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Abstract
This study examined the users’ acceptance of the EMIS for Jinja district’s education planning and management which is a pilot project. Basing on the technology acceptance model, the perceived usefulness of EMIS and perceived ease of use were considered as instrumental in determining users’ behaviour that ultimately led to use of EMIS. The study was conducted through a qualitative approach as it helped an in-depth and holistic perspective of the EMIS users through interviewing informants. Using phone interviews from 11 informants from all the sections of the District Education Department and a qualitative content analysis of the interview text done to interpret users’ perceptions of the system. Results indicate that the EMIS is perceived by user to be useful ever since its inception and it’s easy to use. In view of these findings the study concludes that EMIS is generally perceived to be acceptable to use but riddled with structural challenges.

Keywords: User acceptance, Information Systems, Local Governments, Education Management Information System, Technology Acceptance Model, Perceived Use, Perceived Ease of Use,
1.0 Introduction

Information and communication technologies (ICTs) have become part and parcel of human activities in various aspects. However, with emergency of e-Government, ICTs have also been employed in the enhancement of service delivery, among which are local governments. Information Systems (IS) have been helpful in a number of settings. For instance Legris, Ingham and Collerette (2003) maintain some of the many reasons as to why enterprises choose to invest in ISs are; the pressure to reduce costs, enhancing productivity without increasing costs, and improving the quality of services/products so as to keep in business. Similarly, the government of Uganda has in its draft National ICT Policy Framework (2003) underscores the role of information and communication technology (ICT) as a tool for social and economic development (Ministry of Information and Communication Technology, 2009). In this regard, ICT investments that are aimed to improve the public sector performance are already in place.

Uganda has a dualistic approach where ICT is divided into two categories. One manifests ICT as an enabler for implementation (e-administration and e-services among others), while the other considers it to be an economic development industry. The ICT sector is at three levels; **Policy level:** this is managed by the Ministry of Information and Communication Technology; **Regulatory level:** this has the regulatory bodies- Uganda Communication Commission (UCC) for communications, Broadcasting Council (BC) in charge of broadcasting, and finally the National Information Technology Authority (NITAU) that takes care of information technologies; **Operational level:** this level is composed of various government agencies such as ministries and other private entities. It is at this level that the Local Governments get involved.

1.1 EMIS in Uganda

Education Management Information System (EMIS) has been defined by Kurt (2001) as a system which comprehensively brings people, process and technology together to ensure timely, cost effective, and user appropriate information in support of management in the education sector. In Uganda likewise, EMIS is an ICT component and system in the Ministry of Education and Sports (MoES), which is planned to provide quality education statistics in a timely, cost effective and sustainable manner on a regular basis (MoES, 2005).

EMIS’s power cannot go without notice as Hua and Herstein (2003) propound that “Information-based decision making in the management of the education system has as its goals increased access, efficiency, effectiveness, equity, and quality of education through effective
systems of monitoring and evaluation, budgeting and planning, policy research and analysis.” Though still in its infancy in Uganda, EMIS has been identified as an initiative that could ease planning and management of the education sector in the country and also assist policy makers as they make crucial decisions. EMIS is also significantly improved and expanded by embracing ICT. For starters, the Ministry of Education and Sports procured computers and other accessories which have hardware and software installed for purposes of processing education data. The system is used to generally compile statistics in the education sector. So far, a few districts in the country are being subjected to a pilot study, among which is Jinja. EMIS functions include data collection, processing and utilisation.

Currently, the 112 districts are eligible for EMIS in their education departments and focus on activities such as the annual education census and school mapping exercises.

A number of researchers have delved into the use of EMIS in Uganda. For instance in a study conducted by the United States Agency for International Development (USAID, 2005), it was reported that the country’s EMIS was designed to measure the country’s education system on an annual basis as a way of ensuring effective education and planning. As such, by December 2004, EMIS training had been conducted to equip the Ministry of Education officials, District Education Officers and District Planners, among which were those from Jinja District.

In addition, Moses and Wium (n.d.) write that EMIS in Uganda is centred on technology which is readily available and can be locally supported. While Reinikka and Svensson (2009) have also in their quest to study the power of information in the public sector written about EMIS in the country as a system deployed by the Ministry of Education due to the perception of growth in demand for data. EMIS also requires good practices, people and technology (Kurt, 2009).

Despite the progress in EMIS in Uganda, there are a number of challenges like the lack of investments in the system even though there is need to ensure utility of data as well as proper planning (Kurt, 2009).

1.1.2 Jinja District Local Government

Uganda adopted the decentralisation policy in 1992 in which devolution of powers, functions and responsibilities are left to popularly-elected local governments (Kiyaga-Nsubuga, 2004). All functions including planning for social services were left to districts. The outcome of decentralisation according to Uganda is cost-effectiveness and hence use of e-technology has becomes a means in this quest. ICT have been adopted at districts as catalysts for more effective government through better access to services and democratic process (Asgarkhnai, 2005).
Besides this, “ICT in local government is being seen as central to the delivery of local services” (Worall et al, p.3, 2004). Such local services include those rendered by the education sector in the district.

Jinja district “is located in the south eastern part of Uganda. It is bordered to the east by Iganga and Mayuge districts, to the north by Kamuli district and to the south west by Mukono district” (Ssekiboobo & Nsubuga, 2003, p.14).

1.2 Why User Acceptance?

With the introduction of the EMIS in Uganda’s education sector, there are bound to be quite some changes in the way things operate. Under such circumstances, users come into the limelight, thereby making one question. In fact, “one of the continuing issues of IS is that of identifying factors that cause people to accept and make use of systems developed and implemented by others” (King & He, 2006, p.1). Moreover, “user acceptance of information technology has become a significant area of research in the discipline of management information systems in recent times” (Bandhyopadhay & Bandhyopadhyay, 2003, p.553).

According to Dillon and Morris (1996), user acceptance refers to the demonstrable willingness among a group of users to put into use information technology as they execute the tasks for which it is designed. This is mainly done as organisations seek to understand better why people accept or reject information systems (Chandio, n.d). As such, it can be regarded as an adequate indicator for the overall system success (Ammenwerth, Kaiser, Wilhelmy & Hofer, 2003) especially if the information systems are new (Dillon & Morris, 1996).

User acceptance is today treated as a multidimensional attitude which is influenced by a wide range of technical and social factors (Al-Busaidi & Al-Shihi, 2010), and it generally reflects whether a system adequately fits the characteristics of both the users and the tasks for which it is to perform (Ammenwerth, Kaiser, Wilhelmy & Hofer, 2003).

1.3 Previous Research

A number of studies have been conducted on the aspect of user acceptance of IS related projects, theories and models used in evaluating user acceptance, and the EMIS. These are presented in the subsequent sections.

1.3.1 User Acceptance of Information Systems and Technology

Some studies have been conducted on users’ acceptance of information systems and information technologies. Among them is one conducted by Riebeck, Stark, Modsching and Kawalek (2008) in which they studied user acceptance of mobile information systems for
field-based tourists. Their aim was to particularly measure user acceptance of mobile, location based applications in the tourism industry.

Similarly, Karaiskos, Kourouthanasis and Giaglis (2007) conducted a study to predict technology acceptance of pervasive information systems. In this, they examined the adequacy of the technology acceptance model, Diffusion of Innovations theory, the Theory of Perceived Risk and the Switching Barrier Theory in the evaluation of users. Results from the study indicate that the TAM variables of Perceived Used and Perceived Ease of Use dominate in assessing behavioural intention towards the pervasive information systems use.

Aside from the above, Bandhyopadhay and Bandhyopadhyay (2003) in their work entitled 'User acceptance of information technology across cultures’ compared user adoption behaviour of new technology, with special focuses on the Prepayment Metering Systems in the United States and India which are completely two different cultural environments.

1.3.2 Theories of User Acceptance

"A lot of research has been done to build theories of user acceptance and user satisfaction” (Ammenwerth, Kaiser, Wilhelmy & Hofer, 2003, p.644). In the same way, there have been a number of studies in which such theories have been applied to help in the understanding of end-user technology acceptance (Phuangthong & Malisuwan, 2008).

Prominent among theories studied are; TAM, Diffusion of Innovations theory (Rogers, 1995), Theory of Reasoned Action, UTAUT, Theory of Perceived Risk, the Switching Barrier Theory and the Model of Information Systems Acceptance (Delone and Mclean, 2003). However, TAM has been considered to be the most “promising, parsimonious and influential in explaining IT/IS adoption” (Phuangthong & Malisuwan, 2008, p.23).

The Technology Acceptance Model (TAM)

"TAM is a model based on the Theory of Reasoned Action by Fishbein and Ajzen (1975), was developed by Davis (1989) and expanded in Davis et al (1989)” (Bandhyopadhay & Bandhyopadhyay (2003, p.554) to explain why users accept or reject information technology (Legris, Ingham & Collerette, 2003).

In the model, it is assumed that users’ behavioural intention to use a technology is predetermined by two primary, separate but interconnected variables of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) (Bandhyopadhay & Bandhyopadhyay, 2003; King & He, 2006; Phuangthong & Malisuwan, 2008; Al-Busaidi & Al-Shihi, 2010; Chandio, n.d.; and Ammenwerth, Kaiser, Wilhelmy & Hofer, 2003). TAM helps in predicting information systems acceptance and diagnose any problems with the design if manifested (Chandio, n.d.) in a rather quick, yet inexpensive way (Phuangthong & Malisuwan, 2008).
To strengthen the aforementioned, Chandio (n.d, p.4) maintains that “while basic constructs of TAM; PU and PEOU have been considered primary determinants of individuals’ acceptance and use of technology, IS researchers have investigated and replicated these two constructs and agreed that they are valid in predicting users’ acceptance of various IT/IS systems.”

To the above, Hong, Thong, Wong and Tam (2002, p.100) add that “when compared to other theoretical models aimed at understanding IS adoption behaviour, TAM has been found to have similar or better explanatory power than more sophisticated models.” In addition, the model has been applied in a wide range of IS related organizational contexts due to its simplicity and applicability to different kinds of IT. Whereas TAM is a popular IS model, some scholars are sceptical about its application and theoretical accuracy given its expansive base of variable in the last ten years (Chuttur, 2009).

With the above studies put into consideration, it is worth noting that evaluating user acceptance in IS/IT related projects is very important and yet no empirical study had so far been done about users’ perception of EMIS as a management and planning system within the education sector, more so in Jinja District. The results from this study therefore are a contribution to all local governments in Uganda which are also expected to implement the same, and also to the Ministry of Education and Sports both now and in its future IS-related initiatives. Besides that, user acceptance studies are central to the successful implementation of all IS projects, therefore results from this study are significant to not only EMIS initiatives worldwide, but also to similar systems.

1.4 Aim of the Study

The study aimed at evaluating the perceived usefulness and perceived ease of use of EMIS by the Jinja District Education Department basing on Users’ Acceptance. Users’ acceptance model offers a mechanism through which I.S. projects are evaluated to determine their success based on usefulness and ease of use.

The research questions below guided the study:

1. What are the EMIS users’ perceptions of the usefulness of the system in their office work?

How easy do the users of EMIS in the district’s education office perceive it?

2.0 Method

2.1 Study Design
A qualitative approach— an inductive process in which data is organised into categories, after which patterns are identified (McMillan & Schumacher, 1993) was taken to get the user perspective of the EMIS in Jinja District where the system is still being tested (pilot project). Qualitative research is grounded in a philosophical position, which is broadly ‘interpretivist’ in sense that it is concerned about how the social world is interpreted understood, experienced, or produced (Mason, 1996, 4).

Specifically, a qualitative approach was chosen as it helped an in-depth and holistic perspective of the EMIS users through closer interaction with the informants (Farber, 2006). In this study, the key concepts were defined as follows:

**Education Management Information Systems (EMIS):** “An EMIS is an institutional service unit producing, managing, and disseminating educational data and information” (Hua & Herstein, p.4:2003).

**Local Government:** is defined by the Constitution of Uganda (1995) as a system based on a district as a unit under which there are higher and lower local governments and administrative units as Parliament may provide by law.

**2.2 Technology Acceptance Model (TAM): by Davis et al (1989)**

In this study, the Technology Acceptance Model (TAM) was adopted. Proposed, tested and revised by Davis et al, the model attempts to explain and predict why users sometimes accept, and at other times reject information systems. In this model, “a person’s acceptance of an IS is hypothesised to be determined by his or her intention to accept it. The intention in turn, is determined by a person’s attitude towards the IS and his/her perceptions concerning its usefulness” (Szajna, 1996, p.86).

![Figure 1: The Technology Acceptance Model (Davis, 1989)](image)

**Perceived Usefulness**: refers to the extent to which a person believes that using a particular system would enhance their job performance and effectiveness. While **Perceived Ease of Use** is the extent to which a person believes that using a particular system would be effort-free (Phuangthong & Malisuwan, 2008). Perceived Ease of Use is assumed to affect perceived usefulness.
For purposes of this study, factors such as finances that could have a bearing on user acceptance were held constant, and only the actual technology (EMIS) considered.

**Productivity**: this is the amount of output per employee such as number of reports generated by an IS within a stipulated period.

**Job performance**: this is an expectation from an employee in terms of quality and quantity.

### 2.3 Study Population and Sample Selection

The study was conducted among users of the EMIS is the Jinja District Education Office in March 2011. Users included in the study are the District Education Officer (DEO), Assistant District Education Officers (ADEO) and Inspectors of Schools. These are the people directly charged with using the EMIS, thus including them in the study of the system’s acceptance was worthwhile as it would yield the best results.

Since the study took a qualitative approach, it was not possible to cover everything (Lindlof & Taylor, 2002) as emphasis was laid on depth, but not breadth (Ambert, Adler & Detzner, 1995). As such, a representative sample of 11 informants was selected from all departments of the Jinja District Education Office using the purposive sampling technique (Patton, 1990). All departments from which the informants were chosen are directly charged with using EMIS in planning and decision making of education matters for the entire district.

### 2.4 Data Collection

Since qualitative research seeks to get in-depth information about a smaller group of persons, (Ambert et al, 1995) interviews with open-ended questions were used in this study according to the objectives. This was specially done as informants would be given freedom to answer from their own frame of reference (Bodgan & Bilken, n.d). The data was collected using an interview schedule (*see annex*) basing on the following broad TAM constructs; Perceived Usefulness and Perceived Ease of Use. The six specific questions of the interview guide were derived from the definitions of Perceived Usefulness and Perceived Ease of Use as provided in this paper. Since informants were geographically out of reach, phone interviews were chosen for data collection. The interviewer used an interview guide throughout the data collection process to brief respondents and to also ask open ended questions. Hand notes were taken during the interview sessions for purposes of content analysis subsequently.

### 2.5 Analysis of data

In this study, the TAM was used to qualitatively analyze and describe (Bjorn, Fitzgerald & Scupola, n.d) users’ perceptions on the use of the EMIS. To analyze users’ perceptions from the interview text, a qualitative content analysis, a method used for the analysis of any kind of
recorded communication was used (Kohlbacher, 2006). In this, a strict procedure was adhered to as a way of controlling reflexivity bias. The 11 interviews were carefully transcribed, after which, the transcripts used as an input for the content analysis (Wezemael, Verbeke, Barcellos, Scholderer & Perez-Cueto, 2010). This was followed by the text being divided into meaning units, which were labelled with a code (see coding sheets). The codes were eventually examined for differences and similarities, and divided into categories (Graneheim & Lundman, 2004).

In qualitative research, Wiersma (1995) suggests that post hoc, rather than priori conclusions should be drawn from the data. To draw a line between responses and their interpretation, quotations were used to clearly state what had been said, and what it was interpreted to mean.

2.6 Ethical Considerations
A briefing session before the interview begun was conducted to inform the informants of what the study was all about, how long the study would take, and what their rights were as they responded to the questions.

Aside from that, the convenience, privacy and comfort of the informants were put into consideration. Confidentiality was for example guaranteed by giving each informant a code (from 1-11) which was maintained throughout the study.

While reporting findings, clear distinctions were made between the collected data and its interpretation.

3.0 Results and Analysis
The study investigated EMIS users’ perceptions of the usefulness of the system in their office work and how easy the users of EMIS in the district’s education office perceive it. The results and content analysis from the 11 interviews are presented in the subsequent sections (for the content analysis coding sheets see appendices 2 and 3).

3.1 Perceived usefulness of the EMIS
3.1.1 Effect of EMIS on productivity
 Asked how the use of the EMIS will change their productivity, informants noted that the system has so far helped them to make better decisions concerning for example the ratio of teacher/pupils in schools at a faster rate. In addition, it was noted that the simplicity of the system enabled them to use it in their work and therefore lowered the cost of transactions that characterised use of outsourced IS consultants. Another informant noted that there has been a productivity improvement through accurate human resource planning in all schools and this
meant tighter control over manpower management. Also, informants observed that given the internal recruitment of staff who have a background in education, this has led to increased skill requirement through further training which has ultimately led to adoption of new human resource practices.

However, some informants highlighted the negation of the EMIS in view of productivity and one informant noted that,

“…a lot of time is spent on learning how to use the software given the different educational background of some of us (read users) as well as challenges to gaining relevant and reliable data for the EMIS.”

The results show a differing opinion between the roles of the EMIS on productivity. It should be noted from the preceding results that EMIS has changed users’ productivity by ensuring faster rate of outputs, operational efficiency and control of overheads. Thus IS improves employee productivity by allowing quick decision making and reduces cost of the educational department in tracking information and the number of employees.

3.1.2 Effect of EMIS on Job Performance

The study identified the ways in which the use of EMIS bolsters users’ job performance. Some of the informants noted that the EMIS had improved their job performance by allowing quick access to information needed to make important decisions relating to the school mapping exercises and the software are good for communication between stakeholders in not only the district’s education sector, but also with the Ministry of Education and Sports headquarters. A few informants had issues of learning to use the system in the short run, which is laborious. This they argued that for learners and first time users, computerisation has meant lost time for trainers and trainees in the training period which eventually affects output on job.

3.1.3 Use of EMIS as planning and management tool on the Job

It was important for this study to find the ways in which EMIS as a planning and management tools in Education Systems is useful to users on the job. It was said by many informants that they have gained greater management control in that they have been previously dependent on government units such as the Uganda Bureau of Statistics (UBOS) surveys for information but they can currently access and utilise it with ease. This has translated into easy access to information by several departments at the district.

The EMIS has also led to projects especially of manpower after school mapping that are accurate or now available to management and can make long-term strategic plans. This has however been hampered by the limitation of technology that has led some of them to use
manual and field excursions to verify sources of information. Many times, it was noted that
even the vital and useful information obtained is not acted upon especially that from primary
schools as they are the domain of districts.
Ultimately the preceding facts indicate that EMIS has led to provision of quality education
statistics in a timely, cost-effective and sustainable manner to a certain extent however, this
has been negated by structural situations and lack of information use as well as issues relating
to reliability and validity of some of the data provided.

3.2 Perceived Ease of Use of EMIS

3.2.1 Ease of learning EMIS

Asked whether informants find operating the EMIS easy to learn, many of the informants
stated that EMIS was easy to learn given that there is training for the system use. An
informant specifically stated:

“We have a training kit and this makes the system easy to learn”

However, a few who stated that it was not easy to learn attribute it to longevity (time taken to
learn), lack of motivation to learn, and lack of software adequacy.
Analysis indicates on the whole that the software is easy to learn but some structural factors
do affect the system’s ease to learn.

3.2.2 Operational Ease/Difficulty to utilise EMIS

Informants were asked how easy or difficult it was for them to get what they want from
EMIS. Many of the informants noted that it was easy for them to use it (the system) to
generate and use information for decision making, and they affirm that this has to do with
internal use. However those who state difficulties relate them to technological factors
/software inadequacy and IS support), information quality (validity and reliability) and
system consistency and interconnectivity with Headquarters.
From the foregoing, one notes that the ease to operate EMIS is related to internal factors,
certain factors within the macro environment lead to system operational difficulty.

3.2.3 Ease to Use System

In terms of ease of use of the EMIS system, informants noted that the system was easy to use
internally as it simple, flexible, and reliable, there is a training kit, and it is relevant to the
needs of the district’s Education Department. However an informant noted;

“It is part of my job and would be forced to use it even if it were not easy.”

It can be noted that from above that there is a general feeling of ease to use the system as a
whole.

3.3. TAM and the EMIS
Using the TAM model, a qualitative analysis was made (Bjorn, Fitzgerald & Scupola, n.d) about users’ perceptions of the EMIS to determine their acceptance of the system.

**Figure 2:** Analysis of users’ perceptions of the EMIS

The above figure shows the qualitative analysis of results fitted within the TAM. + represents positive perceptions towards the system.

As shown in the figure, almost all informants perceived the EMIS to be useful with very few reservations. In the same way, there were positive responses towards the perceived ease of use. These two (PU and PEOU) eventually affected the users’ intention towards using the system. Results indicate that all informants felt they would use the system.

From the analysis, Perceived Ease of Use of the EMIS affected Perceived Usefulness in that, informants thought they would use the system especially because it is easy to use (simplicity and ease to learn).

### 4.0 Discussion

#### 4.1 Users’ Perceptions

**4.1.1 Perceived Use**

The findings indicate that users perceive the system to have brought about improvement in their productivity, improved job performance, effectiveness on the job, and as a planning tool has been effective however, lost time when doing training was highlighted as a setback to users’ productivity and job performance and this needs to be addressed by managers if the systems is be efficacious. This also requires better investment in ICTs.

**4.1.2 Perceived Ease of Use**

The findings indicate that there was ease of use of EMIS, there is both ease and difficulty to operate the software as well as an ease with which to use the system. However, the ease to use the system seemed to override and users were willing to accept the system.
Aside from that, it was established that EMIS as a tool plays a great role in the efficient planning and management of the education sector. Such roles include the provision of the needed data in a quite timely manner. This in the Ugandan context is a big achievement since data inadequacy has in a number of ways retarded the country’s socio-economic development, yet both government and its development partners need it as evidence, or for accountability purposes (Kibombo & Population Council, n.d). Similarly, with EMIS in place, districts do not have to wait for the UBOS’ data from the Demographic and Health Surveys which only happen once every two years. Such data could also be obsolete at the time it may be used. Furthermore, results from this study relate to earlier assumptions of the TAM which suggest that although separate, the interconnected variables of perceived usefulness and perceived ease of use predetermine users’ behaviour towards a system’s use an information system or technology (Bandhyopadhyay & Bandhyopadhyay, 2003; King & He, 2006; Phuangthong & Malisuwan, 2008; Al- Busaidi & Al- Shihi, 2010; Chandio, n.d.; and Ammenwerth, Kaiser, Wilhelmy & Hofer, 2003).

4.2. Limitations
The study employed a qualitative approach in which perception was examined using content analysis based on the TAM model. However, a blend of both qualitative and quantitative analyses of the perceptions would have yielded richer results as it would offer users’ perceptions in a quantified manner too (Beck, 2006). That aside, only users’ of the EMIS in the Jinja District’s education office were included. With logistics in place, the involvement of more stakeholders such as the Ministry of Education and Sports, together with a sample of the schools within the district would give a wider perspective. Despite its limitations, this study should be considered by policy makers and users as timely given that it improve on local government’s performance accountability.

4.3. Conclusion
Examining user acceptance prior to the introduction of a technology or IS is very important. The study focussed on user acceptance (perceived use and perceived ease of use) of information systems among local governments in Uganda, specifically Jinja District. It aimed at examining the users’ acceptance of the EMIS for Jinja District’s education planning and management. This was due to the lack of empirical study done about users’ acceptance of EMIS as a management and planning system within the education sector, more so in Jinja District. The study concludes that EMIS is generally perceived to be both useful and easy to use by users in Jinja
District and this has made the users accept it. However many structural challenges exist which have limited the effectiveness of the EMIS in Jinja specifically and Uganda as a whole. Based on specifications of the findings of this study, the study recommends that there is need to address factors such as training, completeness of data and lack of network between districts and headquarters: and there is need to align some critical stakeholders such as schools and head teacher who are the primary generators of information and their involvement may determine the quality of information.

References


Appendix 1: Interview Schedule

1) Opening
   a) My name is Stella Bakibinga, a Master of Electronic Government student from Orebro University. Since you are working with the Jinja District Education Office, and are using the EMIS, I thought it would be beneficial interviewing you on matters relating on the same. This interview should take 30 minutes.
   b) The information you share will help in making the Ministry of Education and Sports and the whole world in understanding your perception as a user of the EMIS.
   c) What is the district’s education sector like (in terms of planning and management)?

2) Body
   a) Perceived Usefulness of the EMIS
      i) How will the use of the EMIS change your productivity?
      ii) In what ways will the use of the EMIS boost your job performance?
      iii) How will using EMIS change your effectiveness on the job?
      iv) In what ways is EMIS as a planning and management tool in the education system generally useful to your job?
   b) Perceived Ease of Use of the EMIS
      i) Do you find operating EMIS easy to learn?
      ii) How do you find it easy/difficult to get EMIS to do what you want it to?
      iii) In general terms, would you use the EMIS if you find it easy to use?

3) Closing
   a) A recap of the Body depending on the information provided by informant
   b) I appreciate the time you have given me during this interview.
   c) Would it be okay if I contacted you for further clarification if need arises?

Thank you once again!
Using EMIS in our office means a boost to my work because with it, data is centrally and simply accessible. Its effect is reflected in operational outputs. EMIS will increase efficiency and control of educational computerisation. I have been able to send timely data to my superiors. The system makes me perform better than before. With new skills acquired in using the system, I can perform better than before. EMIS is a blessing. We for instance do not need to do a lot of paper work in case of evaluation when required. I have been handling registers manually which slowed my performance. I can now work faster and smarter. The system makes the role of the DEO’s office of planning and managing district education data better. Maybe it will change our bad record of unreliable data. The system makes the district’s education planning and management more reliable. We no longer have to wait for the Uganda Bureau of Statistics for data if EMIS is in place. Education in the district is running smoothly from the time the pilot project kicked off. We have previously had problems with ‘ghost pupils and teachers’ but EMIS has the ability to detect all these. Yes, with school registers clearly sorted out, EMIS is a great planning and management tool. In education, there is a lot of planning to do. If EMIS has all that it takes to plan and manage, it then makes everything better.

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<td>Effect on productivity</td>
<td>EMIS is a boost to my work because with it, data is centrally and simply accessible.</td>
<td>EMIS to me means a lot of time wastage since I am required to train in its use.</td>
<td>I am an overseer of the district’s education services and the pilot period of the system has yielded better productivity as a whole.</td>
<td>I and my other workmates have been trained in using the system and we therefore do not need to recruit any IT consultants any more.</td>
<td>With EMIS I can handle a vast amount of data especially from the primary schools where enrolment is very high.</td>
<td>This is a computerised system which therefore has to work faster than we humans. It has increased my level of productivity due to faster results.</td>
<td>A lot of time is saved since I am trained to work faster than we humans. I don’t need to wait for expert help to work.</td>
<td>Computerisation increases productivity. I have also acquired new skills.</td>
<td>EMIS will make capturing educational data for the district less hectic than before.</td>
<td>Its effect is reflected in operational efficiency and control of overheads.</td>
<td>Using EMIS in our office means a faster rate of outputs.</td>
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<td>Effect on job performance</td>
<td>It will make my work faster than it has always been therefore making me deliver better results.</td>
<td>I perform lower than before because I am still trying to fully understand its operation.</td>
<td>I report to the ministry of education and sports, and so far I have been able to send timely data to my superiors.</td>
<td>The system makes me perform better than before.</td>
<td>I together with my colleagues in the past hustled to beat deadlines in vain. EMIS makes our work faster.</td>
<td>No direct effects since I have always performed excellently;</td>
<td>With new skills acquired in using the system, I can perform better than before.</td>
<td>EMIS is a blessing. We for instance do not need to do a lot of paper work in case of evaluation when required.</td>
<td>I have been handling registers manually which slowed my performance. I can now work faster and smarter.</td>
<td>The problem is that I have to master using it, otherwise, I think it can make my work better.</td>
<td>I am still struggling to perfect it, but I think it will make me deliver faster than I have ever.</td>
</tr>
<tr>
<td>EMIS on planning and management</td>
<td>The system makes the role of the DEO’s office of planning and managing district education data better.</td>
<td>Maybe it will change our bad record of unreliable data.</td>
<td>There is definitely a big difference in our planning for school at all levels ever since we were selected to pilot.</td>
<td>Quick availability of educational data also means quicker decision making especially when funds need to be requisitioned earlier.</td>
<td>With increased productivity, there is definitely better planning and management of the district’s education.</td>
<td>The data we have is now more accurate and reliable because the system easily detects errors.</td>
<td>We no longer have to wait for the Uganda Bureau of Statistics for data if EMIS is in place.</td>
<td>Education in the district is running smoothly from the time the pilot project kicked off.</td>
<td>We have previously had problems with ‘ghost pupils and teachers’ but EMIS has the ability to detect all these.</td>
<td>Yes, with school registers clearly sorted out, EMIS is a great planning and management tool.</td>
<td>In education, there is a lot of planning to do. If EMIS has all that it takes to plan and manage, it then makes everything better.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Effect on productivity</th>
<th>Accessibility of data</th>
<th>Time wastage</th>
<th>Better productivity</th>
<th>No need for IT consultants</th>
<th>Huge amounts of data handled</th>
<th>Increased productivity</th>
<th>Time saving</th>
<th>Nee skills acquired</th>
<th>Work is less hectic</th>
<th>Operational efficiency</th>
<th>Better output</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Effect on job performance</td>
<td>Better results</td>
<td>Lower performance</td>
<td>Timely data submission</td>
<td>Perform better</td>
<td>Timely submissions</td>
<td>No change</td>
<td>Better performance</td>
<td>Paperwork reduced</td>
<td>Faster performance</td>
<td>optimistic</td>
<td>optimistic</td>
</tr>
<tr>
<td></td>
<td>EMIS on planning and management</td>
<td>Planning and management are made</td>
<td>Optimistic</td>
<td>Improved planning for schools</td>
<td>Quicker decision making</td>
<td>Better planning and management</td>
<td>Accurate and reliable data</td>
<td>Availability of data</td>
<td>Smooth planning and management</td>
<td>Accurate data</td>
<td>A great tool</td>
<td>Great tool for education planning and management</td>
</tr>
</tbody>
</table>
**Appendix 2**

**Coding sheet 2: PERCEIVED EASE OF USE**

<table>
<thead>
<tr>
<th>Informant</th>
<th>Meaning unit</th>
<th>Ease of learning</th>
<th>Operational ease</th>
<th>General ease of use</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informant 1</td>
<td>It is quite easy to learn.</td>
<td>Even though it takes time to learn, it is not so difficult.</td>
<td>Once learnt, EMIS is fairly easy to operate.</td>
<td>I would say it is an easy system and i have no difficulties using it</td>
<td>Quite easy</td>
</tr>
<tr>
<td>Informant 2</td>
<td>It was very easy for me to grasp.</td>
<td>I can not explain why but it is easy.</td>
<td>EMIS is easy to operate.</td>
<td>Yes, i will use it because it avails information when needed.</td>
<td>Quite easy</td>
</tr>
<tr>
<td>Informant 3</td>
<td>I have been trained and easily learnt it.</td>
<td>Once dedicated, the system is easy to learn.</td>
<td>This EMIS is not difficult when one is trained.</td>
<td>I will use it since it is a simple system</td>
<td>Easy</td>
</tr>
<tr>
<td>Informant 4</td>
<td>We have a training kit and this makes the system easy to learn.</td>
<td>I have been trained and easily learnt it.</td>
<td>EMIS is a basic system which is easy to operate.</td>
<td>I will use it because of its simplicity</td>
<td>Quite easy</td>
</tr>
<tr>
<td>Informant 5</td>
<td>I learnt it quite easily.</td>
<td>I have been trained and learnt using it easily.</td>
<td>It is easy to operate.</td>
<td>I will use it for my work.</td>
<td>Easy</td>
</tr>
<tr>
<td>Informant 6</td>
<td>EMIS is easy to learn.</td>
<td>EMIS is easy to learn.</td>
<td>I have so far had no problems with operating it</td>
<td>It is part of my job and would be forced to use it even if it were not easy.</td>
<td>Easy</td>
</tr>
<tr>
<td>Informant 7</td>
<td>EMIS is easy to operate.</td>
<td>EMIS is easy to operate.</td>
<td>The system is easy to operate once one is trained.</td>
<td>EMIS is easy to use, and i will go for it.</td>
<td>Easy</td>
</tr>
<tr>
<td>Informant 8</td>
<td>We have a training kit and this makes the system easy to learn.</td>
<td>EMIS is easy to learn.</td>
<td>The system is easy to operate once one is trained.</td>
<td>Since it is easy to operate, EMIS will remain a part and parcel of my work.</td>
<td></td>
</tr>
</tbody>
</table>

**Appendix 3**