.

Some head teachers based their argument on the inconvenience caused by making trips to the cyber while they would be continuing with the curriculum. The system was not effective as some activities were still manual.

6.1. Recommendations

Based on this finding, the study recommended that the Government upgrade the online registration portal to accommodate any number of users at any time as many schools use the system during the period of registration.

The Government uses natural resources such as tapping energy through the solar system because this will reduce the cost of even paying the electricity bill, travel costs, and time wasted on the road.

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	Number of Candidates	Frequency	Percent
	Above 60	1	10.0
	21-40	4	40.0
	41-60	3	30.0
	Less than 20	2	20.0
	Total	10	100.0

Table 1: Number of Candidates Registered for KCPE

Figure 1: Challenges Encountered in the Process of Using ICT to Register KCPE Candidates

Figure 2: Time Used in Registering Candidates Online by Schools