Integrating ICT in School Financial Management: A Case of a Secondary School in Tanzania

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ABSTRACT

As ICTs progressively revolutionalise every sphere of human interaction, most organizations have had to undergo radical changes in social interactions in the work pace and in business processes.

With the rapid development of ICTs in the workplace, the use and integration of ICTs in education in developing countries is also on the increase, mainly in teaching and learning. Despite the developments, ICT is yet to permeate other institutional functions and in particular, financial management in educational institutions.

Yet, the successful integration of ICTs in financial management leads to enhanced efficiency, transparency and accountability. ICTs in financial management also act as a deterrent to corruption and fraud.

This paper explores ICT integration in school financial management with a view of understanding the role it plays in enhancing the quality of educational management.

For most schools in developing countries, the mix of head teachers, teachers, IT technicians and other staff, parents, students and donors forms a critical social system to be considered if ICT integration is to spur quality in educational management. Consequently, there must be a match between the institution’s organizational culture and the new technology for it to fit in the institution to enhance the quality of educational management.

Research findings reveal that ICTs facilitate management of finances in a number of ways. ICTs facilitate financial transactions and the use of money, enhance budgeting
and budget control, and reduce chances of fraudulent loss of school funds. Furthermore, research
shows that while ICTs are necessary, technology leadership is even more important for
effective utilization of technology in managing school finances.

These findings may be useful in understanding how to introduce ICT related
innovations in schools, and especially how to use ICTs to manage school finances more
effectively.

**Keywords:** ICTs, leadership, technology leadership, technology integration,
financial management, quality of education.

**INTRODUCTION**

Both human and material resources are important in the running of an institution. For schools, the availability and management of resources affects the learning process (Blandford, 1997).

Finances are a material resource, and are the pivot upon which any institution revolves. Financial management, which Pandey in Idolor (2010) defines as the managerial activity concerned with the planning and controlling of a firms’ financial resources is therefore important for any institution. All other institutional decisions are made in tandem with financial decisions, implying that an institution’s performance is largely determined by the way finances are managed. Idolor (*ibid*) identifies the field of financial management to be of immense interest to academicians and practitioners, “…because it is an emerging discipline with many areas where controversies exist, and for which no unanimous agreement has been arrived at” (p. 8). Related issues include recording, transfer, use, and accounting for funds. With the introduction and use of information and communication technologies (ICTs) in the new globalised economy, ICTs in financial management is an emergent feature that cannot be ignored because of its role in enhancing management efficiency.
ICT has revolutionized every sphere of human interaction, becoming a fundamental conduit of social change (Watson, 2001). Many societies have undergone radical changes in the last decade, partly due to an increased pace of globalization and rapid developments in ICTs (Tinio, 2003). The changes resulting from information revolution have transformed the structure of modern societies from industrial to information societies. The transformation has resulted in the emergence of a new global economy fuelled and driven by information and knowledge (Tong & Trinidad, 2000). In information or knowledge societies, information is created to be shared freely among individuals, groups and across national boundaries. Such information is channelled both vertically and horizontally rather than top-down as is the case with teacher to student or centre to the field as is the case with governments to their various agents such as schools (Gaible, 2010). Because of these seamless channels of dissemination, ICTs have subsequently come to play a pervasive role in modern businesses, dominating almost every aspect of modern living (Mishra & Koehler, 2006). However, even with the massive gains that most sectors of the economy are reaping from information revolution, the rapid growth in technology and the emergence of the new knowledge economy have placed serious challenges on education (United Nations Educational, Scientific & Cultural Organization, UNESCO, 2005). While ICT integration is high in the West, most developing countries continue to be most affected by these challenges. Lack of ICT policies, shortage of funds to acquire ICTs, limited skills, negative attitudes and unsupportive cultures continue to challenge schools in developing countries in efforts to integrate ICTs into their processes and practices. Despite these challenges, schools have continued to put efforts to acquire ICTs for various purposes. Furthermore, while the problem of access to computers and other ICTs persists in many schools, researchers (Wabuyele, 2003; Isaacs, 2007) argue that teachers and head teachers [and other staff] are unable or reluctant to use ICTs in their operations even in schools with ICTs.
RATIONALE

ICTs are enabling tools which open up processes and channels of communication, creating a global village where all stakeholders are able to access information easily. Connectivity to the internet further facilitates the exchange of information in real-time. The successful integration of ICTs in business financial management and their (ICTs) ability to enhance efficiency, transparency and accountability, acting as a deterrent to corruption and fraud are indisputable (Chene & Hodess, 2009; USAID, 2008; Shah, 2007). Despite the wide use of ICTs in financial management in the business world, many schools have failed to tap the potential of ICTs into financial management. Most schools primarily use ICTs in curriculum delivery, or to teach ICT studies as a subject. These schools would benefit more if they deployed such ICTs in managing their finances.

To understand the process of integrating ICTs in school financial management and bring to the fore how schools can introduce ICTs to manage finances, a study seeking answers to the following questions was undertaken:

- How does the school leadership facilitate integration of ICTs in school financial management?
- How do ICTs facilitate management of school finances?
- What is the school leadership teams’ role in integrating ICTs in financial management?
- What factors facilitate/hinder integration of ICTs in school financial management?

SAMPLE

The sample school was purposive, targeting a school with a history of ICT integration in financial management. The participants targeted were staff involved in managing the school’s finances or maintaining the ICT technologies. To collect the data, it was important therefore to interview the head teacher, the finance manager, the IT technician, the BOG chairman and the auditor to understand how ICTs were integrated in managing the school’s finances.
METHODOLOGY

Data for this paper was gathered through three major sources: document analysis, interviews and observations.

Interviews were the main methods used to collect data. Semi-structured interviews and interview guides (Appendix A1 & A2) were used to gather data from the participants in separate one-on-one interviews. Semi structured interviews according to Robson (2002) give room to probe interesting leads and to seek for further clarification. The intention was to capture detailed views of the respondents (Creswell, 2007) about their interpretations and understandings of the role the head teacher played in facilitating ICT integration in financial management.

Observations and an observation check list (Appendix B) were also used to collect data. According to Denscombe (2003), observations do not rely on what people say they do, or what they say they think. Instead, observations draw on the direct evidence of the eyes to witness events being done naturally (Robson, 2002). Observations were carried out on the actual ICTs available to establish and verify the types and kinds of ICTs and software installed in the computers, and to find out if and how they supported financial management. This recreated the schools’ status of ICTs used for financial management. The head teacher and the finance manager were observed as they undertook financial management duties like posting payments and expenditure requisitions, cash book reconciliation and preparing both trial balances and financial statements to establish whether and how they integrated ICT in these processes. Observing the head teacher and the finance manager as they worked provided an opportunity to practically see how they utilized ICTs in financial management, and how the ICTs facilitated the process.

Documentary evidences such as school budgets, school books of accounts, school development plans, school strategic plans, and monitoring and evaluation frameworks were analyzed. The school budgets gave projections on the use of finances to acquire ICTs, software and staff training to support integration of ICTs in financial management. Strategic plans and development plans were analyzed to give bearing towards prioritization
of the use of ICTs to manage finances, while monitoring and evaluation frameworks 
recreated how the ICT 
integration process had been evaluated to remove obstacles in the use of ICTs and hence 
enhance it. Other financial documents like payment receipts, payment vouchers, cashbook, 
trial balances, and income and expenditure accounts statements were analyzed to show 
whether the school had been integrating ICTs in managing finances. Wellington (2000) 
identifies document analysis to 
be a rich source of data. These documents recreated past events, thereby helping to 
ascertain whether technological leadership for financial management had been part of the 
agenda in the school.

FINDINGS

ICTs Facilitated Financial Management

Analysis of the data collected showed that Bendera School (pseudonym) used ICTs in 
the management of its funds, that is, book keeping. All financial transactions undertaken in 
the school were effected through bank and online bookkeeping facilitated by TAS software. 
Blandford (1997) affirms that spreadsheets facilitate financial management. According to the 
finance manager, parents telephoned or visited the school to know fees balances which they 
then paid at the bank and brought the banking slips to the school for receipting. The finance 
manager affirmed that he retained a copy of the banking slip and that he entered the figures in 
the school’s computerised system and issued a computer generated receipt (Appendix C).

The figures are then encrypted and made available to the head teacher and other 
finance personnel. Integrating ICTs in financial management simplifies organizations’ 
workflow and transaction processes, enhancing the rate of working as well as links between 
individuals and institutions and minimizes administrative costs (Ministry of Finance, 
Georgia, MOF, 2010).

According to the auditor, encrypting the figures ensured that they could not be altered without 
authority from both the finance manager and the school’s chief executive officer. This was a 
valid system security measure to ensure that data maintained integrity by blocking against 
unauthorised changing (Bishop, 2003).
However, Bendera did not accept payment through the popular and commonly used mobile phone *m-pesa* for financial transactions. According to the head teacher, electronic money transfer through *m-pesa* to the school’s ICT system was not accepted since authenticating such transactions for receipting was hard. This implied that the school required proof of payment which could be retained for verification if need arose. Indeed, the head teacher expressed satisfaction with paying through bank, and said that newer technologies like *m-pesa* presented alternative avenues which the school could explore with time. The implication was that Bendera was open to new technologies to ensure that its finances are fully managed using ICT, but at the same time was careful that the possibilities presented by such technologies did not breach the school’s financial policy or procedures for accountability. As Shah (2007) alludes, changing from manual ledger systems should be gradual and both ledgers should be maintained until the system is secure and free from risk.

Analysis of bank statements revealed that the bank sends weekly statements of accounts (Appendix D) to the school electronically via e-mail. It was from these bank statements that finance personnel counterchecked and authenticated the receipts issued with the banking slips submitted. Furthermore, payments made by the school, including paying staff salaries were transacted through cheque or electronic funds transfer (EFT) to bank accounts which was facilitated by ICTs. Bendera was able to ensure that it did not lose money through fraud due to the use of ICTs to manage its finances, and controlled access to its finance information. USAID (2008) and Shah (2007) contend that ICT offers a wonderful potential of increasing accountability, transparency, and improving the efficiency and effectiveness in public sector financial operations.

Exceptions were allowed for cash payments below Tanzania shillings (Tsh.) 70,000 (about Ksh. 3,500) in a day. Besides being a security measure, limiting cash transactions implied that the school was committed to using integrated ICT systems to transact its financial business. Using ICT also helped to reduce chances of corruption and fraud.

Tenders for school supplies were placed through the media, and once applications were done, selection of successful bidders was done manually. Orders for supplies were done through e-
mails. On delivery of the supplies, payment vouchers (Appendix E) and receipts (Appendix C) were
generated through the computerised system and could be tracked and monitored through ICTs.

Daily balancing off of the cash book, preparation of the monthly trial balance and income expenditure accounts at the end of the year was also generated through the computerized system.

Furthermore, according to the head teacher, through the computerized system the school instantly accessed lists of debtors and creditors, and balances involved without having to flip through many manual book records. The computerized systems enabled Bendera to determine its revenue and expenditures instantly. At the end of the year, the instantly accessible detailed computerized records facilitated the school’s budgeting process. These findings were similar to Jones’ (2011) finding that by using ICTs, a leader is able to know the schools’ financial position at any time thereby reducing opportunities for being corrupt. Similar views were also advanced by Blandford (1997), USAID (2008) and Shah (2007) who argue that ICTs save time, energy and space, and remove the tedious and bulky manual mathematical calculations in manual financial management systems.

The computerised systems also gave Bendera the advantage of eliminating the bulky books of accounts common in manual systems. ICTs are effective and provide efficiency in financial control which has a positive impact on the quality of teaching and learning because systems in place work faster and can be monitored with ease (Blandford, 1997).

**Role of Leadership in Integrating ICTs in Financial Management**

Data collected revealed that leadership was important in integrating ICTs in financial management.

**Vision Setting**

From the data collected, it was evident that Bendera had a vision which recognized the value of technology in education. Analysis of Bendera’s strategic plan 2010-2013
revealed that the school vision entailed providing first-rate opportunities for students to excel in mathematics, sciences and technology. The vision suggested that Bendera recognized the need for advancements in science and technology for achievement of excellent students’ outcomes. Hew and Brush (2007) claim that developing a shared technology vision is “an avenue to coherently communicate how technology can be used, as well as a place to begin, a goal to achieve, and a guide along the way” (p. 234). The school’s vision aligned the aspirations of stakeholders with institutional aspirations enabling them to achieve their goal of integrating ICTs in financial management (Davies, 2006). According to the participants, the school vision was the reference point in planning and was considered in the implementation of all school programmes. According to Plomp, Anderson, Law and Quale (2009), when introducing ICT, leadership is important not just in terms of providing support but also in determining the goals and direction of the change.

**Capacity Building**

Analysis of the data collected showed that Bendera was keen in ensuring that it developed the capacities of its staff and students. Analysis of the school strategic plan 2010-2013 showed that the school intended among others to improve and extend ICT capability of students and staff. This depicted a school where acquisition of knowledge, skills and attitudes necessary for integrating ICT into the practices of its stakeholders was upheld. According to the head teacher and the IT technician, staff trainings were scheduled during the school holidays and the IT technician was in charge of training in ICT for all staff and teachers. Besides being an avenue for acquiring new ICT skills, the training sessions also created opportunities for staff to bond and develop as a team. Paul (1995) affirms that capacity building is a continuous process whereby people and organizations develop their abilities individually and collectively to perform activities, deal with problems and manage according to set objectives.

**Provision of ICT Resources**

It was evident from the data collected that Bendera aimed at ensuring that staff had adequate technological resources. Analysis of the school strategic plan 2010-2013 showed that the school targeted to implement a planned improvement in ICT equipment and infrastructure. According to the head teacher, these plans were in tandem with budgeting. Due to the various financial
requirements of any institution, planning is imperative and Bendera underscored this as a core activity from where it enlisted all its management needs, including technological requirements.

Through such planning, Bendera was able to acquire modern technological devices since they change with time. Anderson and Dexter (2005) affirm that it is the responsibility of school principals as technology leaders to provide for ICT resources through budgetary allocation if ICTs are to be successfully integrated in schools. Similar finding were brought to the fore by Lee (2000) who argues that acquiring technology and supporting the infrastructure are crucial areas of technology leadership, and principals as technology leaders must provide not only access to ICTs facilities; they must ensure that appropriate facilities are purchased and maintained.

**System Security and Access Controls**

The findings revealed that Bendera instituted measures to ensure its systems were secure and accessible by authorized persons only. Only staff working in financial management had access to financial records. Further security measures were the use of password protected user accounts, antivirus protection, backups and CCTV surveillance cameras.

Each staff had a password protected user account, and it was an offence to reveal ones’ password. Besides, each staff was required to change their user account passwords as frequently as possible. Furthermore, the school ensured that staff maintained high levels of confidentiality of its financial information and used ICTs like CCTV cameras and others to track and detect misuse of ICT systems or attempts to divulge confidential information or defraud the school. According to Jones (2011), electronic data provides a source of raw material for data and text mining and analysis methods to find unseen patterns.

Bishop (2003) argues that there is need to institute policies and procedures to take people working with computerized systems into account which this study also recognized. Findings in this study were also similar to findings by Garrison and Posey (n. d.) who argue that computer users should never reveal their passwords because this compromises network security.

Furthermore, the need to keep information or resources secret to ensure that only people with privileges viewed the information contained therein also correlated with Pearson and Oja’s (2011) findings.
All participants were in agreement on the use of data backups to secure data despite the known challenges attributable to the use of technology. According to the head teacher, finance data is encrypted and secured both in the finance server and in a handheld hard disk drive. This ensured that Bendera did not lose financial data in case of any damage to the computers. Similar findings were presented by Pearson and Oja (2011) and Vacca (2009) who recommend the need to consider backups and recovery plans in security of information systems. Garrison and Posey (n. d.) affirm that creating a backup by making a copy to a second medium and storing the backup media in a secure off-site location are necessary.

Observations of the systems security operations showed that the computers had ‘kaspersky’ antivirus security software installed. Staff were required to update their computer anti-virus protection daily, and scan all external devices and e-mail attachments before opening them. Indeed, several authors and researchers (Pearson & Oja, 2011; Vacca, 2009; Garrison & Posey, n. d.) affirm that viruses, corrupted media and e-mails are potential threats to saved data and should be protected and scanned using antivirus software before opening. Furthermore, Garrison and Posey (ibid) contend that the antivirus software definitions should be updated frequently as was found in this study.

**Monitoring and Evaluation**

Data collected revealed that Bendera monitored and evaluated its ICTs and ICT programmes. The head teacher noted that the school policy required submission of monthly reports to the school board for deliberation by the head teacher, the finance manager, the auditor and the IT manager. This suggested that there were clear role definitions for staff involved in monitoring the ICT systems, and that Bendera invested in ensuring that programmes were effectively monitored. Timelines for monitoring the programmes and submitting reports were also set to ensure that programmes were effectively and efficiently implemented. Furthermore, this indicated that the findings were deliberated on, and subsequently, the findings were used to further enhance the systems. According to Labonte (2008), a shared vision creates a sense of direction in integrating technology in education, spelling out the purposes of integration.
Further, data revealed that Bendera was able to establish staff development needs through the monitoring reports which facilitated planning for staff trainings. The head teacher revealed that it was from the monthly reports that staff training needs were identified and planned for. This implied that Bendera not only planned and offered trainings, but that the trainings were tailored to meet staff needs as revealed in the monitoring and evaluation frameworks. In their study on teacher’s perceptions to technology leadership among principals in elementary schools in Taiwan, Chang, Chin and Hsu (2008) found monitoring and evaluation important in assessing not only the growth process of staff in technology integration, but also in assisting to help establish future professional development plans for easier ICT integration. Bendera appears to have taken on a similar model, using monitoring and evaluation to assist professional growth and ICT expansion.

**Conceptual Framework**

In summary, to guide data collection and analysis, a conceptual framework was developed and used as shown in Figure 1. This framework is derived from literature on school leadership and was adapted to explore the school leadership and ICT interface.

**FIGURE 1**

*Conceptual Framework for Integrating ICTs in School Financial Management*
FACTORS FACILITATING INTEGRATION OF ICTs IN MANAGING SCHOOL FINANCES

Data collected from the study established that a number of factors made it possible for Bendera to integrate ICTs in managing its finances. These factors were availability of resources, availability of skilled personnel and supportive structures and culture.

All research participants admitted that availability of technological resources was a critical factor for successful ICT integration in financial management. This implied that Bendera’s leadership team understood their responsibility to provide ICT resources, and that these resources required money which had to be factored-in in the annual budget. Use of these resources would then make it possible for staff to work more effectively and efficiently. Besides, the ICT resources would increase rate of work and hence were handy tools for use to ensure that the school achieved its vision according to the participants.
These findings were similar to Mumtaz’s (2000), in a review of the literature on the factors affecting use of ICT who identified several factors including “…access to resources, quality of software and hardware…” (p. 1). According to Hennessy, Onguko, Harrison, Ang’ondi, Namalefe, Neseem and Wamakote (2010), availability of technology infrastructure especially internet access, bandwidth, hardware and software provision, electricity supply and the potential of portable and alternative energy technologies among others were necessary.

While the need for trained staff is indisputable, it was evident in the study that this was a key factor that facilitated ICT integration. According to all participants, computer skills were a basic requirement on appointment in Bendera. While there were opportunities to train staff through the regular in-house professional development programmes, the auditor quipped that it was not possible to be employed in Bendera without computer knowledge. This suggested that the school was apt at ensuring that it hired staff capable of using ICTs in their work processes. Indeed, it was evident through observations that none of the personnel worked without a computer and other accessories on a daily basis.

The need for skilled ICT personnel as evident in these findings resonates with Mumtaz’s (2000) review of literature on the factors affecting use of ICT. According to Mumtaz (ibid) background in formal computer training and commitment to professional learning are factors that influence the use of ICTs. Hennessy et al. (2010) further add that skills and technical expertise are a factor in successful ICT integration.

Supportive structures were identified as a facilitating factor by all participants, giving credit to the school board for ensuring that resources were availed and maintained in good working condition. The board chairman identified the support from parents to provide funds to acquire the ICT resources and to ensure that the school programmes were operationalized as a key factor in achieving the school’s goal of integrating ICTs in financial management among other areas. While the parents provided the money to buy the ICTs, programmes like training and monitoring and evaluation which Bendera put in place ensured that the process of integrating ICTs was sustained. Support from both the bank and
parents and the schools’ ICT vision gave the school a head start in ICT integration in financial management.

**FACTORS HINDERING INTEGRATION OF ICTs IN SCHOOL FINANCIAL MANAGEMENT**

Data revealed that limited skills, negative attitudes and a centralised leadership structure impeded the process of integrating ICTs in managing school finances. It was established from the data collected that some staff faced challenges in the use of ICTs, constituting a challenge to Bendera’s ICT integration process. Consequently, Bendera hired technicians to undertake major technical repairs which the IT technician was unable to handle. This according to the head teacher cost the school money which could have been saved if the technical knowhow was available from within. Furthermore, the changing nature of technology mentioned earlier added to the problem of skill limitations despite the trainings conducted in the school because newer technologies emerged with time, necessitating the need for continuous training. These findings were similar to Kessy, Kaumba and Gachoka’s (n. d.) findings that lack of human resources hindered the uptake of ICTs in educational settings in East African schools.

One participant argued that financial management is a book keeping activity which does not need continuous training. This implied that the participant did not recognise the value of training in improving the ICT skills of staff dealing with financial management, a negative attitude hinting that he would probably miss such training sessions at the slightest opportunity. The head teacher also questioned why the IT technician accessed her computer at will, even remotely, which pointed towards having a negative attitude.

Collusion between bank officials and the school finance staff who gave parents counterfeit banking slips at inception of the integrated system constituted a major challenge. However, thorough monitoring and audit, Bendera was able to track the problem and apprehend the culprits through the use of ICT systems. This showed that although Bendera faced challenges initially with staff who tried to beat the ICT system, mechanisms instituted enabled apprehension of the culprits and the malpractice was eventually eliminated. According to Shah (2007):
ICT can substantially reduce corruption, especially for those who do not understand fully the new technology but it also can open new corruption vistas for those who understand them well enough to manipulate them—particularly when their hierarchical superiors are unfamiliar with the new systems. (p.415-416).

The senior managers must have advanced ICT skills and knowledge such as proficiency in spreadsheets to be able to use ICTs in managing finances and to avoid being cheated by more proficient junior staff. Besides, auditing was helpful for identifying loopholes in the system.

**IMPLICATIONS AND RECOMMENDATIONS**

It is recommended that for schools to successfully integrate ICTs in their financial management practices, they should set more flexible structures within which to accommodate recurrent ICT needs like breakdowns and training. This will ensure that ICT devices are serviceable and in good working conditions throughout the year, and that staff are kept abreast with new ICT developments through recurrent trainings. Additionally, school leaders should develop clear ICT monitoring and evaluation strategies to help address difficulties and anxieties that staff experience in the integration process.

Secondly, schools should consider making their stores electronically accessible so that staff can instantly access balances of stock in stores to enhance procurement, and to make this widely used facility ICT compliant.

Third, schools should consider having only one integrated system which enables management of both finances and academics instead of having separate costly software.

Fourth, schools should find ways of compartmentalizing computers used by head teachers so that confidential information is not accessible to staff monitoring the computerized systems or working on them. This will enhance confidentiality of sensitive staff and school information in the custody of head teachers.

Furthermore, schools should develop websites into which fees balances can be uploaded. Such websites could have access controls so that a parent accesses only his/her child’s fees balances to avoid making the balances public. Alternatively, schools could consider sending fees balances to parents through e-mails to reduce trips parents make to
school. This would ensure that parents make only one trip to school to present banking slips for issuance of receipts.

Finally, Ministries of Education should consider setting legal frameworks for integrating ICTs in school financial management, and introducing integrated financial management systems in schools to assist in improving management of school funds. Consequently, the Ministries would need to train head teachers, auditors and other finance staff on use of ICTs in financial management.

CONCLUSION

Literature shows that ICT enables efficient management of finances and improvement in accountability. A qualitative case study was undertaken in a school on five participants purposively selected from staff involved in financial management. The findings revealed that ICTs facilitate school financial management. Furthermore, findings showed that school leadership played a key role in integrating ICTs in managing school finances. A shared technology vision articulated the school’s technological direction and spelt the role of each stakeholder. This created a synergy through which the school’s objectives on technology were implemented. Several factors were found to affect integration of ICTs in managing school finances.
REFERENCES


April, 2011 from
http://www.google.co.tz/#hl=sw&source=hp&q=kessy%2C+kaemba+%26+gachoka+The+reasons+for+under+use+of+ICT+in+education:+in+the+context+of+Kenya%2C+Tanzania+and+Zambia&btnG=Tafuta+na+Google&oq=kessy%2C+kaemba+%26+gachoka+The+reasons+for+under+use+of+ICT+in+education:+in+the+context+of+Kenya%2C+Tanzania+and+Zambia&aq=f&aqi=&aql=undefined&gs_sm=s&gs_upl=34671189710l311311120l20l110215968l0.1.2.1.0.3.1.2l10&fp=b03e55e8eb3f4cbf&biw=1366&bih=495


