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### *Editorial*

The Open University of Tanzania is celebrating its 20<sup>th</sup> anniversary this year. Being the first public Open University in Eastern Africa it has unveiled the best educational preference to many people in the region. The best learning process transcends the efficiency and ethics of a workforce. Through research and hard work, the university has been stirring social transformation evidently in the elevation of dependable approach in solving social problems consistently with the needs of the 21<sup>st</sup> century. Although the OUT doesn't brag for its learning output, its mission and vision attract many to share the reputation of belonging to such learning institution. The importance of this occasion inspires all university stakeholders to re-evaluate the contribution of the open and distance learning to the nation. The growth in delivering and expanding access to many students in Eastern Africa has been marked with increased knowledgeable workforce in the society.

Adult learning contributes in attainment of achievers of social reform and development. For 20 years, East African nations have absorbed graduates capable of transforming society dreams to reality. Learners' response in e-learning has proved that acquisition of knowledge and skills can be done in a non-tradition classroom setting. Deviating from conventional mode of delivery, learning becomes the source of interest and excitement to both students and scholars. The uniqueness of the Open University of Tanzania is realized in its attainable goals, and taking risks while embracing internal and external challenges. The opportunity to extend access and knowledge coincides with emphasis on andragogical learning methodologies. Mobilization of educational resources and guidance in the acquisition of new knowledge empower learners' confidence and sense of belonging to the institution. Inclusion of learners' background and experience has moderated the pace of learning whereby students are in control of what and when to take courses. An online learning method has encouraged students' inclination and motivation to engage in the 21<sup>st</sup> century technology. The OUT has adhered to students' quest for new knowledge through face to face sessions, virtual and physical libraries.

Open and Distance Learning (ODL) has liberated many individuals from stagnation to active participant through e-learning. Learners appreciate their recognition and inclusion of their experience in the learning process. ODL acts as the remedy of many shortfalls of traditional system of education. ODL is also mentioned by Mushi in her article to create free critical and relatively independent thinkers capable of interrogating, interpreting and innovating. East African governments have welcomed the OUT move to create challengers of actions, goals, social structures, traditions and thinking. Higher quality of learning and achievable goals override society status quo. Although liberation is refined by social transformation, the OUT is still challenging its staff and students to be more conversant with emerging technologies.

Human capital has been a pillar of OUT for realization of its goals. Outsourcing innovators and those proven to excel the norm, has made the institution firm to the

present. Mbwette and Ngirwa emphasized the importance of human resource managers to increase diversity of employees. Inclusion of individual's contributions enables the institution to achieve multiple goals. Differences offer higher chance of growth but is also mentioned by Mbwette and Ngirwa to elevate chances of creating specific challenges. The institution is current in its delivering superior knowledge through qualified individuals and its initiative in sponsoring its workforce in acquisition of new knowledge and skills. The stability of the institution to its core values is affirmed in its unitary vision of all stakeholders.

Dr. John Soka  
The Editor

# Human Resources Management Challenges in Higher Education Institutions in Tanzania

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**Abstract:** People constitute the most important resource in any organisation because they use other resources such as money, machines, materials, methods, information and time that enable organisations to function. People make organisations produce the goods and or services needed in the society to meet day-to-day needs. One of the challenges is the shortage of academic staff in Tanzanian Higher Education Institutions that leads to increased moonlighting and hence poor quality teaching, due to the staff being over-deployed. Another challenge is shortage of HRM experts and the lack of well trained and experienced staff in the area, it is not possible for HEIs to recruit and retain a good manager for an extended duration because of demands for HRM.

There are twenty three (23) HRM functions prior to underlining the fact that Human Resources are the most important resource in any organisation. The evolution of management of human resources in HEIs since the 1960s has been reviewed indicating that it was only very late in the 1990s and early 2000 that most Tanzanian HEIs started to realise the critical importance of HRM. The author has presented 14 (fourteen) critical challenges facing HRM in Tanzanian HEIs prior to highlighting a number of potential future challenges that deserve to be anticipated in time.

## Introduction

Human Resources is defined as “the individuals who make up the workforce of an organisation” (Human resource, 2011a). Others literature defines it as “The persons employed in a business or an organisation” (Human resource, 2011b). On the other hand, Human Resource Management (HRM) is regarded to be the function within an organisation that focuses on recruitment, management, and the direction of the people in the organisation (Heathfield, 2011). Human Resource Management is the management of an organisation's employees. This includes employment and arbitration in accordance with the law as well as the organisational directives (Human resource, 2011b).

Ngirwa (2006), on the other hand defines human resources management as a set of management actions intended to influence the effective utilization of human resources in the performance of work in organisations. It is the art of guiding a group of employees to effectively achieve the organisational goals as defined by its most up to date strategic and business plans and the targets set for each employee.

## HRM Functions in Work Organisations

The twenty three HRM functions that are considered to be very relevant for Tanzanian Higher Education Institutions (HEIs). Ngirwa (2006), Mbwette and Bakari (2010), and Human resource (2011b) mentions the following as are functions of HRM:

- |                                     |  |
|-------------------------------------|--|
| 1) Recruitment,                     | 13) Compensation,                                      |
| 2) HR Planning,                     | 14) Health and safety management,                      |
| 3) Job Design,                      | 15) Labour relations,                                  |
| 4) Orientation and placement,       | 16) Disciplining,                                      |
| 5) Training and development,        | 17) Counseling,  |
| 6) Career planning and development, | 18) HR Accounting,                                     |
| 7) Performance appraisal,           | 19) HR Audit,  |
| 8) Motivation,                      | 20) HR Policies and Procedures,                        |
| 9) Job satisfaction,                | 21) Performance Management,                            |
| 10) Quality of work initiatives,    | 22) Human Resources Information System (HURIS),        |
| 11) Management of communication,    | 23) Management of termination of employment contracts. |
| 12) HR supervision,                 |  |

While there is no reason to dwell with their definitions or descriptions in this paper, their relative importance will be demonstrated when discussing the HRM challenges.

### **Importance of Human Resources Management**

All organisations in the world include people. People constitute the most important resource in any organisation because it is people, acting on the other resources such as money, machines, materials, methods, information and time that enable organisations to function. It is people therefore, that make organisations produce the goods and or services which they were established to produce, and which society uses to satisfy its day-to-day needs.

People are not only the most important resource any organization possesses but their activities constitute a huge investment and expense item in all organisations' income. For example, the U.S. Government reports show that, approximately 73% of the U.S. national income is used to compensate employees in various organisations. US Government 1991. In Tanzania, for instance Higher Education Institutions annually spend between 60 and 80 percent of the annual budget on human resource compensation.

Like all other categories of work organisations, HEIs expend resources of a technical and human nature as they function. The resources of a technical nature mainly include machines, money, materials, methods, information and time while those of a human nature include the organisation's employees. HEI managers should see their human resources not as a dispensable bother, but as a crucial resource that no technological revolution will completely eliminate in the production processes of work organisations. In order to improve the understanding of the pivotal position and comparative importance of human resources vis-a-vis other types of resources, it is important to examine and appreciate the following five differences as narrated in the literature such as in Ngirwa (2006):



- (i) Human beings are the most important resources of any organisation. Human beings are the resources which HEIs cannot function or survive without to produce organisational results, and technological explosion.
- (ii) Human beings are unique creations and thus act and think differently due to individual differences in abilities, needs and motivation to work, as well as in work attitudes (Glueck, 1982). This calls not only for HR skills but also tolerance and great understanding.
- (iii) Human beings belong to many organisations at the same time, thus carrying with them a mix of influences which complicates their behaviour. HR must adopt different situations by unlearning influences from their positions and roles in previous organisations to be able to fit well in their new positions and roles in their new organisations.
- (iv) Human beings possess a sense of purpose and choice. Unlike the other resource categories, they are able to work consciously towards the achievement of their objectives. They can explain why they join organisations, why they remain there, and why they do or do not co-operate in performing this or that task within the organisations. Human beings remain the only resource category that can say yes when they mean no and vice versa.
- (v) Due to their uniqueness and multiple memberships, in many organisations human resources are not always rational. Their behaviour and performance cannot be programmed. For instance, HRs can be hard working on Mondays and Tuesdays but they can be low performers on Wednesdays for some reason.

### **The Major Historical Changes in HR Management Practices in Post-Independence Tanzania**

Since the colonial rule, human resources matters of all public institutions as well as Government departments were constantly guided by the Standing Orders prepared based on existing policies and relevant laws as approved by Parliament from time to time. As early as 1964, the Government of Tanzania prepared Staff Circulars (URT, 1964) that were based on a number of Ordinances that continued to be used until 1967 when the parastatal organisations were established. Following nationalisation some private property were placed under the Standing Committee on Parastatal Organisations (SCOPO). It administered Parastatal Service Regulations. Government Ministries and Departments were guided by Standing Orders that were periodically updated like the 1994 Standing Orders (URT, 1994). The latest version of the Standing Orders was produced in 2007 as the second tool after the enactment and approval of the Employment and Labour Relations Act of 2004 and by the President. The disbanding of SCOPO in 1992 led to the division of parastatal organs into two categories. Those that were defined as “productive” e.g., Tanzania Electricity Supply Company (TANESCO), Tanzania Railways Corporation (TRC) were granted full operational and management autonomy as guided by their respective Boards. Other parastatal organs e.g., HEIs were categorised as “unproductive” and unfortunately these were placed under the management of a HR unit under the Treasury Registrar who is the custodian of Government investments. Thus management of HRs in this latter category was

placed under performs its oversight role through directives. As a result of the above narrated frequent changes that have occurred at macro level, some degree of abandonment of good old practise of pilot testing circulars before they are released for wider applications.

Though most public institutions and government ministries and departments knew that National laws and policies were super-ordinate, a number of gaps were felt thus leading to the need to provide more guidance at institutional level. A number of circulars that were sent to the public HEIs could not be implemented due to having a much bigger population of staff who would qualify to be paid certain compulsory benefits and incentives. Their implementation required that the public HEIs be allocated additional funds beyond those allocated as “Other Charges” (OC) that is wholly consumed by activities associated with academic discourse. A good example here is that while the Government to date assumes that housing allowances can be payable from the OC allocation, the magnitude of funds allocated for OC is so small that public HEIs cannot pay their staff such allowances, unless it is provided by the Government from other sources as periodically done now. A mere pilot testing of such allowances should have led one to conclude that payment of Housing Allowances from OC is not feasible due to the low budgetary allocation given by the Government to HEIs. To date, HEIs are not given any funds to pay for initial costs associated with their recruitment covering luggage transport, fares and per diems.

A number of HEIs have had to prepare their own, terms and conditions of service as done by UDSM since its inception in 1970 (UDSM, 1970) in order to customize the HRM Directives of SCOPO or the Treasury Registrar. However, later on they also had to prepare Schemes of Service that had to be approved by the SCOPO secretariat and subsequently the Treasury Registrar prior to use, thus leading to HEIs having too many different Schemes of Services for Administrative and Technical staff even within one Ministry instead of having standard Schemes for all. As a result, approval of new Schemes of service by Treasury can take two years. Because of the disjointed approach, there are no agreed terms and conditions of service for top university managers of Tanzanian HEIs.

### **Evolution of the Organisational Structures Responsible for HR Management in HEIs in Tanzania**

Luhanga *et al*, (2003) has explicitly narrated how most post-independence African universities faced a crisis of identity as well as their relationship with the state as a result of not regularly reviewing their curricula and hence bringing doubts of their relevance, apart from the crisis of maintaining the inherited organisational structures in post-independence. In addition, apart from the problems emanating from the macro policies and the rigid or inflexible legal environment, the universities were staffed with senior managers who never had any training in HR or even personnel matters but somehow, they were expected to manage human resources management matters on their own. At that time, it was erroneously imagined that any good manager can easily

manage HR as exemplified by a Secretary to Council of UDSM acting as the Chief Employer in the 1970s and early 1980s. However, when the number of staff and students increased, and the funding started drying, HEIs realised the need to have, apart from the Terms and Conditions of Service, well defined schemes of service based on the Treasury Registrar's Circulars after the demise of SCOPO.

The next stage of realisation was for the need to have their own (institutional) comprehensive Human Resources Management policy that was based on the National policies, Acts and service regulations as guided by the Treasury Registrar. At this point, their Schemes of Service had to be drawn based on their own HRM policies that even forced them to employ qualified and experienced HR experts (e.g. UDSM, 2004a & UDSM, 2004b) after the establishment of Directorates responsible for HRM for the first time in the early 2000s. Furthermore, the lack of understanding of the critical role and importance of HRM, made the Tanzanian HEIs to start teaching HRM within their undergraduate curricula in the mid-1990s while specialisation at Masters level at UDSM only started by late 1990's. To date, fully fledged Masters degrees in HRM are offered at OUT in Tanzania and in Kenya in collaboration with the Institute HRM in Nairobi as well as the M.Sc, (HRM) at Mzumbe University (Kuzilwa, 2011). It is quite clear that to date, there is very little appreciation of the role of HR as the most important resource in Tanzanian HEIs. The early imagination that a HEIs can manage HR matters well while relying on macro level policies, Acts and regulations only died away very fast. Today some training in HRM is required for the HRM managers

### **Absence of a Tanzanian HR Professional Association**

Due to the fact that to date, human resources management is not yet considered as a profession in Tanzania, many HEIs erroneously assumed that human resources management functions could be performed by any university officer with little consideration for relevant training. Examples include cases where at difference times some universities (e.g. UDSM and OUT) allocated human resources management duties to staff trained in English literature, law, agriculture and even mathematics.

For instance, highly trained staff requires a highly communicative and participatory management style with:

- Low emphasis on staff loyalty and obedience to their seniors, implying that managers earn their legitimacy more from hard work, straight and fair leadership than from the authority surrounding their structural positions as narrated in literature. (Burns and Stalker, 1961).
- High emphasis of the bottom to top and lateral (i.e. among peers) communication style, implying a relatively higher emphasis of open and free communication among employees.

Again due to the absence of a HR professional association to oversee the professional conduct of HR, practitioners in Tanzania to date, there is no professional code of ethics to bind and guide HR practitioners in Tanzanian HEIs. As a result, many HEIs in Tanzania are managing their human resources with varying standards of effective.

### **Challenges Facing HRM in Tanzanian HEIs**

**Staff Retention.** One of the challenges facing HEIs in Tanzania is the retention of its trained staff. Yet HEIs are willing to continue training and developing their employees. HEIs should note however, that it is not enough for the Government HEIs or Development partners to spend money on staff training and development only but they should also spend money to retain the trained staff. As a matter of fact, if HEIs do not retain their trained staff ultimately, it will probably be a waste of time and resources to train them, because they surely will lose them! In the environment of liberalised economies, qualified human resources will be difficult to restrict to HEIs, which often compensate them poorly and keeps them under poor working condition unless some measures are taken to supplement it with self generated funds.

**Shortage of Qualified and Experienced HR Managers.** Currently, because of the general shortage of HRM experts in Tanzania, and the lack of well trained and experienced staff in the area, it is not possible for HEIs to recruit and retain a good manager for an extended duration because of the schemes of service with much lower pay than in other industries, be they public or private. In addition, public HEIs have very limited funds to support staff training and development in their budgets as provided for by the Government and the self generated funds. In addition to the above challenge, nowadays there is general shortage of academic staff in the recruitment catchment in comparison to the increasing number of universities that have to recruit more qualified staffs that are simply not there. In a devastating study of the HR situation in the education sector with country showed that the majority of staff in almost all universities public and private are tutorial or part-time.

At the moment, even institutions that teach only call themselves Universities instead of being referred to as glorified secondary schools or at most mere colleges. The worst case are those HEIs that almost exclusively teach only courses whose programmes qualify for the HESLB funds. Such universities are reported to sometimes ensure all students pass in their examinations at the expense adhering to quality.

**Increased Staff Awareness of Their Rights.** HEIs have to be aware that due to the general enhanced awareness of the rights of Tanzanian employees as well as the staff of most HEIs through civic education as well as the educational programmes given to the staff, have to be careful with the manner in which they handle disciplinary cases in order not to bring their institutions into disrepute and unnecessarily losses. Where a staff member's contract has to be prematurely terminated, it is necessary to seek a comprehensive HR and legal opinion on the best way for the institution to get out of such a contract without any regrets because current policies are designed in a manner which favours the employee more than the employer. Caution has to be exercised to avoid making even the smallest procedural errors even if it may not be substantive. Sometimes the inclusion of law experts can justify the legal process in handling issues of rights and justice.

**Ineffective Staff Deployment Due to Increase in the Number of HEIs.** The shortage of academic staff in Tanzanian Higher Education Institutions has led to increased moonlighting and hence poor quality teaching, due to the staff being over-deployed. It is necessary to allow staff members a certain degree of freedom but must be controlled, such as monitoring extended absence without permission.

**Technological and Scientific Developments.** New technologies pose an opportunity as well as another challenge to human resource managers. In general, technological changes affecting human resources management are widespread, but probably none are more dramatic than those related to computers. In addition to using computers in performing the traditional functions of accounting and payroll calculations, computers today can be used to maintain and facilitate access to employee data that are valuable in HR planning, job placement, training and development as well as deployment. Technological development arouses the need for job redesign, recruiting, retraining, re-design of remuneration, review of schemes of service, review of HR policies and procedures, etc.

Computers can also be used in employee training, workforce planning, management of employee exit programmes, as well as compensation management. Cyberspace and the Internet are changing the way human resources managers are used to operate. Today, it is possible for a human resources manager to conduct research using electronic databases, recruit personnel and disseminate information to various departments and employees, networking, as well as conducting useful group meetings at minimum cost to their organisations.

**Succession Planning.** Succession planning identifies specific employees, who in due course, will fill key positions in the organisation. It is normally done for managerial job positions, but it may be extended to cover other technical positions in the organisation. Succession planning is a demonstration of concern for the continued stability and sustainability of an organization.

Currently, Tanzanian HEIs are not doing serious succession planning and thus losing its benefits namely: maintained stability of their organisations' performance when their good people leave we need to cherish the principle that "we design organisations to live longer than their members".

**Ageing Staff Cohorts.** The ageing phenomenon amongst university staff is another HR challenge in Tanzanian HEIs. The number of senior staff is rising systematically in practically all HEIs in Tanzania. Deliberate HR strategies e.g. recruitment of young graduates, better staff remuneration, staff retention strategies, succession planning, should be forged to ensure the maintenance of a balanced age-mix in the workforce teams of Tanzanian HEIs.

HEIs need to adopt HR policies that encourage ageing senior academicians to mentor, coach and supervise junior staff in teaching, research and consultancy rather than deploy them on loaded routine duties that demoralise and rob them of the time to incubate the younger colleagues.

**Student Crises.** Student crises pause another HRM challenge to Tanzanian HEIs. Student crises have an impact on the management of human resources in HEIs. Students constitute the most important stakeholders in HEIs in that they are the reason for the continued presence of both academic and support staff in HEIs. Some Organisational analysts regard students as the raw materials which HEIs transform into their intended outputs (Ngirwa, 2006). Certainly no industrial organisation would like to see her major raw materials involved in any form of crisis as that would threaten the organisation's productivity and life. Mbwette and Ishumi (1996) have clearly suggested that student crises be as much as possible prevented in the first place and if they cannot, they must be pre-empted and finally, they ought to be well managed when they occur. Student crises disturb peace and the work environment and schedules for all staff and students, often make university campuses unsafe, reducing or halting the volume of services when students are suspended. They also cause disruption of university and individual plans, causing the convening of remedial emergency meetings they lead to wastage of time through supervision of implementation of decisions to send students home, sorting out of names of students who should return and those who should not, and readmitting and re-registering students. They also result in staff leave suspensions, threats to staff and sometimes damage to infrastructure.

### **Diversity in the Work Force**

A close examination of recent national and global initiatives to provide increased opportunities for women to access higher education, to participate in economic and political activities, suggests that the future will see a rising percentage of female managers and employees in Tanzanian private and public HEIs. This particular dimension of workforce diversity will have such significant ramifications for HEIs such as considerations for childcare, spouse relocation, maternity leave, and flexible hours for maternity leave, and stay-at-home assignments and jobs.

Therefore, HR managers must start to recognise diversity among employees. People are diverse: they will not all look and act the same way. Organisations must create and review HR policies to guide HEI managers in decision-making so as to enable them to respond better to the unique needs of employees as individuals.

Increasing diversity e.g. in terms of gender, race, age, religion, and disability will create certain specific challenges but may also make significant contributions.

Increasing diversity will present organisations including HEIs with new opportunities e.g. a culture of greater tolerance of different behavioural styles and views. Such an opportunity will lead to better business decisions and certainly enhance the capability of employees to respond to diverse groups of customers.

### Structural Changes

Modern work organisations in Tanzania today have to undergo structural changes. The most common of these changes are:

- **Re-engineering** refers to a fundamental re-thinking and radical re-designing of business processes in order to achieve dramatic improvements in cost control, quality re-assurance, service, and speed.
- **Downsizing** is the process of laying off a significant numbers of employees in order to strike a balance between the desired size of the workforce in relation to the available quantity of work.
- **Rightsizing** is closely related to downsizing. Rightsizing is the continuous and proactive assessment of mission-critical activities of the organisation and its staffing requirements with the objective of ensuring that staffing levels remain meaningfully relevant to the current and foreseen “mission-critical” activities.
- **Outsourcing** is the decision to sub-contract work to outside organisation that specialise in a particular type of work. Examples of work that is normally contracted out include consultancy services to formulate HR policies and procedures, review of staffing levels, review of organisational structures, review of schemes of services, design of training programmes, or undertaking estates cleaning work.

### Managerial Changes

In post-socialist Tanzania, many organisations are approaching the recruitment function more professionally than before, in order to curb the problems of recruiting unproductive and persons with the wrong qualifications. In the same spirit, so HEIs are opting for contract rather than permanent terms of employment in order to induce their employees to earn their stay in the organisations rather than merely “remaining around and being careful not to rock the boat”.

Also many organisations are avoiding the build-up of fleets of pool vehicles, and opting for hiring transport services when they require them, or encouraging their managers to own private vehicles and chauffeur themselves for an allowance. The challenge facing HR management here is how to “keep their hands off” but “maintain eyes on” in the management of out-sourced services.

### Government Regulations

Governments have been making a number of new regulations and laws such as in the areas of employee participation in multi-party politics, health and safety, equal employment opportunities for men and women as well as disadvantaged groups, pension reforms, labour unions, and the environment. Such regulations and laws introduce the need for new skills for networking initiatives, handling of cases, and implementing court decisions.

### **Empowerment of Employees**

In many enlightened work organisations, employees are considered associates or partners. The challenge here is to make managers reject the by-the-numbers approach to management, recognising that an increasingly important part of their role is to show others that they really care. Human resources managers are redesigning jobs, in order to make them more humane and flexible, designing better career ladders, paying people better, and improving working environments and tools.

### **Organisational Culture**

As a result of regionalisation and globalisation, Tanzanian universities and other HEIs find that they have to interact with people from other cultures in the world. As a consequence, investors and employees have to learn new values, while seeking to influence foreign values. Martin and Siehl (1983), define organisational culture as the values and beliefs that are shared and expressed through various means including organisational stories and ceremonies. It is important to note that an Organisational culture is normally established over time and it is likely to influence the behaviour of employees in the organisation as is articulated its own identity.

### **An Insight of Future Challenges**

In order to meet the challenges of the future, tomorrow's human resources departments will have to be much more sophisticated than their predecessors. In almost all African countries today, the role of human resources management is expanding faster than ever before. It is essential that human resources managers be integrally involved in their organisation's strategic and policy-making activities. There is a need to be an autonomous department of human resources management and its head reports to the chief executive officer and sits on the Board of Directors, the Planning Committee, and other key participatory organs.

If the future human resource managers are to earn the respect of their colleagues and of top management, they are going to have to work hard to overcome certain negative impressions. This could be accomplished in four ways.

*First*, organisations should shift from conducting the human resources function with "common-sense personnel".

*Secondly*, human resources managers will need to become well-rounded businesspeople. This means, that in addition to being well grounded in the basic disciplines of the HRM profession, human resources managers should strive to increase their conversance in the complexities that face their work organisations. This initiative will assist to overcome the misguided feeling among people that HRM experts do not understand the operating problems and issues facing their organisations.

*Thirdly*, human resources managers should strive to become greatly knowledgeable about current and future trends and issues in their organisation's operating environment.



*Fourthly*, Tanzanian HEIs will have to promote the effective deployment of human resources. Human resources managers should learn to be proactive and to seize opportunities to demonstrate how they can positively affect the bottom line such as:

- (i) Reduce unnecessary overtime expenses by increasing productivity during a normal working day.
- (ii) Stay on top of absenteeism and institute HR programmes designed to reduce money spent for time not worked.
- (iii) Get rid of time wastage by employees through sound job design.
- (iv) Minimise employee turnover and underemployment.
- (v) Install and monitor effective health and safety programmes to reduce lost-time, accidents and keep medical and workers compensation costs low.
- (vi) Train and develop all employees so that they can improve the value of their contribution to the organisation and do a better job of producing high-quality products i.e. graduates, research reports, consultancy reports, publications etc and services at the lowest possible cost.
- (vii) Decrease costly material wastage by eliminating bad work habits and attitudes and poor working conditions that lead to carelessness and mistakes.
- (viii) Recruit the best people available on the market for all job positions and keep an eye on overstaffing or its potential.
- (ix) Maintain competitive pay practices and benefit programmes to foster a motivational climate for all employees.
- (x) Encourage all employee categories to contribute ideas for increasing productivity and cost reduction.
- (xi) Encourage management practices that focus the university in performance of more on cores than support activities. Wherever possible, procure support services from outside rather than getting the university to provide them.
- (xii) Utilise employee skills acquired through training by redesigning jobs of trained human resources to include duties that utilise the new skills.
- (xiii) Increase pay packages of trained staff. Pay increase in the form of increments and allowances are an effective strategy of recognising employee training efforts.
- (xiv) Promote trained staff.
- (xv) Symbolically recognise employee training efforts. Employees returning from training feel honoured if they are congratulated through a letter of commendation or even a small party.

### **Necessity to Introduce an Effective Performance Management System (PMS)**

Performance management is the process through which managers ensure that employee' activities and outputs are made congruent with the organisation's goals. (Noe *et al.*, 2004). With a well designed PMS, Tanzanian HEIs can effectively:

- Define their performance processes by participatory setting of institutional performance targets where-from the supervisors and subordinates cascade divisional, directorate/departmental objectives, departmental/sectional targets, and individual targets. Through this sub-process all employees at all levels

become part of their organisation's plans and not only the top management Staff.

- Measure the performance of their employees through the Open Performance Review and Appraisal System [OPRAS] as stipulated in Establishment Circular No. 2 of 2004 and from TFN 832. The appraisal of the employees performance starts with the employee's self appraisal and ends up with the supervisor as a second opinion, thus minimizing the chances of disagreement between the two.
- Feedback performance information to all employees is transmitted through an appraisal meeting involving supervisors and employees. The aspect of feedback is a marked benefit of OPRAS and the PMS in that it is a basis of performance improvement and minimisation of conflict between supervisors and subordinates on the one hand but eventually among the entire work force.

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## **E-learning System Success: Challenges of Mainstreaming E-learning in Zimbabwe**

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**Abstract:** *As the e-learning system promises a new way of delivering education, the need to ensure e-learning system success becomes imperative. However, after 65% of the students failed to voluntarily register for an e-learning blended programme, in three universities, this research set out to find the challenges of mainstreaming e-learning in the Zimbabwean context. This was a survey of a purposive sample of 60 students and 54 university lecturers from three universities who are part-time tutors of the Zimbabwe Open University. The study found out that the divisive vectors of race and inequality appear to re-emerge via technology which is at best stagnating and at worst putting minorities at the margins owing to the dilapidated infrastructure, the digital divide that characterize students in the universities under study, lack of teacher competencies, and challenges of accessing electronic materials. In such instance, e-learning was seen as the monster under the bed and technology adoption acceptance is grossly affected. In this study, historical, technological, social, political and economic challenges appeared to be inextricably linked. Thus the research recommend the need to enable the technological possibility for students to be masters of their own destiny by changing the way they live, work, organise, communicate and interact.*

### **Introduction**

According to Doiron and Asselin (2011), the cumulative advances and innovations in digital technologies, coupled with the evidence that learners entering tertiary education today have changed fundamentally in their learning needs/styles have awakened us to the realities of new learning landscapes which are emerging around us. This means that, digital scholarship which Mutula (2011) posits being perceived as a networked, scholarly or academic environment with pervasive integration of digital technologies in everyday learning and research, the necessary physical infrastructure both on and outside campus for access, integration of university information systems such as institutional repositories, online public access catalogues and content management systems, that allow seamless access to content needed for research, publication and scholarly communication, is here to stay. Youngman (2007) concurs and points out that digital scholarship is the most important thing in contemporary scholarship. However, these sources of readily available information can be of importance to universities if there is e-learning system success especially in Open and Distance Learning institutions. Sadly this is not the case since these institutions face a plethora of contemporary challenges owing to hyper-turbulence in the environment (Chiome, 2011). This culminated in 65% of students enrolled in an e-learning blended programme failing to voluntarily register – hence prompting this study.

There are some opportunities offered to e-learners by the wave of digitalization facing the world today. Leading much of this transformation has been the exploding innovations within academic library communities (Henning, as cited in Chiome, 2011)

where it is no longer the *status quo* model of “if you build it they will come”, but rather new challenges for librarians to create dynamic and integrated systems of delivery and service provisioning (Casey & Savastinuk, 2007). Web 2.0 (Chiome & Kurasha, 2011) which refers to second generation internet-based services such as social networking sites, wikis, communication tools and folksonomies that emphasise online collaboration and sharing among users (O'Really, 2005) are also transforming the learning landscape further widening the gap between those with access to these services and those without who are left while other users not only consume content but create it as well (Pienaar, 2008). As educators, we need to take seriously Koren -cited in Mutula's (2011) stance that the right to information is a fundamental human right, which is crucial to human development and important for every human being.

These transformed learning landscapes are arising in direct response to how contemporary youth are transitioning from the secondary to post-secondary system (Tong, 2010). According to Chiome and Kurasha (2011), there is need for a re-thinking of e-learning scholarship practices. A new pedagogical approach that puts the student's needs at the root of the e-learning quality process is what ODL institutions should strive for. What this means is that e-learning need to incorporate aspects of enjoyment in its operations in order to attract users. Enjoyment is a major factor that drives users to use a new technology (Bruner & Kumar, 2005). Perceived enjoyment or the extent to which the activity of using the technology is perceived to provide reinforcement on its own right, apart from any performance consequences that may be anticipated (Davis, Bagozzi, & Warshaw, 1989). According to Tong (2010), this characterization of technology adoption is consistent with research on retail shopping behaviour. Carr, Peck and Carson (cited by Tong, 2010) asserted that while some consumers may be shopping primarily for instrumental purposes, others may be primarily enjoying these interactive media. Sadly, in developing countries the situation may be different at a time when ODL is making attempts to mainstream e-learning in its operations. The authors argue that literature informing educational change, based on understanding today's learners, can strengthen developments towards twenty-first century only if other inequalities in society are addressed concurrently.

Technology adoption researchers (Asare, Alejandro, & Granot 2011) propose a set of principles for building new learning landscapes which capitalize on changes in students' expectations for their learning and creates a vision for socio-technological learning contexts which change the dynamics of ODL through attributes that have been well researched and proven time and time again to have a strong relationship with the decision by an individual to adopt an innovation (Asare et al., 2011). In comparison, the usage and integration of the internet and other digital technologies into the daily lives of students in the developed world show dramatically escalating trends (Rye & Zubaidah, 2008). It has been pointed out that the behavioural intentions of technology user are an important measure of technological acceptance. This stance is also taken by Lee (2006) who maintains that the behavioral intention to use is a measure of the likelihood a person will employ the application. A question remains: that how then are

those who do not have food on the table expected to benefit from this digital revolution. Is it possible to mainstream e-learning and at the same time equalise educational opportunities? Or that there is now a widening gap between rural usage of digital technologies by ODL students and the paucity of usage opportunities in urban settings and well to do communities, an idea that is shared by Aboelmaged (2010). Zimbabwe Open University introduced e-learning through zouonline.

The overall goal of the study was to identify implications of this e-learning programme on learners' predominant usage of, and preference for, digital technologies and how these might impact the teaching and learning environments in an ODL context where some students live in remote areas lacking electricity. Specifically, the team selected rural based students and their tutors in order to explore questions of how e-learning match the profile commonly described of Net Generation youth; how they use digital technologies for learning and socializing; and how well faculty succeed in matching their traditional goals for higher education with this generation's "digital mindset" (Doiron & Asselin, 2011). In other words, the question is: is it possible to mainstream e-learning under the circumstances?

### **Some Challenges Related to Mainstreaming of E-Learning**

In a comparative study of online Chinese and American shoppers, Tong's (2010) findings revealed that only 51 percent of the Chinese respondents had online shopping experience. On the other hand, Kim and Stoel (2004) posit that if consumers' online purchase experiences are positive, then they will foster positive attitude toward online shopping and be willing to shop online in the future. The Graphic, Visualization, and Usability (GVU) Center at the Georgia Institute of Technology has conducted Web user surveys every 6 months since 1994 (Pitkow & Kehoe, 1996). The results from the most recent survey identified some key ease of use problems. Most frequently cited was the slow speed of downloading or viewing Web pages. Other problems included being unable to perform such tasks as finding a page that users knew existed, organizing the pages and information they gathered, finding a page once visited, and visualizing where they had been and could go to find information. If students under study are meeting the same problems, then they will not be very willing to part with their money and register for an online course. Asselin and Doiron (2008) found out that many students are disengaged with their school work and are more interested in what is happening outside of school. In such a case students in poverty stricken areas will not enjoy the benefits of e-learning considering that Chiome and Kurasha (2011) pointed out that there is still progress to be made, in particular as regards student involvement in e-learning in ODL. To this end, one may as well point out that: "Their backyards are the world, not just the local neighbourhood" (Asselin & Doiron, 2008, p. 6).

Closer to Zimbabwe, Brown and Czerniewicz (2008) on trends in student use of ICTs in higher education in South Africa revealed that despite the rise of Web 2.0 tools for sharing information, 25 per cent of students do not share resources using these tools, about half does not upload resources using these tools and 67 per cent does not use

these resources to publish content. A total 75 percent does not use blogs as part of their studies, 67 per cent does not exploit the option of working collaboratively with other students online. In most cases, we are quick to blame the students yet they may not be getting the instructional support they need to be critical consumers of information from the internet (Latham & Gross, 2009). Asare et al. (2011) also maintain that among the few papers that focus on B2B technology adoption, several approaches with numerous overlapping and divergent constructs and models have been used. Research about young people's internet literacy reveals a critical need for instruction in these higher level aspects of new literacy (Asselin, 2007). Additional research is therefore needed to provide further understanding of the issues that organizations have to consider when making the decision to equalize educational opportunities through e-learning. Doiron and Asselin (2011) point out that educators must continue and even step up their efforts to embrace digital technologies, find ways to integrate them meaningfully into their classrooms and, in some ways, relinquish some of the power and control over learning to students. It is likely to be true that the "best way for students to learn about the world they live in, is to have a hand in creating it" (McHugh, 2005, p. 7).

### **Statement of the Problem**

Mainstreaming e-learning will enhance digital scholarship which is now the thing of the moment in ODL institutions. However, an alarming number of students are not benefiting from this wave gripping the global village owing to a number of challenges that this research set forth to unearth. The subject of challenges of mainstreaming e-learning in Zimbabwe has hardly been researched in a digital scholarship environment. Consequently, there is limited Zimbabwean literature on the subject, hence this study.

### **Research Question**

This research sought to answer the question: What are the challenges of mainstreaming e-learning in Zimbabwe?

### **Significance of the Research**

Empirical research is needed to address issues of mainstreaming e-learning in developing countries in a digital learning and research environment in order to leverage the proliferation of technology to optimise benefits for scholarly endeavours. Institutions of higher learning, especially universities, must strive to integrate into their learning and research strategies challenges of mainstreaming e-learning and other aspects of digital scholarship to ensure that information and communication technologies that are implemented meet acceptable scholarly standards with regard to access, usability, productivity and more. Issues of mainstreaming e-learning have been of immense importance owing to the evolving knowledge economy and the perversity of information and communication technology in society emanating from increased rollout of e-government infrastructures throughout the world by governments.

## **Methodology**

This research uses a qualitative approach to enable the authors to develop an in-depth understanding of issues around challenges of mainstreaming e-learning in an ODL institution in a developing country. By using a qualitative approach, the authors were able to explore and discover new and important themes, relationships, and perspectives that have not been previously covered in mainstreaming e-learning in a developing country literature. Since the purpose of this research is not to test a hypothesis or verify a theory but rather to develop new ideas and inform our understanding of mainstreaming e-learning, a qualitative approach is appropriate for achieving those goals (Strauss & Corbin, 1990). A case study approach was used and methods outlined by Rossman and Rallis (2003), Seidman (1998) and Strauss and Corbin (1990) were emphasized. This was a survey of a purposive sample of 60 students and 54 university lecturers from three universities who are part-time tutors of the Zimbabwe Open University. The goal of this research was to develop an in-depth understanding of the issues that students consider and experience when institutions decide to make e-learning the in thing in their learning. This research uses a qualitative approach to collect and analyze data, and in-depth interviews were conducted to help generate new themes, and ideas about the challenges of mainstreaming e-learning (Rossman & Rallis, 2003).

A semi-structured interview guide was utilized in conjunction with an open-ended questionnaire technique. This enabled the researchers to cover the main topics and categories while remaining flexible and open enough to pursue topics that the participants bring up while being interviewed (Rossman & Rallis, 2003). Participants were provided with informed consent forms to explain what the study was about, their level of participation and also to guarantee them confidentiality. As an incentive to participate in the study, participants were offered a copy of the completed study. In all, ten in-depth interviews were held with tutors. All ten interviews were tape-recorded and fully transcribed. The remaining 44 tutors and 60 students answered an open-ended questionnaire.

## **Data Analysis**

The researchers analyzed the collected data using a thematic approach. Researchers who use this method allow patterns and thematic connections to emerge out of the data and do not address the material with a pre-determined theory or hypothesis in mind (Seidman, 1998). The authors used an elaborate multi-stage process to code, analyze, and interpret the data generated from the interviews. The main coding process used was Strauss and Corbin's (1990) three stage coding process in combination with methods outlined by Rossman and Rallis (2003) and Granot (2006). The first step in the process was the open coding stage. This stage involved the labeling and reduction of data into conceptually similar ideas and categories (Pandit, 1996). The next stage was the axial coding stage where the categories identified in the open coding stage were further searched and reduced into multiple patterns, clusters and themes (Strauss & Corbin, 1990). The final stage was the selective coding stage where the patterns and themes



identified in the previous stage were integrated into a central and core theme (Pandit, 1996). The main themes that came out were presented in tables and then discussed in themes.

## Results

While the debate regarding the mainstreaming of e-learning rages on, new thinking emerged that questioned the role and efficacy of mainstreaming e-learning in a third world country. One even said it is (in his/her words) *atrophying*. It is the gap between the respondents in this study and what is happening elsewhere that is worrying. While the respondents in this study claim e-learning is stagnating and putting minorities at the margins, 79% (Table 1); elsewhere it is noted that the application of third generation (3G) mobile communication technologies has triggered the rapid development of mobile commerce (Zhou, 2011). On the other hand, according to a report issued by China Internet Network Information Center (CNNIC), the number of mobile internet users has reached 277 million, accounting for 66 percent of the internet population (CNNIC, 2010). A variety of mobile services such as short message services, mobile instant messaging, mobile search and mobile games have become popular among users. Sadly, this was not the case in this study in which technology was said yet to be atrophying in developed countries, students can access mobile internet to acquire information and services at anytime from anywhere (Zhou, 2011).

Table1

*Challenges to mainstreaming e-learning in Zimbabwe. N=114 and F=Frequency*

E-learning issue raised	Agree		Not sure		Disagree	
	F	%	F	%	F	%
E-learning is putting minorities such as women blacks and physically challenged at the margins	90	79	3	3	21	18
The divisive vectors of inequality are evident in e-learning	100	88	2	2	12	10
Dilapidated infrastructure is a challenge for mainstreaming e-learning in Zimbabwe	85	75	2	2	27	23
A very wide digital divide characterise students in higher education in Zimbabwe	81	71	1	1	32	28
I do not own a computer	110	96	2	2	2	2
Leaner support service did not change to accommodated online support services	76	67	0	0	38	33
Online learning is greatly affected by the availability of internet services.	70	61	3	3	41	36
Tutors are not competent enough to provide adequate e-learning services.	98	86	1	1	15	13

Institutions intending to mainstream e-learning should embrace Sharma's (2011) suggestions pointing out that several advantages make distance learning become popular and important. Convenience and flexibility are some of the main reasons. With

the growing number of Internet users, Web-based distance learning programmes enable lifelong education anytime at any location. Scalability of participants is another advantage. With a proper support of network infrastructures and computer systems, a large number of students will embrace e-learning and mainstreaming e-learning will be mere formality.

### **Emergence of the Divisive Vectors of Race and Inequality**

The study found out that the divisive vectors of race and inequality appear to re-emerge via technology 88%. Widmer (2011) posits that while working against the danger of creating further exclusion, e-democracy clearly is an enormous opportunity for the society. With today's tools it gets simple to create school democracy, spreading information and involving students in decision making processes in their schools. This is a great opportunity to take ownership of their learning, giving the space for innovation and creativity by putting the learner into the centre. Like in the citizenship education also in the use of the Internet as new type of society, the development and learning process from the passive consumption or observation to the active and critical participation has to be facilitated and learned consciously. Lamentably for the students and teachers in this study, it was deplorably saddening to note that this was not the case in this study in which e-democracy is turning into e-exclusion.

### **Double Edged Role of ICT**

It was the contention of the respondents in this study that ITC is a double-edged sword. They pointed to the double-edged role of Information and Communication Technology. They claimed that ICT can be a facilitator of equal educational opportunities and at the same time a potential risk to equality in education owing to the dilapidated infrastructure 75% and the digital divide 71% that characterize students in the university. Some supporting arguments were as follows:

*“The dilapidated ITC infrastructure in ZOU means lecturers and support staff will be frustrated in their efforts to re-generate the university. It is inappropriate to shuffle something as important as access to educational opportunities to the periphery because of technology.”*

*“There are promising initiatives in the form of ZOUONLINE that can be utilized to re-generate the university. However, the digital divide that exists among the students in various situations risks increasing the gap between the rural based students and the affluent ones if efforts are not made to bridge it. As it stands right now, mainstreaming of e-learning is not possible right now when technology is atrophying these chances”.*

What the respondents in this study appear to show is that owing to dilapidated infrastructure, mainstreaming e-learning is a challenge, yet Hume (2008), suggests that perceived value is the most important indicator of repurchase intention. This means that digital scholarship is under threat. According to Mutula, (2011), digital scholarship may be perceived as a networked, scholarly or academic environment with pervasive

integration of digital technologies in everyday learning and research, the necessary physical infrastructure both on and outside campus for access, integration of university information systems such as institutional repositories, online public access catalogues and content management systems, that allow seamless access to content needed for research, publication and scholarly communication. On the other hand, e-research appears to be in jeopardy owing to the dilapidated infrastructure, yet it is closely related to the concept of digital scholarship. O'Brien (2005) says e-research is perceived to mean large-scale, distributed, national or global collaboration in research. Such kind of research typically entails harnessing the capacity of information and communication technology (ICT) systems, particularly the power of high-capacity distributed computing. It is also hailed, according to O'Brien (2005) as an aid to that is used to study complex problems across the research landscape. This valuable aspect of e-learning is still a pipe dream in some rural areas of Zimbabwe with dilapidated infrastructure.

On the social plank, one of the major arguments for ODL has been its ability to increase access to education together with facilitating equity in an area which has all along been a preserve for the elite (Neely & Tucker, 2010). On the other end, with the changing social, political and economic environment all over the world, as the changing needs and expectations of learners highlighted the arrival of the *new learner* questioning the relevance of many a traditional course. ODL cannot escape the arrival of the new learner who expects programmes that are socially relevant and meet his/her needs and expectations. According to Mutula (2011), the new learner can be absorbed in a digital scholarship environment when the online systems facilitate a variety of tasks related to supporting different scholarly scenarios such as: collaboration, virtual project teams, communication, administration, etc. This is still far from reality considering that the majority (110) 96% do not own a computer and if responses in this study are anything to go by. It is the wish of the respondents in this study that associated information are effortlessly accessible to the new learners.

### **Use of Traditional Support Services**

It was the contention of the respondents in this study that in spite of the proliferation of online learning, support services are failing to move with the tide. Universities still offer traditional learner support services 76 (67%). An extract from the responses pointed out that:

A learner's distance learning know-how is often fashioned by the quality of the services that support the educational process. Online learners have an advantage from learner support services exclusively designed to meet the learners' needs but sadly this is not the case as universities stick to their traditional learner support services.

The concerns with support services by the respondents in this study were further echoed by Sharma (2011) who lamented that support service systems that are easily

accessible to on-campus learners frequently are deficient in distance education programs, directing to further remoteness of distance learners. Even the most extremely motivated and independent distance education learners can find their experience lonely, difficult, and occasionally intimidating (Sharma, 2011). A shortage of ample learner support services can be disappointing and lead to failure. Chiome (2011) also made comments related to this issue by pointing out that with the growth in number of institutions offering distance education and the growth in learner numbers, tele-learning is introduced in the third generation. Print materials are still used, but a shift to the focus on learner support is made. Henning, cited by Chiome, (2011) also pointed out that UNISA embarked on a series of workshops for senior management with an expert in online teaching to teach them to assess technologies available to facilitate Open Distance Learning in the University. Now, open and distance teaching staff can decide if they should communicate by using Blogger, Wikispaces, or Twitter to support students.

### **Challenges in Accessing the Internet**

The respondents in this study pointed out that because they were rural based, they faced challenges of accessing the internet (70) 61%. Some who lived in towns also said they face the same challenge since their work places did not have the internet. “We do not have access to the internet. We have to travel to the very few providers to queue for our turn the whole day. Sometimes the network is not available and the net is so slow that one will not download a single document”.

When students get experience with the internet, they adjust their perception of it as a learning medium in a positive direction (Monsuwe, Dellaert & Ruyter 2004). Concerning access to new technology, Kirkwood in (Rye & Zubaidah, 2008) problematised the social repercussions of making computer use obligatory for Open University, UK students. They considered this a potential threat against the liberal principles of an open university. Later they also adopted a global perspective on the same issue (Kirkwood, in Rye & Zubaidah, 2008). Others, such as Aboelmaged, (2010), also warn against a situation where new technology might raise the quality of ODE, but also exclude groups of students that were initially a target for such universities. They both pay special attention to students in developing countries as this is where the access to new technology is most limited. Their fears were confirmed in this study, but in sharp contrast to Mutula (2011)’s observations that, digital information resources are being relied upon as primary or complementary information sources of scholarship and scientific journals that were, a few years ago, produced largely in print format, are now rolled out first as e-versions. Libraries are also transforming their print collections through digitisation or subscription to e-journals, with or without print alternatives to make them more accessible and to enhance resource sharing. Through digital scholarship information is delivered to users 24/7 via intranets, the internet and other fast and emerging networks (Mutula, 2011).

While the requirements of educational institutions such as universities and E-Learning content providers are vital, the requirements of end users (i.e., the learners) must be taken into bearing in the design and advancements of the technology. To such an end, Vaughan and MacVicar (2004) maintains that E-Learning, as with any learning, is destined to fail when it fails to successfully focus on learners and their unique individual needs as was the case in this study. For instance, developers require taking into bearing access to E-Learning infrastructure. High Internet access charges often deter students from accessing E-Learning curriculum outside classroom. When this is the case, arrangements must be made for learners to access the Internet at workplace or campus websites.

### **Challenges in Accessing Electronic Resources**

The respondents in this study were concerned with the availability of electronic resources that could help them in their e-learning. This statement sheds light on this issue: "I have challenges in accessing electronic resources. Even the university library is failing to provide us with electronic resources". Challenges with electronic resources appear to slow down mainstreaming e-learning in ODL. In fact Park and Jun (2003) confirmed this development in which they indicated that the more experienced and satisfied technology users are with the technology, the more likely they are to make repeat purchases. This is further supported by Chiome (2011) who posits that modern ODL institutions have to establish systems for the distributed facilitation of learning after registration; this includes provision of tutors, equipped learning centers, libraries, information, and communication technologies. Henning (cited by Chiome, 2011) further point out that every learner, lecturer, research or any other staff members of the institution is entitled to have access to the library and information services of the institution despite their geographical location. This will include direct communication with the library staff in an appropriate medium of communication and regardless of the location of the library staff members and the client.

ODL libraries should therefore manage and plan its services in such a way that they meet the information and resource needs of clients wherever they are located. This appears to further confirm that the concerns of respondents in this study were real. Sharma (2011) also adds his voice on this issue and posits that learning through distance education using computer-mediated environment has become not only an accepted norm, but also a necessity in the field of retraining working professionals. ODL should have realized that the quick flow of information and the ensuing rapid change in all disciplines have made it essential for incessant improvement of all professionals. With the learners engaged in work-related commitments, distance learning utilizing computers has improved the learning environment whereby the learners have access to improvement of programs without having to physically go for the courses and yet being in steady contact with the resource persons as well as the other learners.

### **Teacher Competencies**

E-learning teacher competencies were cited as a challenge to mainstreaming e-learning (98) 86%. To this end, some put it this way: “Mainstreaming yes but do we have tutors with capacity to deliver on line. If not do we have funds to train teachers to do this?” All these questions raised by the respondents in this study appear to point to the fact that mainstreaming e-learning is still an uphill climb to the bottom. At the same time the students who are disadvantaged have had their right to information violated. UNESCO (2008) is explicit about commitment to the free flow of information and access to knowledge sources . . . for “the wide diffusion of culture and the education of humanity for justice . . . liberty and peace . . .” Yet in this study, respondents point out that tutors lack competencies to guide students to prosperity. In this regard, UNESCO (2008) further posits that access to information for all . . . is a fundamental right which should be upheld with greater efficiency and imagination in a spirit of equity, justice and mutual respect. UNESCO further states that promoting ethical aspects and principles that espouse creative multilingual content, universal access to information and communication, best practices and voluntary, self-regulatory, professional and ethical guidelines should be encouraged among media professionals, information producers, users and service providers with due respect to freedom of expression for equitable presence in, and access to, cyberspace. When these values/rights are upheld consistently, they engender trust in the systems, institutions or individuals who have responsibility to uphold them but when they are violated they cause distrust.

### **Conclusions**

The purpose of the research was to mobilise key stakeholders so that they support the mainstreaming of e-Learning in open and distance learning as an agent for modernization of education, for all subjects and skills. The research looked at challenges in terms of the current situation of ICT for education and training in the Zimbabwean context, the potential obstacles to full scale adoption of eLearning, and the necessary pre-conditions to mainstreaming it in ODL processes. In this study, historical, technological, social, political and economic challenges appeared to be inextricably linked leading to challenges that include ICT infrastructures and teachers' competencies. Startling revelations came out from this study where e-learning was seen as the monster under the bed and technology adoption acceptance is grossly affected. As the study shows, students will be happy to enroll online if they are guaranteed usefulness and benefits that outweigh existing practices. They remain stubbornly rigid if their time is wasted by too much effort put into using technology, system malfunctioning and challenges of accessing electronic materials.

Existing research has dealt extensively with the factors affecting customers' offline repurchase behaviour. Relatively, the amount of research that have considered mainstreaming of e-learning in a developing country is small, as such this paper adds value by contributing to the relatively sparse literature in the area by bringing in new ideas on challenges of mainstreaming e-learning in a developing country. The outcome of this research not only corroborates some of the findings of prior studies, but is also an advance over many as the variables identified in this research will go a long way

towards improving chances of mainstreaming e-learning in a developing country environment. While there has been a recent increase in research on e-learning, the quantum and quality is still a far cry relative to the amount of work done in many of the other disciplines such as quality, leadership and pedagogical aspects. The progress in mastering ICT and in mainstreaming e-learning in the Zimbabwean context for retaining the niche in distance education has been extremely disappointing. Although many effective instructional technologies of distance education have been in use for years, getting the universities in this study to adopt the technology is often a stumbling block. This suggestion appears to be valid, as computers and telephones in several societies put learner who own or use them in the elite class of the society. This puts minorities such as women, the disabled, black community and others at the margins.

### **Recommendations**

In view of the need to engage students other than the “early adopters” with the opportunities in e-learning, the study considered it important to recommend development of e-learning success basing on the conclusions of the study, this research gives the following recommendations:

- Relevant government agencies could find the outcomes of this research useful, particularly with respect to developing internet infrastructure that is student friendly and does not put minorities at the margins.
- There is a need to enhance competition among internet service providers since, with greater competition; students would have greater options and better services at competitive prices.
- A reputable student support centre with customer relationship management at the fore-front will enable e-learning service provision for the disadvantaged so that they are not pushed to the margins.
- Quality e-learning service tailored to satisfy customers’ needs can enhance customer satisfaction, and help to reduce the digital divide.
- E-learning institutions to improve their competitiveness by effectively managing and delivering services to customers that guarantee highest level of ethical standards, efficient processes and beneficial outcomes.
- To mainstream e-learning, there is need for institutions to invest more resources and time to understand their students’ social background and find ways to include them in the digital scholarship.
- It is crucial for the respective online firms to recognise the importance of managing consumer expectations and be able to provide functional, reliable and easy-to-use systems that enable enjoyable online learning experiences.

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## E-learning and Teacher Education in Tanzania

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**Abstract:** *The paper, initially, explores the concept and the essence of e-learning within the global knowledge economy. It further explains why e-learning is the cornerstone for the development of the teacher education sector in Tanzania. In light of the latter the paper presents the efforts that have been made by the Tanzanian Government through the Ministry of Education and Vocational Training (MOEVT) in conjunction with the Open University of Tanzania (OUT) in order to expand the provision of teacher education by employing e-learning initiatives. E-learning is presented as having unprecedented potentials to upgrade most teachers who are already in the field and to train more teachers through pre-service e-learning programmes. Among the e-learning teacher education initiatives at the OUT are the inauguration of the Open, Distance and e-Learning (ODEL) Center, the SADC Center of Specialization in Teacher Education (CoS), and the initiative of OUT to transform its current mainstream print media ODL programmes into e-learning platforms using open source platforms, specifically the Moodle. OUT has already opened up 10 computer labs in 10 of its 30 regional centers while efforts are being made to install computer labs in the rest 20 regions. In order to gain the most advantage from e-learning the Tanzanian Government has worked with donor agents to increase Internet capabilities. Besides E-learning enabling teachers in the field to be upgraded and new ones to be trained, it also enables collaboration and sharing of innovative pedagogy and multidisciplinary transformative content to be developed.*

### Introduction

Perhaps it would be unwise to start talking about e-learning without making a few statements about education as a term that is frequently contested and sometimes used synonymous with learning. Education is an institutionalized system enabling teaching and learning to take place. At times, education is simply considered as a term representing a “critical sector whose performance directly affect and even determines the quality and magnitude of development” (African Union Second Decade of Education Plan of Action). Under this consideration, education is seen as the most important means that people have to mobilize resources, impart appropriate skills, knowledge and attitudes. Through education, innovations are realized to guide technological and scientific discoveries which are necessary in harnessing resources and creating wealth and prosperity. This perspective is contested by scholars who view institutionalized education as a system of indoctrination or a banking system (hooks, 1994; Freire, 1970) of disempowering education, safeguard the establishment and sustainability of classificatory social structures of domination and discrimination. The latter view is poised on the basis that institutionalized education has typically been characterized by strict standardized practices which are maintained by rules and regulations accompanied by reward or punitive operations. Generally, the banking

system of education is considered a form of mis-education since it serves the interests of dominant classes rather than the interests of the learners and their communities.

Contrary to the banking system of education is a system of education that builds free critical and relatively independent thinkers. Individuals and communities created from this system, are empowered to critically interrogate, interpret and innovate things and activities that “make problems vanish” (Wittgenstein, 1964 in Newman & Holzman, 1997, p. 14) or solve problems. The type of education that empowers learners has the potential to mould individuals and communities who are capable to generate qualitative development for majority people and their environments. The latter view is finely tuned for a pedagogy directed towards learning whereby lifelong learning framework is central to development. Learners are given opportunities to share their experiences, criticize existing knowledge and innovate new ways of learning and living.

According to the second perspective actual learning is not mere listening to or reading scholastic representations and reproducing (or banking) the same representations in tests and examination papers. Learning is an intentional activity in view of addressing practical learner(s') problems emanating from lived experiences and projected future. Learning; whether through traditional or e-learning settings should thus focus on enabling the learners to solve their practical problems and those of their communities. Meaningful learning should be situationally relevant, engaging, pleasurable and empowering (Vygotsky, 1987; hooks, 1994; Newman, 1998). The pleasure in learning is founded on the fact that it is tuned to learners' social-cultural situations where inquiry and arguments enjoy measures of esteem and protection rather than punishment.

The foregoing consideration of learning moves steps ahead of perceptions of learning as only activities whereby a learner acquires motor, affective and cognitive skills; in the latter, meaningful and effective learning considers fundamental aspects such as who learns, what is learned, why it is learned, who wants such learning to take place, who benefits or loses through such learning, where such learning takes place, how such learning takes place and when such learning takes place – this list suggests that in learning the intentions, the people, the processes, the content etc. matter in differentiating a dis-empowerment and mis-education from an actual meaningful education that empowers learners.

### **E-learning**

E-learning is a contemporary term that has evolved with advances in the capabilities of e-technologies to deliver, store, retrieve, organize and update educational content and services as well as build educational networks of activity and people. The concept ‘e-learning’ has, commonly been used as an alternative to other terms such as online education, virtual education, Internet-based education, web-based education, and education via computer-mediated communication (Rekkedal & Qvist-Eriksen, 2003). However, Rekkedal and Qvist-Eriksen (2003) express their concern when e-learning is

equated with the terms listed in the foregoing. Their concern is based on consideration that learning is a change process in a person's perception/cognition, attitudes or physical skills, it is not "electronic" rather it is only "an element of education" involving a broad range of activities, services and structures. E-learning can therefore be more accurately defined if people, technologies and activities relating to such learning are factored into the meaning of the concept.

Although the following definitions of e-learning are not exhaustively descriptive they hold fundamental characteristics of e-learning. Rekkedal and Qvist-Eriksen's (Ibid) perceive "e-learning ... as [an] interactive learning in which the learning content is available online and provides automatic feedback to the student's learning activities". The second definition taken from Results of the e-learning initiative (2007) represents e-learning as "the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration". One can consider e-learning as a form of distance education, as such, consider the typical characteristics of distance education components of e-learning: flexibility for teaching and learning to take place anywhere and anytime, the freedom for learners to pick preferred programmes and instructors from any institution across the world, quality education, extensive outreach possibilities, greater opportunity for reduction of costs where economies of scale are attained, etc.

From the definitions sited above we can realize a variety of e-learning characteristics that have kept on attracting individuals and institutions to embrace e-learning. Among the characteristics are the availability of educational content online, interaction and interactivity, automated or immediate feedback, a variety of applications and processes, the possibility of embedding animations and virtual reality allowing formation of e-classes that closely resemble actual traditional face to face classrooms, collaborations, access to resources and services, exchanges that enable sharing of among other things ideas, challenges and opportunities. When all these characteristic are effectively combined and harnessed they open up for improved quality of learning and open up for more individuals to join in learning initiatives.

While many of the e-learning characteristics can be explored in terms of the advantages they bring into education practices; in this paper, I only explain the advantages of those characteristics that I consider to be more relevant to this presentation intended to establish the situation of e-learning for teacher education in Tanzania. The target characteristics include the possibility of improving the quality of teacher education, increasing the number of teachers in the country, increased visibility and flexibility, increased opportunities for collaboration and partnerships, sharing of innovative pedagogy and opening up greater potentials for transformation through an engagement of multidisciplinary approaches in developing education and training content.

### **Improving the Quality of Teacher Education**

The possibility of improving the quality of education is perceived by considerations that through e-learning the use of multimedia brings in the use of a variety of pedagogical operations that cannot be easily accomplished in the traditional classrooms. For example, different learners have different learning styles (some learners are more comfortable when more tactile activities are included, others learn more when more visual images are projected, others learn more when they listen to instruction, etc.). With effective use of multimedia, e-instructors have the opportunity to embed all types of media and configurations: icons, simulations, animations, three dimension (3D) images and pictures to ensure they capture the interest of their diverse students. Additionally, e-learning provides more opportunities for teachers to easy and frequent communication that is highly spontaneous to the extent that it is nearly “conversational” (Holmberg, 2001) between learners and instructors as well as between and among the learning peers. Through Internet chat rooms, e-mails, and currently social media such as Facebook, Wikipedia and blogs learning can be made more experiential, i.e., dialogical, lively, instant and up to date. Learners can communicate and interrogate their own views as they get immediate critiques of their positions from peers and instructors. Ultimately, learners polish how they process learning and determine what is relevant and meaningful to society and to themselves.

Moreover, online teaching and learning content is not limited to the instructional content developed by target instructors; learners have the opportunity to surf across many websites to access information relevant to given topics from individual with diverse experiences. In this way, learners stand better chances of scaffolding the content that their instructors offer – they have great opportunities to be adventurous, critical and innovative.

### **Increasing the Number of Teachers in the Country**

Although the question of outreach programmes have been practiced in traditional education institutions with extension units or distance education departments, currently the e-learning part of distance education have better provisions to meet this challenge more comprehensively and effectively. Information communication technologies (ICT) enhanced with mobile technologies have the capabilities and potentials to reach individuals at further distances. Such capabilities are continuously being harnessed to improve existing knowledge, skills and values as well as develop new ones. Grounded on such potentials, more individuals are attracted to join education programmes provided through e-learning. As shall be explained later in the section dealing with teacher education and e-learning in Tanzania the government in collaboration with educational institutions have worked out plans to capitalize on the opportunities of e-learning so as to educate more teachers in order to meet the teaching demands which are increasing parallel to efforts made to bring the obligation of making education a right for all (EFA) fruitful.

### **Increased Visibility and Flexibility**

Generally, social structures of domination and marginalization have continuously left out great numbers of individuals from the education services. By doing so, the voices of those left out have not been heard and have been made invisible even though they could be catalysts to development. This is a phenomenon in Tanzania although the country is one of the signatories of the UNO's convention for the provision of education as a right for all people. Among those whose voices have been shut out from education are majority of those living in rural areas where no schools and colleges have been built (this group include migrant populations such as pastoralists and hunters); majority of women, the poor, refugees, the disabled and those who have clung to ancestral traditions. Since e-learning has the potential to reach people where they are, then those whose voices have been shut out of educational settings can now be provided with avenue to air, share, and improve their education. They can as well gain new knowledge, skills and values from the courses they pursue and from sharing experiences of their learning peers and the global community.

The traditional face-to-face education system required that individuals leave their homes, jobs, and other social settings for prolonged portions of time. For some individuals, this had negative impact to their lives and they decided to opt out of the institutionalized education systems. Further, some individuals who adhered to traditional production systems realized that the content of such education systems did not serve their interests and needs (e.g., pastoralists taught how to grow coffee or cotton instead of being taught how to take care of their animals and the vice versa). The outreach capacity of e-learning to reach most, if not all areas, coupled with the flexibility of educational programmes that can be 'fetched' from online educational providers and free educational resources technically referred to Open Education Resources (OERs) provide such individuals (guided by their instructors) the opportunity to pick programmes most suitable and relevant to the learners' socioeconomic needs and interests.

### **Increased Opportunities for Collaboration**

E-learning has increased trust and opportunities in collaborative teaching, learning, research and services. Through e-learning tools, communication can be designed to be faster (synchronous, asynchronous, and/or automated), it can be made more frequent, relatively conversational, and broadly distributed. Individuals and groups dispersed at great distances have more opportunities to collaborate and produce on demand outputs within given timeframes. Participants within e-learning communities can easily work together, teacher educators and teacher trainees distributed across different geographical locations can work together to solve common problems or individualized problems that is of interest to others. Collaboration is encouraged within current theoretical frames of social constructivism whereby teaching and learning are considered both as individual as much as they are collective endeavours. Making reference to learning, Rekkedal and Qvist-Eriksen, (2003) point out that under social constructivism,

[t]he learning process is not seen as an individual pursuit concerned with accumulating knowledge, but as part of a social process where students help each other to develop understanding in an enjoyable and stimulating context. The learning is process driven and learners must be involved in the social process and pay attention to this process to achieve their desired goals. The outcomes are not only academic, but involve increased competence in working with others, self understanding and self confidence. The learning activities may end up in group products which would not be achievable if learners worked individually, or the process may consist of learners helping and supporting each other in achieving individual learning goals.

### **Sharing of Innovative Pedagogy**

E-learning features provide participants in educational transactions with the possibility of sharing pedagogical approaches and techniques, particularly sharing those approaches and techniques that seem to lead to the attainment of intended teaching learning outcomes and objectives. A number of e-learning interface or features might be employed as means of sharing pedagogical purposes: e-mailing, blogging, exposure to educative web-sites and other fora, chat-room discussions, etc. Employing multimedia to enable embedment of variations of activities and presentation formats such as engaging virtual reality, animations, charts and mapping, individual and group activities, online practical sessions from recorded live audio clips and theoretical sessions, etc. It is also interesting to note that except in a few cases when synchronous e-conferences or chats are employed, mostly e-learning instructors and learners enter and leave the education transaction fora at their convenience (asynchronous) without disturbing others.

E-learning makes it possible to easily bring to fruition what different scholars have proposed as being most ideal to assist actual learning to take place. Scholars such as hooks (1994) and Vygotsk (1989) suggest that learning should embed aspects that take characteristics of pleasurable play engaging those who are involved. When employing e-learning, this characteristic can be fulfilled as learners exchange chat room messages, web sites with exiting information/ animations/pictures/charts/maps. Additionally, scholars have also suggested that effective learning pedagogy should empower learners to be independent thinkers and innovators; this feature can be attained as learners independently search the Internet sites, exchange information with peers and scholars other than their classroom instructors, use OERs, etc. Learners also are encouraged to form communities of learning and partnerships that may last beyond their studies; these are ideal for long lasting relationship leading to addressing common societal problems.

### **Transformation Through Multidisciplinary Approaches to Content Development**

I believe that most of us are aware of the demand of current global economy for individuals to acquire multidisciplinary competences that are needed for the same



individuals to handle multitasks at their workplaces. This demand would require, for example, that teacher trainees and their instructors get exposed to multidisciplinary approaches in handling events at colleges and in schools where they finally get employed. Multidisciplinary enables teacher trainees to fit into societal demands as well as train others to handle similar situations. The teaching job exposes teachers to situations where they are obliged to take responsibilities that would typically fall into fields such as nursing, medicine, police, law, guidance and counselling, accounting, administration, monitoring learners' nutrition content and intake; and taking care of students' with special needs.

E-learning tools that enable instructors to communicate and collaborate with specialists from a variety of fields are of great value when developing e-learning content for teacher education programmes. It is therefore important to engage specialists from other fields when developing courses for teacher trainees. Such engagement would transform the way content in the field of teacher education is developed as well as how the actual practice of teaching is conducted. It is equally important for course teams who develop teacher education content to use e-learning tools to search for relevant information from other fields of specialization and incorporate relevant ideas into the content they develop. Currently, open educational resources (OERs) which include free online content have added to the pool from which teacher trainees, instructors, and online content developers can draw relevant content from a variety of disciplines. Precaution, however, need to be taken to ensure that content drawn from OERs is relevant and fitting into the context for which it is developed; otherwise contextualizing the same becomes mandatory.

### **E-Learning: Hope for Teacher Education in Tanzania**

With its policy on Information and Communication Technology (ICT), the Ministry of Education and Vocational Training (MoEVT) has developed a Teacher Development and Management Strategy (TDMS) aimed at training and sustaining sufficient competent teachers, tutors and managers for pre-primary, primary, secondary, adult and non-formal education; and teacher education. The need to increase the number of teachers in all these sectors was triggered by the need to achieve education for all (EFA). The government has almost doubled school enrolments after implementing the 2002-2006 Primary Education Development Plan (PEDP) and the 2004-2009 Secondary Education Development Plan (SEDP). As an example, while the enrolment of students in primary schools in 2009 was 7,637,813 there were only 157,185 teachers. This made the teacher/student ration 1: 53 which is higher than the government national standard of 1:40. The teacher deficit in 2009 stood at 118,630 (MOEVT, 2009). Given the foregoing, it is an imperative to have additional competent teachers through pre-service (PRESET) teacher training and upgrading those who are currently in service through in-service training (INSET) programmes.

E-learning is the hope in responding to the increased student enrolments. Through e-learning the Tanzanian government can work out and implement plans that ensure the

filling of the teacher gaps and improving teachers' competences. In preparation for the engagement of all teachers in provision of and participation in e-learning, all teachers who are currently undergoing INSET and PRESET programmes are obliged to study a variety of competences among which are ICT basic skills. In addition to ICT basic skills, trainees pursuing diploma teacher education programme take a programme in Information and Computer Studies (ICS) of which e-learning is a component. The later enables the diploma holders to teach the same programme to secondary schools and Grade "A" teachers who have the task to cascade the skills to their students after graduation. The organization and implementation of these programmes are expected to have a spillover effect that will assist in enabling as many individuals and sector to be aware of and use e-learning for teaching and learning.

At teacher training college levels, training of trainers (TOT) approach has been adopted for tutors to use tailored materials and internationally recognized training programmes of Cisco IT Essentials and ICDL to acquire basic ICT skills. Through collaborative initiatives between e-learning literate college tutors and volunteers, the college tutors are trained on the use of ICT for teaching and learning. The University of Dar es Salaam Computing Centre (UCC), the College of Education at the University of Dar es salaam (UDSM) and The Open University of Tanzania (OUT) have been instrumental in the execution of the programme.

Outputs from such training are reflected through qualified trained MOEVT educational management officials, principals, and tutors who are now working in the colleges. Forty three principals and fifteen officials in the Department of Teacher Education and four hundred and eighty nine tutors have been trained in ICT and Computer Basic Skills using the International Computer Driving License (ICDL) resources. One hundred and seventy seven tutors have been awarded the ICDL Certificate. One hundred and twenty two tutors have qualified with certificates after successfully completing a blended Cisco IT Essentials course and one hundred and eighteen have attended technical skills training programmes enabling them to manage ICT equipment in 34 teacher colleges distributed across the country. Three hundred and three tutors have qualified with basic computer skills that enable them to apply the MOODLE platform in mapping web resources across the teacher education curriculum (MOEVT).

Generally, a good number of tutors in teacher colleges pursue professional development programmes using e-learning facilities available in the colleges. For example, supported by a German NGO (InWent) some tutors in Tanzanian teacher colleges have been awarded special e-learning certificates from the University of Western Cape qualifying them to teach aspects of the HIV and AIDS Pandemic to teacher educators in Africa. Attainment of competences in engaging e-learning has made it possible for college tutors to study from different universities within and outside Tanzania, e.g., several Master and PhD students have (and are) pursuing studies employing e-learning facilities at the 35 teacher colleges and all the universities in the country.



ICT instructors at Morogoro teachers college working at his computer laboratory office

ICT literacy has been made a compulsory aspect for all students and staff in all teacher education colleges and universities. Several universities, including OUT and UDSM offer Information and Communication Technology degree programmes. OUT offers several ICT programmes specifically targeting college and secondary school teachers with the aim of attaining similar knowledge and skills spillover effect to instructors and students at other levels of education where graduates from such programmes get employed.



Part of the Morogoro teachers college ICT laboratory

### **E-learning for Teacher Education at the Open University of Tanzania**

The Open University of Tanzania (OUT) is one of the universities in the country that offers teacher education programmes at Certificate, Diploma, Bachelor, Masters and PhD levels. The Certificate and Diploma are offered through the Institute of Continuing Education which is the arm of the university housing majority of none degree programmes. The rest of the teacher education programmes are offered through the Faculty of Education. It is worth mentioning that courses taught for each programme draw instructors from across other faculties and institutes of the university as well as from institutions other than OUT.

Initially the OUT offered all its programmes through the print media. However, with increased ICT capacity, availability, social capital capable of using ICT and the Internet and public acceptance of ICT as imperative capital of our time, OUT is gradually integrating e-learning into its programmes. To ensure efficacy and sustainability of ICT usage and grounded on the National ICT Policy of 2003, OUT has developed its own ICT Policy and implementation strategy in order to guide ICT usage and e-learning operations. The institution's mission for implementing e-learning is to provide opportunities to OUT community, in exploiting the potential of technology to enhance self-paced and learner-centered education. In line with this mission, OUT's e-learning vision is to support the growth ambition of OUT, by extending teaching and learning activities through the development and delivery of programmes using ICT to increase accessibility, retention and throughput (OUT, June 2009)

On matters of ICT use and e-learning operations, the institution is collaborating with the government through ministries such as the Ministry of Education and Vocational Training (MOEVT) and the Ministry of Communication, Science and Technology (MCST). It is also collaborating with other Universities, organizations and institutions to ensure that an effective ICT infrastructure is developed to maximize utilization of the technologies for development in education and other sectors. Nationally, the Internet bandwidth has been highly limited; hence efforts to broaden the system through an improved National Information and Communication Technology Infrastructure Backbone has been enforced since 2011.

*[T]he cable will have capacity to carry all information and link up with the Indian Ocean sub-marine cables EASSY, SEACOM and UHURUNET – whereby Dar Es Salaam will be the landing site... [since the backbone] will be connected by existing submarine cables to the rest of the world, it will be [a] solution for reduction of ICT connection charges...* (Mushi, Tonya & Ndilanhla, n.d).

Through the enhanced Internet connectivity in the country, Internet transactions such as e-learning will be made easier, more efficient and therefore effectively successful.

OUT's intention is to ultimately offer most its programmes using the e-system. However, due to the current constrained Internet infrastructure and low bandwidth, limited ICT and Internet qualified staff, large numbers of enrolled students and programmes; the institution has started to move rather gradual towards this goal. Several courses have been customized into the Moodle platform. The institution is also using web-based learning management system customized from Moodle and audio technologies to serve the virtually impaired students. Due to lack of reliable internet infrastructure, especially in rural areas, the institution is exploring the possibility of employing mobile phones to support learning. There is also a teacher education e-learning project jointly run with MOEVT, Mid-Sweden University (MiUn), and University of Dar es Salaam. The project employs both e-learning and mobile systems to facilitate learning; it is currently being pilot tested and its success will be cascaded to other programmes at the university and beyond.

### **The Open and Distance e-Learning (ODEL) Centre at the OUT**

This centre was launched by the Permanent Secretary in the Ministry of Education and Vocational Training on 10<sup>th</sup> December 2009. It was established through a partnership between OUT and the African Virtual University (AVU). The centre is expected to catalyze e-learning activities, specifically teacher education programmes at OUT and beyond. The Centre conducted a pilot phase involving 20 first year students of the academic year (2009/2010) at OUT. This programme made use of special ICT - integrated learning modules for mathematics, physics, chemistry, biology-zoology-botany, ICT and Education. Under the coordination of AVU, the modules for these courses were jointly developed by experts from diverse African universities: Jimma University (Ethiopia), University of Nairobi (Kenya), Universite d'Antananarivo (Madagascar), Universidade Pedagogica (Mozambique), Universite Cheikh Anta Diop (Senegal), Amoud University, University of Hargeisa and East African University (Somalia), The Open University of Tanzania, Kyambogo University (Uganda), University of Zambia and the University of Zimbabwe. Each participating university has the liberty to adopt or customize these modules which are freely online deposited as OERs. At the OUT the modules are downloadable from the OUT web site or can be obtained from the ODeL Centre which is open for use to all OUT students and staff. As preparation for sustaining the centre, AVU trained six instructors through the African Capacity Enhancement Project (ACEP) so as to serve the center in areas of e-learning materials development, e-learning delivery technology, and governance, management and financing of e-learning. The ACEP experts are expected to train other members of the institution as well as others from interested universities in the country.

OUT's contributions to the establishment of the ODeL centre constitute of, among other things, availing space for computer labs, face-to-face, examination sessions, and staff offices. The institution also contributes in terms of supplying tutors and instructors for the programmes and maintaining the Centre.

As a physical hub for creating, organizing and sharing knowledge and development ODeL generally serves as:

- (i) A training facility for staff of the University in the use of ICT in developing, delivering and managing Open, Distance and e-Learning;
- (ii) A delivery point for current and future ODeL programs, including the AVU Teacher Education Program;
- (iii) The physical location where staff are able to conduct research and participate in collaborative work in ODeL;
- (iv) A physical installation that can be used by the University to generate funds and thereby guarantee sustainability of the partner relationship between the OUT and the AVU.

The long term plans for the Centre was to enroll all OUT students taking B. Sc (Ed.) and B. Ed (Science) from the 2010/2011 academic year; to expand the program to other Universities in Tanzania; and jointly with AVU, to prepare modules for other non-

science and mathematics subjects, that is to develop e-courses for Arts and Social sciences, Business Studies, and Law programmes.

### **The SADC Center of Specialization in Teacher Education in Tanzania**

Following the Southern African Development Community (SADC) launching of a capacity building initiative in Open and Distance Learning (ODL) project; three centres of specialization (CoS), - (one for teacher education in Tanzania at OUT), one for public administration and management (Botswana) and one for secondary education (Malawi) - were established in accordance with Section 7E of the SADC Protocol on Education and Training. The establishment followed a competitive bidding process. The purpose of the centres are to contribute to the development and deployment of effective, harmonized ODL programmes, increase access to quality education and training and support regional integration across SADC members.

CoS at OUT has not yet started to operate its study programmes, however most of the necessary infrastructure which includes *inter alia* e-learning technologies both at the CoS and the regional Centers is in place. CoS is mandated to provide specialized short and long term training priority courses in such areas as e-learning, ODL curriculum planning and material development, ODL financing, budgeting and costing, student support, assessment and accreditation in ODL, ODL management, administration and marketing, quality assurance in ODL, research skills in ODL application, strategic planning and management in ODL and monitoring and evaluation in ODL.

Initial beneficiaries of the CoS centre are:

learners, and teachers at primary, secondary and tertiary levels and those involved in Technical and Vocational Education and Training (TVET) programmes ... secondary beneficiaries will be those responsible for designing and implementing ODL in the region including SADC secretariat, specifically the Directorate of Social and Human Development and Special programmes (Maritim, 2009).

The center expected to train a total of 1,080 ODL practitioners in its first two years. These will be trained at ten training sessions each involving six participants from the nine SADC countries (Angola, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Tanzania, Zambia, and Zimbabwe). At the end of the first two years each SADC country will have had 120 members who are competent in fundamental ODL and e-learning knowledge, skills and values. These are expected to cascade what they learn to other members of their organizations whose knowledge will further spill over to community members. It is envisaged that ultimately, there will be awareness of the efficacy of e-learning among regional members. This awareness is a necessary trigger to attract members to willingly participate in e-learning and encourage others to do the same. When education is viewed as a means of attaining development at individual, community and national levels, then, the programmes at CoS will be of immense benefit to the SADC countries.

### **Common Challenges**

There are, of course, several challenges encountered with attempts to establish and sustain e-learning endeavors. The challenges are particularly a consequence of the context at which these establishments find themselves in. E-learning in most, if not all, African countries takes place in a low developed country whose economic clout is marginalized and dis-empowered within current globalized socio-economic structures. It is on these grounds that the following challenges are a typical characteristic:

- Limited or none availability of e-learning infrastructure and facilities, especially at the initial stages.
- Limited or none availability of experts in e-learning technologies, pedagogy and management
- Insufficient and unsustainable budgets
- Resistance from traditional/conservative practitioners in the field of education and staff who are disgruntled by the system
- Over dependence on foreign donors, when donations dry up projects are no longer sustainable.

### **Opportunities to be Harnessed**

- Availability of widely distributed study points such as the diverse geographical locations reached and a variety of learning technologies (multimedia) in e-learning at the MOEVT and the Open University of Tanzania which have been discussed above have the potential to involve more of the potential individuals into teacher education programmes.
- E-learning teacher education programmes in Tanzania bring practicing teachers in for in-service training; such teachers could not have had education opportunities because of limited space in conventional teacher education colleges. Some of the same teachers have too many social, economic and community responsibilities which prohibit them to join traditional in-service programmes, which take them from their jobs, families and communities for long periods of time during the course of their study.
- E-learning teacher education programmes have potentials to reduce costs as teacher trainees do not have to travel to specified locations for registration, studying, attaining guidance and counseling services, attempting and submitting examinations, meeting study groups and instructors, or resolving administrative issues. The needs for all these educational related transactions are met through e-learning facilities and services. With e-learning there is enormous reduction of the need for stationery facilities and equipment.
- E-learning facilities and multidisciplinary approach to teacher education programmes have potentials to stimulate collaborative research, especially action research which empowers practitioners to interrogate and improve the profession. As Eiletsen and Strom (2008) correctly point out  
 an actual and relevant teacher education demands a dismantling of the academic dominated tradition to the advantage of a more flexible net-based platform which can both safeguard more adaptable qualifications and

give a basis for research and development to the good of all partners. (p. 153).

- E-learning, if appropriately understood and harnessed has the potential to bring about self-centered learning and lifelong learning into fruition among teacher education trainees. The trainees learn to self-learn and have at their disposal materials: equipment, personnel to guide them and facilities they need to realize this. With e-learning Lindström's (2008) proposition that "learning could go on if there were no teachers" (p. 173) can be realized.
- E-learning gratifies trainees because of the immediacy with which feedback is provided and communication between and among staff and peers is enhanced

### Concluding Remarks

This paper has explored several issues, among which are the concept of education and e-learning. Education has been presented as a contested concept specifically based on two major perspectives of dis-empowering education and education for empowerment. Learning has been considered a process of inquiry and construction of meaning whereby fundamental questions are posed while people, learning intentions, processes, the context, and the content of learning are considered. The meaning, efficacy, potentials and challenges of e-learning have been discussed and conditions under which e-learning initiatives are taking place in teacher education system in Tanzania have been presented. E-learning initiatives that have been highlighted are those at the MOEVT, specifically those at teacher education colleges and those at the OUT. Additionally, common challenges and opportunities of e-learning have been highlighted.

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## Student Support Services in Open and Distance Learning: The Case of the Open University of Tanzania

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**Abstract:** *In the last two decades Open and Distance Learning (ODL) has witnessed a tremendous growth in Tanzania and worldwide. The Open University of Tanzania shows an increase in enrolment rates from 776 at its commencement in 1994 to over 40,000 in 2011. The same scenario is evident in India and China. The growth has been possible due to an increase in demand in higher education and inability of conventional universities to absorb big numbers of students that qualify for higher education. To maintain quality of education in ODL institutions student support services are crucial. By using questionnaires and interviews the study analyses the student support services available at The Open University of Tanzania: their prospects and challenges. The identified student support services at OUT include print materials, face to face sessions, Portfolios, ICT related support including Student Academic Record Information System (SARIS), on-line examination registration, CD-ROM, cassette records and e-Learning.*

### Background to the Study

The Open University of Tanzania (OUT) was established by an Act of Parliament No. 17 of 1992 and the offering of the programmes commenced in January, 1994. According to Kuhanga Report (1990) and the University's Act, the objectives of the University are:

- To offer opportunities for higher education and training to a large segment of Tanzania's population especially following the expansion of schools at lower levels and limited entry to tertiary level institutions.
- To provide access to higher education to disadvantaged groups and individuals especially those living in rural areas by bringing higher education programs to the door steps through distance teaching.
- To sustain the connotation of the philosophy that education has no end alone that it is a fundamental right for every citizen.

The 1992 Act was repealed and replaced by the Open University Charter which is in line with the Universities Act No. 7 of 2005. The Charter became operational with effect from January 2007. The University is an Open and Distance Learning (ODL) institution but it also runs some conventional programmes. It offers various certificates, diplomas, degrees and postgraduate programmes.

Open and Distance Learning is a system of learning where the learners learn at a distance what, where, how and when the student wants. Open and distance learning is characterized by the separation of the learner from the tutor. The system can be manifested by utilizing a wide range of media such as print materials, television, radios audio and visual cassettes and ICTs which bridges the separation gap. ODL system is

now widely used in many countries. Dikshit, Gang, and Panda (2002) pointed out that the system is poised for further expansion in the coming years as its virtually unlimited potential to impart education to anybody; anywhere and anytime, is being recognized by educationists, policy makers and planners. Tanzania through the Open University of Tanzania is one of these countries which have embarked in ODL to serve majority of her people who are in great need of higher education. Students who are enrolled for the courses offered by the Open University of Tanzania (OUT) have a multiplicity of backgrounds both educationally and experientially. In order to provide them with high quality university education the need for a good and sound infrastructure in the form of learner support services cannot be over-emphasized. *One can ask her/himself: who are distance learners?* A learner is physically separated from her/his instructor. This separation considers geographical location, peers, teachers, administrators and sometimes family and friends (Hancock, 1997; Mays, 2000). Literature indicates that various techniques have been used to bridge the separation. One of the techniques is the provision of student support services (Rumble, 1992; Simpson, 2002).

### **Student Support Services**

Student support services are student centred actions or interventions made by an institution to enable the learners to study successfully (Rumble, 1992; Molefi, 1998). The success in the provision and accessibility of student support services in developed countries is based on the availability of human, material and financial resources. For example, distance education institutions are able to utilize a wide range of media.

Institutions that provide appropriate and adequate student support services have been observed to attract and serve their learners better than those which do not (Dhanarajan, 1997; Simpson, 2002). This implies that for successful learning programmes, open and distance learning institutions have the obligation of providing and making student support services accessible to their learners. This way the institutions strive to maintain quality assurance.

According to Rumble (1992) the problems of distance learners include:

- Geographical isolation of the learner who is separated from distance learning institution and its administration.
- Economic constraints of the learner and the institution.
- Stress caused by pressure of work and family responsibility.
- Lack of confidence.

Almost every activity undertaken by a teaching institution constitutes student support. In this case student supports according to Sewart (1993) include the following:

- Delivery of study materials.
- Tutorials/practical sessions.
- Counseling and guidance.
- Students' registration for examinations.
- Record keeping.
- Broadcast/recorded media support etc.

At the OUT there are several support services which are offered to students. Among the services provided include: study materials, face-to-face sessions, and students'

registration for exams, record keeping, e-learning, CD-ROM, audio cassettes and portfolios.

This paper examines the position of some of the support services which are offered by the OUT, their present status, challenges and suggests the way forward.

### **Research Questions**

The research was lead by two research questions:

- What is the status of student support services available at The Open University of Tanzania?
- What are the challenges that students face in using student available support services?

### **Limitations of the Study**

The study was limited by small sample size for both the students and the staff. Also the regional centres involved were few. Hence, the findings may not be used for generalizations rather provide light of what actually happens in terms of students support services at the Open University of Tanzania.

### **Methodology**

The research was carried out at the OUT head office and in some few Regional Centres based on the availability of the respondents. Data collection for this research was through a combination of methods. Questionnaire was the major source of data collection. This technique was complemented by other sources of information such as discussions and interviews. Questionnaires were administered to 14 members of staff and 30 students from Faculties of: Education; Arts and Social Sciences; Science Technology and Environmental Studies; Laws; Business Management; Institute of Continuing Education and Institute of Education and Technology. The questionnaire and discussions were designed to assess the support services provided to students at the OUT. Services which were considered were the print materials, face-to-face sessions, portfolios, ICT related support such as: CD-ROM, cassette records and e-learning.

The questionnaires had open and close ended items. The open ended items were meant to allow the respondents to give more details on the challenges faced and suggestions for improving of student support services in the OUT. The questionnaires were returned by 20 out of 30 students and by 14 out of 14 staff members. This gives response rates of 65% and 100% for students and instructors, respectively.

### **Results and Discussions**

#### **Print materials**

Print materials are among the important support services provided by the OUT to learners. Print materials that fall under support services are information booklets, compendia and textbooks and other reference books. In addition to these there are journals that are internally published and sold to students as well as members of staff. These include *Journal of Issues and Practices in Education, Law, and Huria* journals.

Also few courses have compendia though some of them were reported not to be clearly readable.

Regarding print materials the following components were examined: quantity and relevance of print materials. Students reported that most of the regional centers have libraries however these libraries have mainly study materials and rarely other books.

### **Face to Face Sessions**

Face to face sessions are occasional contact sessions organized by ODL institutions. These face to face sessions involve formal meetings of teachers and learners for the purpose of teaching-learning interaction (Rumble, 1992). The sessions are used by students to ask for assistance in areas of difficulty. Dhanarajan (1997), in the same vein, says that face to face sessions provide opportunities for students to interact with their instructors, to seek clarifications in their study materials and give immediate feedback on difficult areas of their learning.

Face to face sessions are meant to fill the gaps of time, physical and geographical separation that usually exists between distant learners and their instructors. It is argued that isolation is one of the main causes for students to drop-out of studies. Face to face sessions minimize the isolation and boredom. Table 1 below is the result of staff members and students were asked about their expectations of face to face sessions.

Table 1  
*Staff and Students Expectations from Face to Face Session*

Expectations	Instructors		Students	
	No.	%	No.	%
Get tutorials/clarifications of difficult areas	12	85.7	16	80
Meet fellow students for discussions	10	71.4	8	40
Get feedback on their progress	9	64.3	14	70
Be guided on how to study	11	78.6	15	75
Get extra materials like handouts	7	50.0	10	50

The result of the study on Table 1 shows that both instructors and students expected face to face sessions to give tutorials/clarification on the difficult areas. Both instructors and students rated clarification of difficult areas the highest. However more instructors than students saw face-to-face as providing opportunity for students to engage in discussion among themselves. Students and instructors were asked whether the face to face sessions provided by the OUT meet their expectations. All 14 (100%) staff members said that face to face sessions do not meet students' expectations. While 5 (25%) of students said their expectations from the sessions were met, 15 (75%) of the students said their expectations were not met. The results show that majority of students and instructors were dissatisfied by how the face to face sessions are conducted at OUT. The discussion with the respondents on the cause of this

dissatisfaction revealed that face to face sessions conducted by OUT spend most of the time on administrative and general issues as opposed to academic/subject specific issues which are highly needed by the students. Further discussion with instructors showed that this problem may be because it is not possible to have instructors who are subject experts in all the areas needed by the students at each regional centre.

Students were further required to point out challenges which they encounter in face to face sessions and how to overcome them. The following were listed as challenges:

- Time for face to face is not enough.
- Few instructors in various areas of specialization.

### **Portfolio Assessment**

Portfolio assessment is a new mode of assessment at OUT. Under this mode each student is required to summarise what s/he has done in each subject which s/he wants to sit for examinations. It aims to assess whether the student is ready for test and examinations. Students have to write objectives and learning outcomes from each course, references used so far, challenges encountered and how they expect to overcome those challenges. During face to face sessions, tutors are supposed to assess students' portfolios to see whether they have achieved what they are supposed to.

When tutors were asked if they were aware of what is to be done in the portfolio exercise, all 14 (100%) tutors said that they were aware and all the tutors had participated in the portfolio assessment. The following were attributed as the challenges which face the portfolios exercise:

- No proper preparations from students because some of them do not read their study materials beforehand.
- Some students do not know how to write/fill the portfolios.
- Some students only copy from their colleagues.
- Administrative/generic issues dominate the sessions.
- Few tutors i.e. 2 or 3 tutors cannot cater for all disciplines on offer.
- The exercise is done on an ad-hoc manner by students as most of them fill the portfolios on late hours.

Students on their sides pointed out challenges which they experience from the portfolios as follows:

- Inadequate lecturers.
- A lot of time is wasted waiting for ones turn to be interviewed.
- Lack of proper assistance from tutors who are not subject experts.

### **ICT Related Support**

ICT related support is one important aspect of students support services in ODL institutions. It was the interest of the paper to study how this support service is provided by the OUT. Under this area the following were studied:

- Students' and tutors' computer knowledge.
- Access to computers and the Internet.
- Students and staff awareness of e-learning.

- Students and teachers usage of the computers.

The responses were as follows:

**Students' and Tutors' Computer Knowledge.** Computer knowledge is a basic pre-requisite for any computer related support. Investigation of the knowledge of computer by the Instructor and students revealed the following results:

Table 2  
*Computer Knowledge*

Rate	Instructors		Students	
	N	%	N	%
Very good	2	14.3	4	20
Good	5	35.7	4	20
Satisfactory	5	35.7	6	30
Poor	2	14.3	6	30
Total	14	100	20	100

Table 2 indicated that most of the Instructors' computer knowledge ranged between good and satisfactory (71.4%) while (14.3%) were very good in computer and (14.3%) were poor in using computers. This indicated that at this level there were some instructors who did not have computer knowledge. Computer knowledge is very important to all academic staff as it enables them to perform their duties more effectively and efficiently.

**Access to Computer and Internet.** Access to computer and internet is very important for using ICT related support services. The findings of computer and internet access for students and tutors studied are as follows: All tutors 14 (100%) agreed to have computers in their offices though some indicated that their computers were old. The ratio of computers to tutors sampled was as follows:

Table 3  
*Computer: Staff Ratio at OUT*

Ratio	Tutors	
	N	%
1:1	1	7.1
1:2	5	35.7
1:>2	8	57.1

Majority of the tutors under the study 57.1% share one computer between more than two persons while 35.7% of the tutors share one computer between two persons and only one person (7.1) who was not sharing a computer. This indicates that there is need for more computers for its staff. However, there are other computers that are specifically meant for short computer courses run by the University. There is a need, therefore, for the University to provide more computers for effective performance of its staff and also in order, to foster the use of these modern technologies by all staff.

Furthermore, 9 (64.3) tutors indicated that they have computers at home. This is a good sign on the commitment of the staff to the use of modern technologies. Out of these only 4 (22.2%) have access to internet at home.

Most of the students 14 (70%) indicated that they access computers at the internet cafe. They also access computers at work place (20%) and few of them at home (10%). Some enjoy the benefit of multiple accesses. However, these findings cannot be generalised across all the regions. However, findings shade light on the possibility of the effective use of ICT related support services by the OUT as there are students who have access to computers.

### **Computer Uses by the Tutors and Students**

Having computers without using them is as is equivalent to not having one. The study on the uses of computers by the instructors and students revealed that, instructors mainly use computers for setting examinations (100%), searching various materials (71.4%), communication with students through e-mail (57.1%), communication with leaders and colleagues through e-mail (85.7%) and typing purposes (100%). None of the staff responded to the questionnaires which were about the use of computers for teaching through e-learning. The researchers admit that they couldn't access those instructors who make use of e-learning for teaching such as in the BSc (ICT) Programme.

On the part of students, all of them reported using computers and the Internet for examination registration and Student Academic Record Management System (SARIS) for accessing their results. These two activities seem to encourage if not force students to use computers. The use of examination registration and SARIS are important ICT related services the OUT is proud of despite some challenges that face them. Other uses of ICT related support services at OUT include e-learning, m-learning, audio cassettes and CD-ROM. E-learning courses are offered to BSc. Computer Science (ICT) and Master of Law (LLM-ICT) students. M-learning is integrated in Diploma in Poultry course while audio cassettes are mainly used by students with visual impairment.

Students pointed out the following challenges which they encounter when accessing SARIS and on-line examination registration:

- High costs of internet.
- Unaffordability of computers and modems.
- Low internet, sometimes it is blocked and it would not open up and poor accessibility
- Poor network.



- Difficulty in access to computers.

### Conclusion and Recommendation

The study examined student support services available at the OUT. Students and instructors showed some dissatisfaction on how face- to- face sessions are conducted, especially that there is no subject's oriented support provided to students. Also, it has been learnt that portfolio exercise is not well practiced so far. This is partly due to the fact that it is a new practice and hence, not well understood by the students. With respect to SARIS and examination registration; these are very important support services available at OUT. However, they face many challenges such as high costs incurred on access to computer and the internet, slow internet during browsing and unreliability of the internet and electricity. ICT related support services such as e-learning and m-learning are used in very few courses and much is still desired for their effective integration in other courses.

In the light of the findings the following are suggested:

- The University should develop strategies to ensure that the exercise of filling the portfolios is a continuous process. More time is needed to orient students on what is required from them. The portfolio to be awarded at least 10% of the course work so as to make the students value the exercise.
- There should be tutorials based on difficult areas derived from the students' portfolio exercise.
- Increase days and contact hours.
- Deploy subject experts to handle their courses during face to face sessions.
- Conduct face to face sessions in different zones at different times so that at one time different tutors with different areas of specializations could be in the same zone to assist the students in their subject specific areas at least two weeks per year.
- Students should be assisted to acquire computer basic knowledge in order to harness the potentialities of ICT related support. Also, they should be assisted in terms of access to computers and the internet.

Given the small sample size used, another research could be done that include representation of students and staff from other regional centres.

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# Integrating Psychological Resources in the Implementation of Online Instructional Design and Pedagogical Processes: The Case of Open University of Tanzania

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**Abstract:** *Information and Communication Technology is an important aspect in a distance learning environment. In response to this awakening, the Open University of Tanzania (OUT) has aligned itself with principles of effective online pedagogy by ensuring institutional support and commitment as well as implementation of sound instructional design methodologies. Despite these interventions there is still a need to examine instructional design processes in order to address attitudinal challenges, inadequate educational resources and insufficient ICT infrastructure. The contributions of this paper could be incorporated as a solution for instructional design framework which addresses the needs of a distance education environment.*

## **Introduction**

Information and Communication Technology is an important asset in a distance learning environment (Bakari, Tarimo, Yngstrom & Magnusson, 2005). In response to this awakening, the Open University of Tanzania (OUT) has sought to keep abreast with emerging educational technologies in order to enhance the teaching and learning experience. In 2007, the University adopted e-learning media for the purpose of enhancing teaching and learning activities. The transition started with an establishment and customisation of the learning management system (LMS) called A-tutor. Due to some complexities, the system was replaced by Moodle that was considered easy to adapt and integrate with other University information systems. In the long run, the Open University of Tanzania aligned itself with principles of effective online pedagogy by ensuring institutional support, commitment and well as implementation of sound instructional design methodologies. However, despite these interventions, observations have been made that highlight impediments to the successful route of implementing online pedagogy and instructional design at OUT. These hurdles stem from issues of lack of awareness, low motivation levels, limited skills and negative attitudes that surface during the operational environment. Most instructors are still not yet knowledgeable and exposed to the advantages of getting involved with the electronic approach to instruction. This is reflected among the students as well as they also do not appreciate existing educational technologies or the learning management system in terms of the associated resources and opportunities made available to them.

It seems that there is still a need for a revised approach to the implementation of online pedagogy that accommodates attitudinal challenges, motivational issues and inadequate skills. This paper proposes that in order to ensure effective and efficient implementation of online instructional and pedagogical principles, a new element needs to be considered or added to the currently utilized instructional design and pedagogical framework. The proposed element is termed as 'Psychological Support', which is inclusive of aspects such as behavioural or attitudinal change, motivation, skills in ICT

etc. This paper aims at highlighting and sharing experiences of the instructional design process transpiring within a distance and Higher Education Institution (HEI) in a developing country. Furthermore, it recommends an additional element to the existing instructional design framework used to implement online learning in HEIs.

### **Conceptual Framework/Literature Review**

This paper focuses on three main areas of academic discourse which include: distance education, instructional design and online pedagogy. The first area of concentration is *distance education* (DE). Yacci (2000) simply defines DE as a teaching and learning process, which is characterised by a separation between learners and facilitators in terms of distance as well as or time. Distance education has evolved through five specific generations (Taylor, 2001), each characterised by a distinct phase that was applied to enhance teaching and learning experiences. The first generation of distance education (DE) made use of the "correspondence" model which was based on print technology; the second generation adopted the "multi-media" model which was based on print, audio and video technologies. What followed in the third generation was the "tele-learning" model which utilized telecommunication technologies to create opportunities for synchronous communication. Subsequently, the fourth generation embraced the "flexible learning" model which capitalized on online delivery through the use of Internet. The emerging stage that DE has or will shortly evolve to, is the "intelligent flexible learning" phase which according to contemporary researchers (Taylor, 2001), makes use of automated response systems that do not require human intervention. Each of these models has left its print in DE environment.

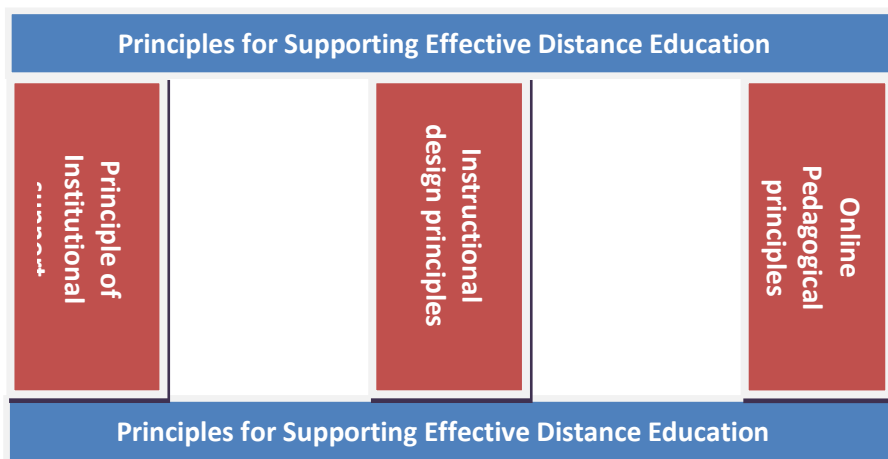
The principle of instructional design is another key focus area in the paper and it refers to reliable and consistent systematic design procedures that are used to develop education and training programs (Gustafson & Branch, 2002). The commonly accepted model which embraces the principles of instructional design is ADDIE. This model comprises of reiterative processes of **An**alysing, **D**esigning, **D**eveloping, **I**mplementing and **E**valuation as the core elements necessary to attain effective teaching and learning experiences. In light of the growing relationship between distance education and Information Communication Technology, some researchers (Zimnas, Kleffouris & Valkanos, 2009) have adopted the instructional design principles encapsulated within the ADDIE model and have incorporated a web-based learning element to form what is referred to as a simple *Instructional Design Tool for E-learning (IDEL)*. In essence, IDEL is a model that was developed in order to facilitate the development and implementation of online courses in accordance with the ADDIE model principles.

The final component of academic discourse explored in this paper is the aspect online pedagogy. This term refers to strong theoretical foundations that ensure educational excellence in online education (Herie, 2008). According to researchers like Scheers, Terry, Doolittle and Hicks (2004) online pedagogy –especially in a distance learning environment- can be secured through the implementation of three principles, namely: institutional support, instructional design and online pedagogy principles. The researchers assert that effective online pedagogy can be attained by ensuring

institutional support in terms of commitment, motivation and availability of infrastructure as well as support services. The instructional design principles are recommended for effective online pedagogy because they provide guidelines on instructional goals, objectives, context and media selection as well as assessment and evaluation processes. The online pedagogical support principles on the other hand ensure that the basic educational process of interaction, knowledge constructions, inquiry and cultivation of student independence are carried through in an online environment. A graphical representation of Scheer et al. (2004) online pedagogy framework could therefore be portrayed as in Figure 1:

Figure 1

*Principles for supporting effective distance online education*



Source: Scheer et al. (2004)

### Online pedagogy framework

A close analysis of the online instructional design and pedagogical principles, in operation at OUT, reveals that the institution is closely aligned with Scheer et al.'s (2004) online pedagogy framework which is anchored on three main pillars, namely: institutional support, instructional design and online pedagogical principles.

### Institutional support

The University has been successful in ensuring institutional support. There is an established institute of educational technology which oversees the development and progress of Information Technology (IT). An e-learning strategy document has been developed for the purpose of providing concrete guidelines for the implementation of E-learning at the University. The top management has also shown commitment and support by organizing and facilitating workshops, seminars and training for academic staff and students. In 2011, at least three workshops were conducted and at least forty members of the academic staff acquired knowledge and skills around issues of online instructional design and pedagogy. As a result, there is increased awareness, knowledge

and skill on the use of E-learning as a supplementary instructional tool. Top management also strives to support the unit by providing the needed infrastructure for supporting e-learning activities. The institution has established 30 regional centres in the country and at least 14 of these nodes have computer labs that enable online activities. Currently, plans are underway to develop four computer laboratories at some of the remaining centres that have no computer labs.

### **Challenges in implementing online instructional and pedagogical processes**

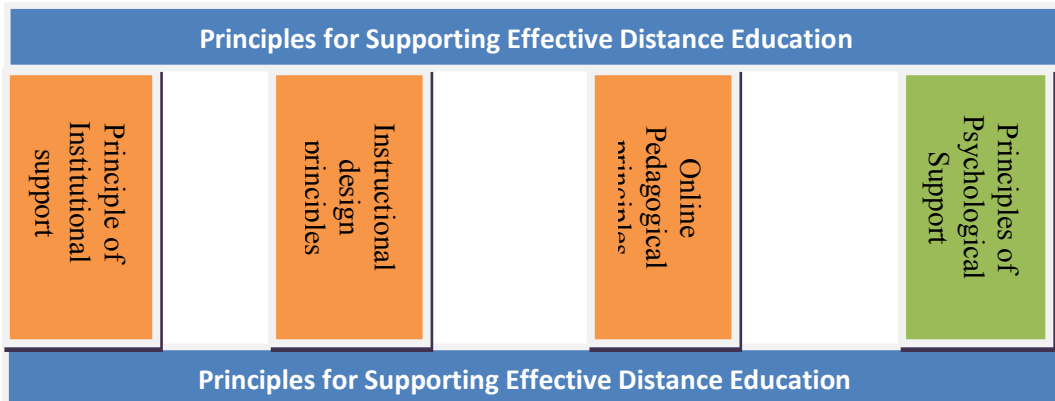
Some of the main issues that the institution is trying to address are low awareness levels and negative attitudes that academic staff and students have towards online instructional design processes. These negative attitudes are reflected through low interest levels and lack of motivation towards instructional design initiatives that are organised by the institution. Additionally, system generated reports reflect that there is a limited number of courses on the systems, many of which are either inactive or incomplete. Another challenge that the institution is facing is a lack of available study material to support online instructional design and development.

### **Revised framework**

In spite of the apparent implementation of the recommended framework (Scheer et al., 2004) at OUT, it is evident that effective and efficient implementation of online instructional and pedagogical principles require more than acquiring institutional support and engaging online instructional as well as pedagogical principles in the teaching and learning process. It is proposed in this paper that an additional element should be considered or added to the current framework in order to facilitate successful online instructional and pedagogical processes. Parallel to the principles of institutional, instructional and pedagogical support, there is a need to address issues of a psychological nature which include issues of interest, motivation, awareness and skills. This arm of support is termed as a “psychological support” principle. It is strongly suggested through this paper that ‘psychological support’ should be explicitly embedded within the instructional design frameworks in order to ensure effective implementation of the online instructional design and pedagogical processes as reflected in Figure 2.

Figure 2

*Revised framework for supporting Effective Distance Education*



Researchers such as Davis, Bagozzi and Warshaw (1989) who theorise about technology acceptance, have also confirmed that psychological issues such as attitude are core influential factors in the adoption of technologies. Similar sentiments are echoed by Rhema and Miliszewska (2010) through the assertion that a positive attitude towards ICTs is necessary in order to achieve effective implementation of ICTs in the realm of teaching and learning.

The revised framework and approach for supporting effective distance education has already been adopted at OUT with positive results. E-learning awareness seminars have been scheduled for all faculty members and one-on-one consultation sessions are being conducted. These are among some of the preliminary strategies that have been embraced to ensure that the institution achieves positive mindsets amongst its academic staff and students.

### Conclusion

Higher learning institutions offering open and distance learning have been embracing ICTs, as a tool towards delivery of quality education. The link between technology and pedagogical context has been established for the purpose of ensuring effectiveness in delivering learning outcomes. The current framework has been anchored on instructional support, design and pedagogy principles. Psychological support as an element of the revised framework is aimed at raising awareness levels of academic staff and students on online instructional design processes. The positive mindsets will therefore contribute to attaining maximum engagement in online learning activities.

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## The Role of Information and Communication Technologies in Quality Assurance in Open and Distance Learning

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**Abstract:** *Open and Distance Learning (ODL) is a welcomed innovation and handy tool that could speedily help actualize Education For All. However, despite a long and generally successful track record, ODL is still required to prove that the quality of student learning is at least equivalent to face-to-face teaching so as to promote its value and recognition. With the potentialities provided by modern Information and Communication Technologies (ICTs), their incorporation into Quality Assurance (QA) system can help accomplish this. The paper focuses on issues of using ICT in QA in ODL and some major associated challenges. The role of ICT in QA is very well elaborated in different areas, but a number of related issues necessary to situate the indispensable role of ICT in QA in ODL are given a cursory mention. Some vital recommendations are made to overcome challenges identified including careful and adequate investment by government and private bodies in ICT.*

### Introduction

Open and Distance Learning (ODL) is one of the most rapidly growing fields in education. It serves as a force contributing to social and economic development of both developed and developing countries. ODL is becoming accepted and indispensable part of the mainstream of educational systems, especially for developing countries (Ololube, Ubogu & Ossai, (n.d); UNESCO, 2002). ODL represent approaches that focus on opening access to education and training provision, freeing learners from the constraints of time and place, and offering wide range of purposes and flexible learning opportunities to individuals and groups of learners (UNESCO, 2002).

To protect students and other stakeholders from low-quality provision and disreputable educational providers, as well as to encourage the development of quality cross-border higher education that meets human, social, economic and cultural needs, Quality Assurance (QA) can be adopted as an effective method and tool to respond to the challenge of quality in ODL.

QA processes are an integral part of ODL operations by virtue of its foundations in the industrial era. As observed by Akeusola and Ofulue (2011), it is the industrial mass production approach to education that has attracted perceived misconceptions about the quality of education provision through ODL as being second to traditional forms of learning. Assuring the quality of education provision is a fundamental aspect of gaining and maintaining credibility for programmes, institutions and national systems of higher education worldwide (Kirkpatrick, 2005). For ODL to be as good as, even better than the learning provided by conventional/traditional system of education, its quality must be ensured to promote its value and recognition. There are different definitions of QA, however, Belawati and Zuhairi (2007) defined QA as "systematic management and

assessment procedures adopted by higher education institutions and systems in order to monitor performance against objectives, and to ensure achievement of quality outputs and quality improvements". Quality Assurance of the educational process covers the entire scope from admission through to assessment; curriculum design and content; learner support; and the outcomes in terms of its value and recognition (Akeusola & Ofulue, 2011). The primary purpose of QA is to ensure that students receive a high quality and relevant education and awarded credentials that are widely recognized by governments and employers.

With the potentialities provided by modern Information and Communication Technologies (ICTs), the role of ICT in QA in ODL cannot be overemphasized. Arasomwan (2011) noted that there is no universally accepted definition of ICT because the concepts, methods and applications involved in ICT are constantly evolving on an almost daily basis. It's difficult to keep up with the changes - they happen so fast. It is important to remember that ICT does not mean just the Internet or the computer. However, a good way to think about ICT is to consider all the uses of digital technology that already exist to help individuals, businesses and organizations use (store, retrieve, manipulate, transmits or receives information electronically in a digital form) information (Arasomwan, 2011); Ramanujam, n.d); these includes the whole range of communication technology starting from radio, telephone, etc to the latest satellite based telecommunications and the computer technology. Increasingly new modes of ODL, including new ICT application are seen as vital to new approaches to training provision on a large scale UNESCO (2008).

The role of ICT in QA is very well elaborated in different areas. However, in order to situate the indispensable role of ICT of our modern times in QA in ODL, the old and modern types of ICT and their associated characteristics, as well as the revolutionary impact of ICT in ODL are given a cursory mention. The paper made some vital recommendations that could help overcome the challenges stated in the paper.

### **OLD and Modern Types of ICTs Used in ODL**

ICTs facilitated by electronic means the creation, storage, management and dissemination of information. Many of these technologies are available for ODL usage: *i)* radio – analogue, digital and high frequency two-way, *ii)* television – broadcast, cable, and satellite, *iii)* telephone – wire, cellular, satellite, *iv)* fax, *v)* audiovisual devices, *vi)* artificial satellite, *vii)* computers, *viii)* the Internet, *ix)* newspapers, *x)* World Wide Web, *xi)* Webcasting, *xii)* e-mail or linkserve, *xiii)* electronic bulletin board or newsgroup, *xiv)* online chatting, *xv)* Voice Over IP (VoIP), *xvi)* Podcasting, *xvii)* blogging, *xviii)* interactive computer networks, etc.

The old types of ICTs i.e. the newspaper as well as radio and television (though these have been modernized via the Internet) have the advantages of low cost, requiring little skill to operate and the potential to be highly relevant to the needs of the users in terms

of local information delivered in local languages. The major shortcoming of these old types of ICTs has to do with the often one-sided nature of the communication.

The modern (more advanced forms) part of ICT includes networked computers, satellite-sourced communication, wireless technology and the Internet. A feature of these technologies is their capacity to be networked and interlinked to form a 'massive infrastructure of interconnected telephone services, standardized computing hardware, the Internet, radio and television, which reach into every corner of the globe'. Four interconnected characteristics of the modern, advanced ICTs are worth noting (Baryamureeba, 2007):

- Capacity for interactivity: the new forms of ICTs offer effective two-way communication on a one-to-one or one-to-many basis.
- They are available 24 hours a day on real time, synchronous or asynchronous basis.
- ICT through its interconnected infrastructure now has a reach over geographic distances not possible even in the recent past.
- Feature of the modern ICT that is also highly significant is the continuing reduction in the relative costs of communicating (some are even free), although this differs by location.

ICT has greatly transformed ODL; thus is an indispensable tool in QA in educational institutions/Universities.

### **Revolutionary Impact of Modern ICTs in ODL**

The emergence of new technologies has led to increased interest in distance education. E-mail, electronic bulletin boards, and interactive computer networks have replaced mail carriers in delivering curricular materials, textbooks, and examinations to distance learners. New transmission media capable of providing two-way, full-motion, real-time (live) interaction between a student and a teacher are increasingly replacing non-interactive, one-way systems (Encarta, 2009).

### **Roles of ICTs in QA in ODL**

Assuring the quality of education provision is a fundamental aspect of gaining and maintaining credibility for programmes, institutions and national systems of higher education worldwide, (Kirkpatrick, 2005). In the National Open University of Nigeria, the use of ICT for most operations in the University has enhanced quality education. Application, registration, continuous assignment and examination are all done online. That means students of National Open University of Nigeria must have vast knowledge in ICT. With the advent of digitized ODL forms, millions of learners have been attracted to this innovative approach in education and training. Vital areas of QA considerations as noted by Kirkpatrick (2005) are curriculum and instructions, staff support, student support, and student outcomes, though different countries' QA systems appear to have different area of focus like teaching effectiveness, management processes, accrediting agencies, or research productivity.

### **QA Pre-requisites**

Whether QA has been established in a new institution, or existing practices are being refreshed, there are a number of pre-requisites as stated by Kirkpatrick (2005). Explained in this subsection is how ICT could play a vital role in line with these pre-requisites.

- An institutional quality policy and plan. Committees can access the Internet for existing policies and plans of other outstanding (ODL) institutions to serve as a guide to draw theirs.
- A QA “champion” who will lead the QA effort and ensure it is embedded in the institutional culture and practice. Up-to-date resources, means of easy and timely communication with other experts, are readily available through ICTs for this individual to keep himself updated.
- Opportunities for all staff to contribute to the design of a QA system. E-mail, linkservs, newsgroup, videoconferencing, teleconferencing, SMS and online chat system provide these opportunities. Without doubt these means of communication will increase the sense of ownership and ensures that strategies are meaningful, realistic and more likely to be adopted.
- Mobile phones, World Wide Web, etc. can help create and maintain an effective communications strategy that ensures everyone knows their own and other’s responsibilities, understands why a QA system is being implemented and what should occur. This can also allow stakeholders to identify aspects of QA that may have been missed or not working.
- Mechanisms that encourage good practice will maintain staff interest and involvement in improving quality. For example, exposure to examples of good practice from other sub-systems or work units through meetings (via any of the modern ICTs means) or online-newsletters can stimulate thinking about new quality practices, and encourage collaboration and integration.
- With modern ICTs a range of staff development strategies could be designed to improve quality, where possible linked to staff performance review. Reward structures can also encourage staff commitment to QA.

### **General Philosophy**

With the advent of the Internet and World Wide Web, an institution’s website could be designed such that the Policy and mission statements, philosophy and culture of the institution/organization, mottoes, attitudes of staff and levels of staff commitment are displayed strategically on each web page including the home page when visited. This can put staff in constant remembrance of the level of commitment expected of them.

### **Teaching/learning Effectiveness**

- *Learning materials:* Scientists and scholars use the Internet to communicate with colleagues, perform research, distribute lecture notes and course materials to students. In fact, Webcasting of educational material has become one of the most important services available on the Internet. Common forms include live transmission or rebroadcasts of lectures, classroom work, seminars (sometimes

organized as “webinars” from different locations), as well as videos of conferences, press briefings, and other information presentations. The ability to archive webcasts makes educational material available to users on-demand and at convenient times (Encarta, 2009).

- *Transition Learning*: ICT enables transition learning, i.e. support in developing action plans, preparing curricula vitae, completing application forms, preparing for selection interviews, help in securing funding for further learning opportunities or becoming self employed (Baryamureeba, 2007).
- *Blended learning*. ICTs enable learning that blends e-Learning with instructor-led learning. The learners do pre-work online, learning the subject and facts. Then they come together with an instructor and do activities which may include reviewing the material seen online, role-plays, discussions, etc.
- *Teaching/tutoring*: Individual students can use their computers to contact other students or individuals who have information they need. Entire classes can participate in interactive video sessions with teachers from remote sites or with groups of students from other schools. An instructor can orchestrate the individual learning activities of students who collaborate with other learners, with the teacher, and with multimedia technology available locally or via the Internet; teachers use chat, SMS, etc to help students practice language skills and to provide mentoring to students. For instance history students may chat with elders who lived through the historical period that students are studying.

## Support Services

- ***Student or learner support***
  - *Help desks/Enquiries*. ICTs have made enquiries by clients from far or near to be easy. The helpdesk deals with all incoming emails, telephone calls, voicemails, etc. received from staff, students and occasionally other sources. Once an issue has been resolved, the enquirer will receive information or instructions relevant to the issue.
  - *Registration (online services for students like student registration and fees payment)*: In modern high institutions students pay their fees online and also register online, therefore minimizing registration costs as a result of reduced manpower on the side of the institution and students travelling a long distance. Therefore, deadlines observed that enhances efficiency of the operations.
  - *Assignment submission/return*: Using e-mail, students can submit their assignments as attached documents.
  - *Counselling/advisory*: Counsellors use interviews, counselling sessions, interest and aptitude assessment tests, and other methods to evaluate and advise students; also counsellors consult and collaborate with parents, teachers, school administrators, school psychologists, medical professionals, and social workers to develop and implement strategies to help students succeed. All these could be achieved with ease and precision use of ICT. In various respects, ICT has the potential to significantly

increase access to guidance services, freeing it from constraints of time and space. Counselling can also be done on a one-to-one basis via SMS, email, online chatting, etc between the counsellor and counselee.

- *Guidance on career and learning*: ICT is used extensively in the delivery of career information and guidance. ICTs are transforming career information and guidance services, just as they are transforming service delivery in other sectors such as insurance, tourism, banking, and health services (Baryamureeba, 2007).
- *Learner's progress can be monitored using computer system*: With computerized database system, a detailed/summary progress report on any learner could be made available at any time without any difficulties or mistakes for proper and timely follow-up.

- **Staff support**

Train all ODL staff (teaching and not teaching); they should be oriented and re-oriented in paradigm changes in the ODL system. ICT Customer Services teams could be formed to provide staff with a central area where IT queries can be resolved in a reliable and efficient manner. They can offer help by phone, email, etc.

- **Others**

- *Record keeping (e.g. management of staff and student record)*: Electronic data/ information have the advantage of allowing multiple accesses by users. Also when it comes to manipulating data/information, it is easier if it's electronic. Universities implementing and maintaining information through Student Academic Records Information Systems as opposed to manual records. Universities are keeping staff records in electronic databases/ information systems commonly known as Human Resource Information Systems.
- *Electronic backup*: Different storage devices exist for this purpose, e.g. Flash drives, CDs etc.; this is very useful for the purpose of data recovery and future reference.
- *Warehousing and stock control*: With computerized Inventory/stock Control, available and functional facilities and quality books/study materials can quickly be ascertained and orders placed.

## **Monitoring Operations**

- *Monitoring quality of inputs*: With the help of ICT it is possible to have an analysis of the performance of the students relative to the scheme they used to get admitted, school they came from, A-level/mature/diploma performance, subject combination etc. This information can guide in reviewing admission requirements for the academic programmes and recommending remedial courses. We can also monitor the other inputs like computers, lab materials relative to the number of students in the given department. ICT can also help in monitoring the quality of lecturers; who is a good lecturer; A PhD holder, a master's holder or a Professor.

- *Physical and human resource and other resources audits:* ICT can help in the keeping of real time records on physical and human resource and library resources. For example at any one time it should be possible to know student numbers by, course by faculty, human resource by discipline, computers in each laboratory, library resources, lab equipment and materials from anywhere any time as long as you have the necessary user rights. It should also be possible to account for all academic staff and also know which units are understaffed etc. (Baryamureeba, 2007).
- ICTs can help track the progression and retention rates of students and number of graduates.
- *E-Examination/Assessment:* The pass rates as well as standards of performance of students in their course work and examinations could be tracked easily and efficiently if they are assessed online; the external examiners and internal examiners could examine the students' electronic records independent of time and space.

### **Management Processes**

- *Staff (academic and non teaching) evaluation.* Information from external examiners, student feedback and probably internal Quality Assurance Committee reviews could be fed into staff appraisal process for proper evaluation
- *Appointments and Promotions Processing:* ICT can help in making the appointment and promotion of staff transparent, faster and efficient. This will make it possible to always employ quality staff and encourage those promoted to render better/quality services
- *External examiners Reports:* The external examiners reports are very important reports. The analysis from these reports can be used in curriculum reviews, promotion of staff, termination of employment of staff, enhancement of teaching and assessment among others. Most Universities in Uganda use these reports when there are approving results in Senate and it ends there. Using ICT to process these reports into information can provide information that can be used in ensuring quality enhancement and also help in identifying good examples and poor examples in teaching and assessment which can be distributed to departments for purposes of improvement among others.

### **Quality Research Productivity**

- The quality of graduate students' research work could be greatly enhanced if a portion of ODL institution's website is created where students post their work and different user rights are given to the supervisors, heads of related departments, deans etc. Then the online comments by the supervisors and the different versions of the student's work can be captured to monitor the progress of the student and quality of his work.
- E-supervision of graduate students through wikis, blogs, chatrooms, online telephony, email and discussion boards are very effective if well planned and prepared. According to Baryamureeba (2007) most African Universities lack

expertise in many fields and ICT provides a window of opportunity to enhance quality assurance in research and training via e-supervision and e-mentoring.

- The widespread use of computers and the advent of internet have made it easier for some students to plagiarize. Computer-assisted detection using software like CopyTracker, SeeSources, Plagium, etc. has made detecting plagiarism in a student's work (course works, reports and dissertations) easier and more accurate. The same can be used to detect the genuineness of research work by staff including book chapters, journal papers, and conference proceedings.

### **Feedbacks**

- Qualitative feedback can be obtained through Student On-line Evaluation exercise, Staff On-line Evaluation exercise, Research On-line Evaluation exercise, External examiners and Accreditation online reports.
- Student feedback via tutorials with personal/subject tutors is possible with online chatting.
- Feedback from electronically archived statistical data on examination performances of students and examination supervisors can immensely contribute to QA review for further improvement.
- ODL institution-wide (through the different study centers) student questionnaire exercise can be carried out on-line or posted to students' e-mail boxes for appropriate response for evaluation by management.

### **Accreditation**

Many of the accreditation exercises could be done online (e-accreditation). Accrediting agencies assess the educational quality of colleges and universities by determining whether they have effective academic programmes, qualified faculty members, adequate instructional and library facilities, and sufficient resources to provide satisfactory education. Information on all these could be uploaded to the institutions' websites for accreditors' assessments.

### **Data Analysis and Decision Making**

Various computer software are available for data analysis; examples are SPSS, Microsoft Excel, etc. Also there are systems available for decision making; example is DSS; these software and systems enhance accuracy, reliability and timeliness in data analysis and decision making.

### **Challenges of ICT in QA in ODL**

There are quite some challenges associated with ICT in QA in ODL because keeping abreast with the dynamic nature of ICTs is highly demanding. Identified below are some of these challenges:

- For ICTs to have any role to play in QA in ODL, ICTs must be 'maturely' integrated to ODL and issues on QA in integration of ICTs in ODL properly dealt with.



- The procurement, installations and maintenance of ICTs facilities coupled with constant supply of electric power for their usage may demand some huge amount of finance that could inconvenience many developing countries.
- Lack of internet connectivity is another challenge in developing countries; online learning material will be irrelevant to the learner if they are inaccessible even if they are of the highest quality.
- Because of the dynamic nature of ICTs due to continual technological advancement, ODL institutions staff would need constant training and re-training to keep them updated.
- In most cases, students involved in ODL are working adults who have little or no time for their studies and many do not seek for counselling on time management, thus compromise quality by not being serious in meeting quality expectations in ODL programmes.
- Many of the staff members (supervisors) of ODL institutions are not yet convinced that they can easily supervise their students virtually. Many of the students mostly in developing countries who are not computer literate or poor at the usage of ICTs are not in agreement with e-supervision. According to Lubega (2007) they think that e-supervision cannot work and should never be used.
- The increasing use of ICTs in education highlights the need for multi-disciplinary teams that bring together experts in both education and informatics to providing ICT solutions to educational challenges because these groups use different vocabularies and have different priorities.
- ODL is a rapidly expanding field where new developments are happening very quickly. A static tool for policy-making would become quickly outdated. At the same time, regional needs in this area vary widely owing to several factors such as variations in educational demand and differing degrees of access to ICTs Varoglu (n. d).

### **Additional Comments**

This paper dwells much on technical aspects of ICT. The issue of ICT cannot be over emphasized but it is still a new innovation and various organizations that have embraced this new trend should endeavor to focus and elaborate on managerial aspect of ICT. The National Open University of Nigeria has upgraded students' portal profile to improve on the use of ICT for its operations. The managerial aspects has been improved upon more versatile consultants engaged to handle students portals.

### **Recommendations**

In line with the challenges stated above, recommended below are some of the ways the challenges could be taken care of:

- Government and private bodies should careful and adequate investment in ICT integration in ODL by way of procurement and maintenance of the facilities as well as sponsoring researches and frequent ICT training of staff.

- The use of solar cells should be adopted so as to introduce telephones and Internet connectivity in areas still without electricity.
- Quality is a product of planning, monitoring, control and coordination; hence it needs to be built into an ICT programme at the time of design and not at the end.
- Students as active participants in their educational experience should be encouraged to actively participate within institutional structures like student surveys because they are an integral part of institutions' strategies for continuous quality improvement, including the identification of good practices. Besides ICT-based student, surveys should be practiced by all ODL institutions timely and cost effectiveness.
- Because of their differences in vocabularies and priorities, there is need for dialogue to bridge the gap and to establish agreement between experts in both education and informatics on the multi-disciplinary approaches to providing ICT solutions to educational challenges which include quality issues.
- Active partners in the ODL field in their respective regions (study centers) should be involved in the implementation of projects.
- Countries should socialize and educate students, educators and the society in using ICT facilities for ODL enterprise.
- ODL institutions (mostly in developing countries) should to take up the initiative of encouraging their staff and students to use e-supervision for students project work and researches.
- Government should provide computers at subsidized rates to citizens, especially students, educators, and ODL staff.

## Conclusion

Open and Distance Learning (ODL) is flexible and user friendly. To ensure its quality, ICTs should be integrated into the various aspects of ODL as well as its Quality Assurance (QA) system. In this paper, role of ICTs in QA in ODL was very well elaborated in different areas. When properly designed, developed and implemented ICT in QA in ODL will result to greater public confidence, more satisfied students, efficient processes and staff who are confident in their jobs. However, the associated challenges and recommended solutions should be given careful consideration and implementation. When all these are done, actualizing Education For All without lowered quality of student learning compared with traditional method of learning becomes a very easy task.

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## Quality Assurance in Open and Distance Learning: The Approach of National Universities Commission of Nigeria

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**Abstract:** *The origin of distance education at the university level in Nigeria dates back to 1974 with the transformation of what used to be correspondence studies to distance education by the existing conventional universities thereby making them become Dual-Mode institutions. While a single mode open and distance learning at the university level was introduced in 1983, it became functional in 2001. However, the issue of quality assurance was not in place until 2009 when the National Universities Commission (NUC) in charge of the quality assurance in Nigerian universities established a unit to ensure quality in open and distance learning. Although NUC is specialised in regulating the activities of conventional universities, the unit convened a stakeholders workshop to develop guidelines for open and distance learning in Nigerian universities with resource persons from the Open University, United Kingdom. The outcome of the workshop was the development of programme evaluation form for open and distance learning programmes.*

*This paper critically analyses the evaluation procedure by comparing it with critical areas that any framework for managing open and distance learning quality should address as proposed by the Common Wealth of Learning. The strengths and weaknesses of the NUC evaluation procedures were determined and suggestions were offered on how to improve the evaluation procedures by taking into cognisance of Nigeria's present technological and infrastructural challenges.*

### Introduction

The history of distance education in Africa, and Nigeria in particular, dates back to the 1940s when many Nigerians got enrolled in the correspondence colleges in United Kingdom such as the Rapid Results College, Exam Success and Woolsey Hall. By 1933, a handful of Nigerian graduates had obtained bachelors degree, mostly in philosophy and history. Such graduates were able in those days to overcome the barriers of distance to gain access to university education (Ojo, 1988; NOUN, 2006). The first indigenous distance learning programme was the English by Radio programme of Nigeria Broadcasting Corporation that followed independence in 1960. The programme was primarily targeted at primary and secondary school levels and covered core courses at both levels with more emphasis placed on the teaching and learning of Science, Mathematics and English. In the last four decades, university education programmes in the country began to witness a lot of changes in terms of instructional delivery mode in some of our tertiary institutions. The Correspondence and Open Studies Unit (COSU) of University of Lagos that started in 1974, which later changed to Correspondence and Open Studies Institute (COSI) and now known as Distance Learning Institute was the first attempt made to establish a distance education unit as part of a University in Nigeria. It began initially to offer programmes in science education at first degree level in Biology, Chemistry, Mathematics, Physics and

Postgraduate Diploma in Education (PGDE) for degree holders who did not possess teaching qualifications (Ajadi, Salawu & Adeoye, 2008).

Ahmadu Bello University (ABU) also started its distance education through a training programme known as Teachers-in-Service Education Programme (TISEP) for Grades Three and Two teachers and later the Nigerian Certificate in Education (NCE). Also in November, 1976, the University established a University of the Air Programme for teachers in secondary schools and teacher training colleges. The Distance Learning Institute of the University of Ibadan which started in 1979 as External Degree Programme of the University is another institution which adopted the distance learning mode (Ajadi, Salawu & Adeoye, 2008). Another historical step in Nigerian distance education was the initiative of the civilian government of Shehu Shagari to establish an Open University, which was to be based in Abuja. However, for various reasons and considerations, the scheme was scrapped by the military regime of General Buhari. His Government favoured a dual-mode set-up at the University of Abuja. The Centre for Distance Learning and Continuing Education (CDLCE) was mandated to provide a distance education component for every course that the University of Abuja would provide. However, it was not possible to meet this mandate (Yusuf, 1999). This paved way to many conventional universities in the country to establish distance learning centres.

Thus, another milestone in the history of establishment of dual-mode institutions, that is, establishing distance learning centres within existing conventional universities. There are notable examples of distance education delivery forming part of a 'dual-mode' institution. Within this are varying degrees of formalization. For example, the Universities of Abuja, Lagos, Ibadan, Ife, Maiduguri and Yola operate structured dual-mode distance education. At Abuja, Ibadan and Yola the Centres are situated kilometres away from the main campus. The Lagos, Ife and Maiduguri distance learning centres are more fortunate in that they operate within the main campus. All these Universities have centres for distance education that are an integral part of the administrative structure of their respective universities. However, they operate with a reasonable degree of autonomy (Yusuf, 2007).

A key characteristic of delivery of distance education within a dual-mode institution is the location of such delivery within the systems and operations of predominantly face-to-face institutions of higher education. The implication of this is that distance education units tend to rely heavily on tutors and writers who are already employed as fulltime lecturers. As individual institutional reports illustrate, development of materials for distance education provision and tutoring relies predominantly on tutors who are already employed on a full-time basis as academic staff in face-to-face institutional settings.

Another implication of locating distance education facilities within the face-to-face tertiary institutions has relegated distance education to being regarded as what expert term as ‘poor brother’ of face-to-face education provision.

Despite the long history and successful track record of distance learning in Nigeria, there wasn’t any framework to ensure or benchmark quality in open and distance learning in the country until 2008 when the National Universities Commission (NUC) in charge of quality assurance in Nigerian universities established a unit to ensure quality in open and distance learning. Although NUC is specialised in regulating the activities of conventional universities, however, the unit convened a stakeholders workshop to develop guidelines for open and distance learning in Nigerian universities with resource persons from the Open University, United Kingdom. The outcome of the workshop was the development of programme evaluation form for open and distance learning programmes .

Therefore, the aim of this paper is to critically analyse the NUC evaluation procedure by comparing it with critical areas that any framework for managing open and distance learning quality should address as proposed by the Commonwealth of Learning and thereby, determining the strengths and weaknesses of the NUC evaluation procedures with the aim of offering suggestions on how to improve the evaluation procedures by taking into cognisance of Nigeria’s present technological and infrastructural challenges.

## **Meaning of Quality and Quality Assurance**

### **What is quality?**

Crosby (1984) affirmed that quality means ‘free and zero defects’. Juran (1989) opined that quality means ‘fit for purpose’. Harvey and Knight (1996) suggested that quality can be broken into five different but related dimensions;

- Quality as exceptional, e.g. high standard.
- Quality as consistency, e.g. zero defects.
- Quality as fitness of purpose; fitting customer specifications.
- Quality as value for money.
- Quality as transformative; ongoing process to empower and enhance customer satisfaction.

Thus, suggesting that quality is not some kind of fixed, immutable target or destination that may be attained merely by striving sufficiently hard, but a dynamic or moving target whose attainment at each point in time is facilitated by a set of strategies that are themselves also dynamic (Ekhuere, 2006).

### **What is quality assurance in education?**

Menon (2004) asserted that quality in a higher education programme means quality of graduates it produces and quality of learning processes it provides for. Menon further stressed that *Quality assurance (QA)* is the set of activities that an organisation undertakes to ensure that standards are specified and reached consistently for a product or service. Quality assurance facilitates recognition of the standards of awards, earn greater public confidence, helps to inform students choice, contributes to improved

teaching, learning and administrative processes and help disseminate best practices with the objective of leading to overall improvement of higher education systems. Since higher education is becoming internationalised, however, setting common standards and evaluation criteria must take into consideration diversity and plurality of higher education within national, as well as regional systems. According to Menon (2004) *Quality Assurance* involves proactive measures taken to avoid faults while *quality control (QC)* involves reactive measures taken to remove faults and *assessment of quality systems* that include the monitoring, evaluation, and audit of procedures. A *total quality management - internal and external*, will be a combined mechanism of *quality assurance, quality control and continuous monitoring and evaluation (M&E)*.

Although the definition of quality assurance may differ, however, all quality assurance terminologies share a common purpose in ensuring that students receive a high quality and relevant education that has greater public confidence.

### **Quality Assurance in Open and Distance Learning**

Open and Distance education have seen a remarkable growth in the last few decades owing to the increasing demand for education and training. This is because since its inception, distance learning has been increasing access to education. Look at how distance learning is providing access, for example, Anadolu University in Turkey provides access to 40% of all entrants to higher education in that country and the government of India aspires to reach a similar percentage of ODL students by 2012. In South Africa 4 out of every 10 students enrolled in Higher Education study at a distance (Kanwar & Daniel, 2009). It was opined that if access is increased, there is the danger of lowering quality. It is within this access to education paradigm that 'quality assurance' has become one of the fundamental aspects of managing and planning distance education provision.

In the last two decades, quality assurance in distance education has gained serious attention by institutions, stakeholders and scholars. There are quality assurance frameworks and transnational qualification frameworks developed nationally and internationally to guide and regulate distance education programmes and institutions. These include:

- EADUTU-UNESCO,
- Guidelines for Distance Learning Programs developed by Commission on Higher Education, Middle States Association of Colleges and Schools,
- Guiding Principles for Distance Learning in a Learning Society prepared by the American Council on Education,
- ADEC Guiding Principles for Distance Learning by the American Distance Education Consortium,
- Best Practices for Electronically Offered Degree and Certificate Programs drafted by the Western Cooperative for Educational Telecommunications (WCET) and developed by eight regional accrediting commissions,

- Quality on the Line: Benchmarks for Success in Internet-Based Distance Education prepared by the Institute for Higher Education Policy (2000),
- The British Association of Open Learning,
- The Canadian Association of Distance Education and the Norwegian Association of Distance Education establish voluntary standards and accept a code of practice,
- The International Council on Open and Distance Education Standards Agency (ISA),
- The Distance Education and Training Council (DETC). DETC endorsement is viewed by the public as recognition of quality performance standards.
- Asian Associations of open universities (AAOU)
- The National Universities Commission of Nigeria (NUC )
- African council on distance education-quality assurance and accreditation agency (ACDE-QAAA).

It is worth noting that this is not an exhaustive list of open and distance learning quality assurance agencies. These National and International regulating authorities, professional bodies and distance education providers developed these policies and frameworks based on the inference drawn by them with respect to potential learners (Deshmuk, 2005). As a result ,a specific quality assurance strategy is not universally adoptable (Olojede, 2008) because distance education ‘outfit’ varies widely from institution to institution and one country to another.

Thus, quality improvement becomes imperative for distance education providers. This means distance education providers must pay close attention to quality in terms of products, processes, production, delivery systems, and philosophy (COL, 1997). Pressures for quality improvement have emerged from both internal and external parties. Internally, distance education institutions are being challenged to undertake continuous improvement from within. Externally, stakeholders (i.e., users, consumers, educational funders) are persistently questioning the quality, accountability, effectiveness and efficiency of educational endeavours in which they have interest. Moreover, for many distance education institutions funding and student enrolment levels depend on quality of their bottom line performance and the quality of the services they offer.

In response to the above quality assurance pressures , institutions have begun to re-define and re-orient their institutional missions and strategic visions to incorporate and address quality issues (Belawati & Zuhairi, 2007).This is because quality in Distance education covers a number of aspects, which along with the physical products, includes pedagogical processes, production and delivery systems, and philosophy (COL, 1997). Quality of products includes course materials, number of graduates, examination pass rates, admission in further studies, and so forth. Quality of processes covers areas such as learning and teaching processes, advising students, coordinating external course and test item writers, networking with regional offices, managing student information.



Quality of production and delivery systems includes course production, print and multimedia production, test item production, scheduling, warehousing and stock control, getting materials to students, and broadcast transmissions. Quality of philosophy covers such things as ODL vision, mission and policy statements, institutional culture, governance, corporate culture, and public image (COL, 1997).

In terms of production and delivery system, ODL may be likened to industrial management (Peters, 1983). Management is crucial in ODL, as management activities follow assembly-line procedures and some jobs require craftsmanship. Deadlines and schedules must be met. What goes wrong in one activity can have a domino effect on subsequent activities, oftentimes with devastating consequences. For instance, delays in meeting course development deadlines can result in delays in production, printing, dispatching, and even in whether or not students receive their learning materials on time. In extreme cases, students' examination schedules can be postponed, simply because they did not receive their learning materials in time. Producing learning materials – including tutorial services – requires quality professionalism (Belawati & Zuhairi, 2007).

Innovation in distance education is essential in order to meet the students' demand flexibility, as students have increasingly diverse background and needs. Innovation in distance education assumes that new techniques will help individual institutions achieve their aims in terms of concrete access, cost, quality, and flexibility (Daniel, 1999). In this context, technology becomes a vital tool in distance education. For technology-based distance learning centres, the quality of teaching and learning is of critical importance, as distance learning materials are open to public access and scrutiny, and when the use of information and communication technology is involved, such access can often become global (Bates, 2000). Components of quality in technology-based educational materials include content, media production, instructional design, and delivery and student support (Bates, 2000). According to (Pirani, 2004), institutions must provide adequate and reliable technical infrastructure to support e-learning activities, instructors and student must possess the technical skills to use e-learning tools and instructors must redesign their courses to incorporate e-Learning effectively into their pedagogy. However the use of technology in distance education in developing countries like Nigeria is challenging looking at the e-readiness of the country. Nigeria was rated as the world's 139th e-ready country, the 23rd. in the African region and the 3rd in the Western African sub-region with e-readiness index of 0.2758 in 2005 (United Nations, 2006). More recent, according to the 2010 Economic Intelligence Unit, the world's e-readiness for the years 2009 and 2010 were assessed, and Nigeria was ranked 61 out of 70 countries. The most populous country on the African continent, South Africa ranks 39, Egypt 57 and then later followed by Nigeria, (Economic Intelligence Unit, 2010).

Another important element of successful strategies for benchmarking quality in online degree programs is recognition that quality can be conceptualized and measured at

different levels. Quality benchmarks can and should be measured at the institutional level, the program level, and the course level. Quality issues and considerations at these three levels are interrelated and there will be some overlap of them among the three levels. However, many quality assessment benchmarking strategies focus only on one or sometimes two of these elements, and the results are therefore incomplete and do not enable the programme to recognize all of the elements that should be addressed for comprehensive program improvement.

Quality is an incremental process (Daniel, 2005) involving continuous development along with the development of distance learning institutions. Quality assurance should not be viewed as an effort to create quality, but rather a systematic and comprehensive effort to improve quality. Quality assurance, therefore, is not a means to achieve particular target and develop procedures, but rather a continuous process of improvement. Quality assurance is based on the assumption that quality can be improved continuously. Systems and procedures that are developed for this purpose ensure that staff continuously and critically question the quality of ODL products and processes, and continuously attempt to improve it. This shows the importance of developing and strengthening the internal quality assurance mechanism in distance education.

### **The National Universities Commission and its Approach to Quality Assurance in ODL**

The Federal Government of Nigeria through section 10 of Act No.16 of 1974, incorporated as section 4(a) of the National Universities Commission (NUC) amended Act No.49 of 1988 empowered the NUC to lay down Minimum Academic Standards (MAS) for universities in Nigeria and to accredit their degrees and other academic awards. Prior to August, 2006, the Department of Inspection and Monitoring of the NUC had not been created. It was in May, 2007 when the general reform in the public service took place and the National Universities Commission culminated in the creation of Department of Inspection and Monitoring that the Open and Distance Learning was created as one of the four Divisions of the Department (NUC/ODL). The Division was mandated with, among other things, to carry out the following functions:

- Regulating and ensuring orderly development of ODL in Nigeria.
- Monitoring and Evaluation of all institutions offering University Education via the ODL mode.
- Producing manual and conditions for offering ODL on quality assurance in Nigerian Universities.
- Monitoring and evaluating all universities offering Open and Distance Education in Nigeria with focus on such areas as academic brief and students and staff numbers, quality and mix, teaching and research quality; infrastructural input and other issues pertinent to quality assurance.

In pursuance of its mandate the division in 2008 carried out a two-day fact-finding and familiarization visits to four institutions of ODL namely: University of Ibadan,

University of Lagos, University of Abuja and National Open University of Nigeria (NOUN) offering degrees via Open and Distance learning mode. Following the fact finding visit, the Division produced a draft model for ODL in Nigerian Universities. In 2009, the division convened a two-day stakeholder's workshop with five academic staff from all institutions of ODL in Nigeria and resource persons from the Open University, UK for input and finalization of the draft practice guidelines for distance learning in Nigerian Universities. The outcome of the workshop was the development of programme evaluation form for open and distance learning programmes. Below is the evaluation form which contained detailed scoring schemes.

The programme evaluation form for open and distance learning programmes (NUC/FEF/ODL), later known as Guidelines for Open and Distance learning in Nigerian Universities, comprise 36 'best practices' under 12 main components (Table 1), and reflect the NUC's comprehensive needs to operate quality ODL programs:

### **Strengths of the NUC Approach**

The manual further stressed that, in order for a programme to earn full accreditation status, it must score at least 70% in component 4, 5, 6, 7 & 8 (Table 1). A cursory look

Table 1

*Quality Assurance guidelines for ODL Programs*

S/NO	QUALITY ASSURANCE	(%)
1	Philosophy and objectives (3 best practices)	3%
2	Admissions (1 best practice)	3%
3	Curriculum (1 best practice)	5%
4	Pedagogy/learning resources (9 best practices)	30%
5	Evaluation and assessment (4 best practices)	10%
6	Staffing (5 best practices)	10%
7	Academic learner support (5 best practices)	15%
8	Information advice and guidance, IAG, (2 best practices)	10%
9	Administration (3 best practices)	5%
10	Efficiency (1 best practices)	4%
11	Employer feedback (1 best practices)	3%
12	Viability (1 best practices)	3%

**Source:** National University Commission (2009). *Guidelines for ODL in Nigerian University*.

at the main components/attributes especially 4, 5, 6 & 7 in which a programme must score at least 70% before it earns full accreditation will reveal that the quality assurance exercise of the NUC has the following strengths:

1. Pedagogy/learning resources (9 best practices) score 30%: The literature review revealed that quality in ODL is frequently judged in terms of learning materials because student learning is at the centre of the ODL experience. Success depends

on how effectively course production, delivery and student support sub-systems operate, underpinned by academic standards and management processes. However, a course is more than just the materials. It is the total experience of the learner, which the NUC approach acknowledged by adding pedagogy to this component. Therefore, allocating 30% of the total marks of the evaluation to the pedagogy and learning resources are in order.

2. Evaluation and assessment (4 best practices) score 10%: Assessment is an integral part of teaching and learning, in open and distance learning assessment should be seen as a process that drives learning than assessing learning. Thus, an independent learner is isolated, always at the brink of frustration. He therefore needs instant feedback to bridge the gap of isolation. The best practices under this component (in NUC assessment) emphasised the use of computer based assessment (CBA) and constant feedback. The literature reviewed had discovered the potentials of computer based assessment (CBA) in the enhancement of distance learning. Computer based assessment offers significant potential to the student. It is always available and its use is free from personal embarrassment. It can offer immediate feedback on progress and advice on future learning. If well designed, it can be engaging. From the perspective of the teacher, it allows class size to be scaled without an increase in effort and a simple means of monitoring progress. Assessment audit frameworks demonstrate that computer based assessment is capable of meeting the criteria for assessment that supports learning. The formative capabilities of computer based assessment are of particular importance in distance learning where flexibility in timing and geography are of particular importance. Therefore ensuring that a programme must score 70% of the total marks (10%) allocated to evaluation and assessment before it earns full accreditation is another strength of the NUC's approach to quality assurance in ODL.
3. Staffing (5 best practices) score 10%.The best practices under this component emphasises the training and re-training of academic and non-academic staff and specified the qualifications and experience required of administrative and teaching staff. It went further to specify the minimum number of staff required for programmes and study centres. This is in line with staff support requirement in ODL as contained in the COL's document for quality assurance in ODL. Therefore allocating 10% of the total marks of the evaluation procedure indicate the strength of the NUC's evaluation procedure.
4. Academic learner support (5 best practices)score 15% and information advice and guidance IAG (2 best practices)score 10%) This is one the major components of support in distance learning. Distance learners are dispersed and physically separated from the institution as well as their peer groups. They may not get immediate clarifications for their doubts that come up during their studies. It is a fact that the learning packages (print materials, audio cassettes, videocassettes, etc.) used by open and distance learning institutes are not enough for the distance

learners. Most of the open and distance learning institutes in the world have established student support service centres and/or regional/study centres to cater to a large number of students on various matters like, admission, courses, examination schedules, materials dispatch, counseling and so on. It is a fact that the success of distance education depends largely on student support services provided to distance learners. Therefore, ensuring that a programme must score 70% of the total marks (20%) allocated to learner support before it earns full accreditation is in tandem with world best practices in distance learning and it shows the strength of the NUC's approach to quality assurance in ODL.

### **Weaknesses of the NUC Approach**

- 1) The evaluation procedure is expected to clearly spell out the level at which it assures quality. This is because quality can be conceptualised and measured at different levels. Quality benchmarks can be measured at the institutional level, the program level, and the course level. The NUC's evaluation form is for which of these levels?
- 2) Is the NUC procedure designed for comparative or competitive purposes, in order to provide some ranking of programs to the public, or is it for continuous improvement? There is need for the commission to clearly state to stakeholders the purpose for the exercise.
- 3) The evaluation procedure has not clearly stated the review period of the exercise. Is it once a programme got accredited and then continuously reviewed or is there a period for review?
- 4) The evaluation exercise has no provision for students' ratings of the programs. None of the performance indicators seek feedback from students. Research findings indicate that students are the most qualified source to report on the extent to which the learning experience is productive, informative, satisfying, or worthwhile. While opinions on these matters are not direct measures of programs effectiveness, they are legitimate indicators of student satisfaction, and there is substantial research linking student satisfaction to effective teaching.
- 5) Another weakness of the NUC approach is that in all the best Practices, it emphasises the use of ICT, while this is desirable, the commission should take the countries e-readiness into cognisance. Nigeria was rated as the world's 139th e-ready country, the 23rd. in the African region and the 3rd in the Western African sub-region with e-readiness index of 0.2758 in 2005 (United Nations, 2006). More recent, According to the 2010 Economic Intelligence Unit, the world's e-readiness for the years 2009 and 2010 were assessed, Nigeria was ranked 61 out of 70 countries. The most populous country on the African continent, Nigeria ranks below South Africa and Egypt – which rank 39 and 57 respectively (Economic intelligence unit, 2010).
- 6) NUC is an external assessment force. External audits are not only needed to assure external stakeholders that an institution is performing well, but also provide an valuable feedback to the institution on whether or not they are, in reality, achieving their set goals.

### **Recommendations**

The NUC quality assurance procedure should be developed in order to ensure quality at the institutional level, programme level and course level. Quality issues and considerations at these three levels are interrelated and there will be some overlap of them among the three levels. However, the NUC's assessment benchmarking strategies focused only on one of these elements, and the results would be therefore incomplete and would not enable the program to recognize all of the elements that should be addressed for comprehensive program improvement. All of these levels of analysis must be addressed simultaneously for maximum opportunity for program improvement.

The purpose for evaluating the programme quality should be clearly stated. Is the overall framework designed for comparative or competitive purposes, in order to provide some ranking of programs to the public, or is it for continuous improvement? The answer to this question will determine much about how the process of benchmarking quality is implemented, how open the process will be, and how readily program staff, students and others will be able to locate targets of improvement.

The NUC guidelines for ensuring quality should clearly state the period for which review will be carried out, for example is it every 3, 4 or 5 years the programme will be evaluated to ensure quality. Current NUC's guidelines call for the perspectives of employers to be considered, but do not stress including students as major players in the benchmarking strategy. While this may not be a requirement for all programs, nevertheless most programs have external constituencies whose needs should be considered and represented. Therefore the procedure should include students (customers) perspectives. In the 21<sup>st</sup> century, education has become a commodity. It can be bought, sold, and transferred just like any other commodity.

The NUC emphasises the use of ICT in all the best practices in ODL, while this is desirable, the commission should take the country's e-readiness into cognisance. It is recommended that for now the emphasis should be on the use of asynchronous ICT components like CD's, USB stick etc, as the country's e-rating improves then emphases should be on synchronous ICT component.

### **Conclusion**

This paper critically analyses the National Universities Commission of Nigeria procedure for ensuring quality in open and distance learning by comparing it with critical areas that any framework for managing open and distance learning quality should address as proposed by the Commonwealth of Learning. The strengths and weaknesses of the NUC evaluation procedures were determined and suggestions were offered on how to improve the evaluation procedures by taking into cognisance Nigeria's present technological and infrastructural challenge.

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## Online and Mobile Learning in Poultry Farming in Tanzania

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**Abstract:** *Poultry farming in Tanzania has become a major source of income in families in the rural areas. In earlier days, farmers used only a traditional way of farming by letting free poultry in the morning to fetch for food and later in the evening let them in the chicken barn for shelter. In some cases the farmers were not using vaccination or methods of treatment against diseases, instead they slaughter and eat a fowl if it shows signs of being sick. Currently, this situation is changing due to concerted effort to improve poultry farming in rural Tanzania. One of the many efforts is the deployment of agricultural extension officers they operate as facilitators and communicators, helping farmers in their decision-making and ensuring that appropriate knowledge is implemented in order to obtain the best results.*

*Nowadays, several training are offered but have not reached the rural areas where the extension officers are operating and the residence for the bigger percent of traditional farmers. Introduction of m-learning is believed to be effective in delivering learning materials to agricultural extension officers in the rural areas.*

*This paper explores the impact which can be realized by using m-learning to deliver learning materials to agricultural extension officers who in-turn will guide traditional poultry farmers in rural Tanzania to use professional methods of poultry farming. The learning materials are developed in the Learning Management System (LMS), which is also available via the web, and delivered to the mobile phones.*

### Introduction

Rural life in Tanzania is similar to that in many other developing countries. The rural poor population survive by various forms of subsistence farming. The only livestock enterprise available to all farming families, even the poorest, is poultry production. Throughout the developing world, indigenous chickens, referred to as “village chickens” or “rural chickens”, scavenge for survival, their diets sometimes supplemented by household scraps. Under most forms of management, these chickens are not very productive, but every egg and every chicken that becomes available for consumption or sale is a benefit to the owner and produced at minimal cost. Many international organizations and veterinarians are now becoming interested in the potential productivity of village chickens. The causes of low productivity are being defined and suitable interventions are being designed.

There are about 15 major poultry farms in Tanzania located in Dar es Salaam, Morogoro, Songea, Zanzibar, Tanga, Arusha, and Moshi. According to Tanzania Daily News of 31 October 2010, the Central Zone regions are estimated to have about 9.2 million chickens kept by 60 per cent of the rural communities which constitutes about 1.17 million households. The single most important constraint of local chicken rearing is their high death rate as a result of poor health control, poor housing, and inadequate feeding.

The government is also keen to see agriculture sectors improving, and therefore, through the office of Prime Minister – TAMISEMI, has stationed agricultural extension officers in the rural Tanzania, who are intermediaries between research and farmers. They operate as facilitators and communicators, helping farmers in their decision-making and ensuring that appropriate knowledge is implemented in order to obtain the best results.

The Open University of Tanzania (OUT) and Sokoine University of Agriculture (SUA) under the project sponsored by DANIDA have established the use of LMS and mobile phones to promote availability and accessibility of learning content. Currently, training materials are available in the system for diploma courses which are developed in such a way that even the farmers are able to understand and can be motivated to take the courses themselves instead of waiting for the extension officer. This will also ensure that we produce future professional poultry farmers in the rural areas.

Agricultural extension officers encourage farmers to adopt new, improved methods of farming, using a variety of methods to reach farmers i.e. organizing study groups for farmers, demonstrations, as well as informing the media. The best method though, is through personal contact with farmers on their farms.

### **M-Learning**

O'Connell and Smith (2007) defined the term 'm-learning' as referring specifically to learning that is facilitated and enhanced by the use of digital mobile devices, which can be carried and used anywhere and anytime such as mobile phones, PDAs and MP3 players. The strength of m-learning is that it has the potential for delivering information at the right time.

Figure 1

*Local Chicken in the field*

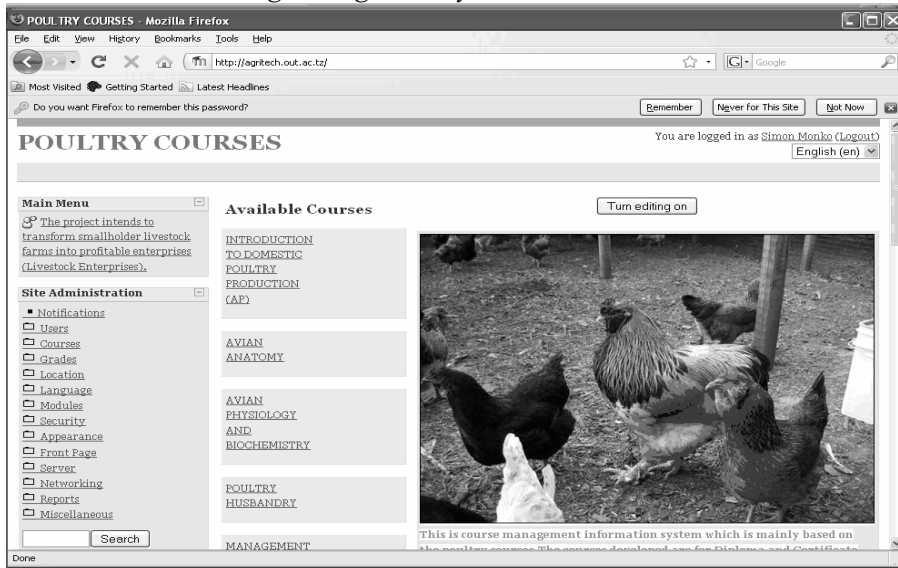


Before engaging in developing content for mobile learning, also referred as m-learning objects, one should consider the learning styles of the target group. Learning styles were developed by Honey and Mumford (1982), based upon the work of Kolb, and they identified four distinct learning styles or preferences: Activist, Theorist; Pragmatist and Reflector:

1. Activists are those people who learn by doing. Activists need to get their hands dirty, to dive in with both feet first. Have an open-minded approach to learning, involving themselves fully and without bias in new experiences.
2. Theorists like to understand the theory behind the actions. They need models, concepts and facts in order to engage in the learning process. They prefer to analyse and synthesise, drawing new information into a systematic and logical 'theory'.
3. Pragmatists need to be able to see how to put the learning into practice in the real world. Abstract concepts and games are of limited use unless they can see a way to put the ideas into action in their lives. Experimenters, trying out new ideas, theories and techniques to see if they work.
4. Reflectors learn by observing and thinking about what happened. They may avoid leaping in and prefer to watch from the sidelines. They prefer to stand back and view experiences from a number of different perspectives, collecting data and taking the time to work towards an appropriate conclusion.

Farm work is characterized by a large amount of physical activity; farmers use their whole body doing practical things. People attracted to the farming life will, besides valuing working with the land and animals, prefer action and doing rather than analysis and theory. This indicates that m-learning should aim at fulfilling the needs of the Activists and the Pragmatists. This is another motive toward developing materials capable for mobile learning access to facilitate teaching and learning in the fields.

Figure 2  
*Courses in the learning management system*



The contents for the learning objects are a complete re-use of content pulled from e-learning management system hosted at the Open University of Tanzania. The content in the LMS is developed by experts from Sokoine University of Agriculture (SUA) using OUT in-house style for course material development, then the courses are hosted by OUT and technical support provided by OUT technical staff.

Currently, there are six (6) courses completed and can be delivered online, and six (6) courses are yet to be developed. The five courses completed in the system are the one required to qualify for the diploma and the remaining courses will make a student qualify for the certificate.

The list of the courses offered up to diploma level are as follows;

- 1) An Overview Of Domestic Poultry Production
- 2) Avian Anatomy
- 3) Avian Physiology And Biochemistry
- 4) Poultry Husbandry
- 5) Management Of Poultry Diseases
- 6) Gender And Socio-Economic Aspects Of Poultry Production, Community Collaboration, Group Formation And Marketing
- 7) Poultry Health: Poultry Diseases And Biosecurity Course
- 8) Poultry Pathology And Disease Diagnosis
- 9) Applied Poultry Breeding: Breeds, Ecotypes, Names Of Local Ecotypes And Productivity
- 10) Hatchery Establishment And Management
- 11) Poultry And Poultry Products: Processing And Marketing

## 12) Extension Methodologies, And Rural Sociology Participatory Constraints (Ap)

**Learning Management System and its Extension to Mobile Learning**

It is expected that, for the purpose of developing content for the mobile phones, authoring system will be used. Currently, it is envisaged that the system will be Learning Mobile Author 4.4 from HotLava Software. Learning Mobile Author is a PC-based tool with a simple but effective interface. It allows content authors to design, author, test and publish mobile content for delivery to mobile phones and PDAs. It is possible to use text, pictures, video, Flash, audio, test and quizzes and to communicate results to a central management system. The philosophy in Learning Mobile Author is more suited for non-formal learning as is the case in poultry farming. Due to the fact that the content is available on hand, we believe the technical production of learning objects will be easy.

With respect to audio content, we are expecting to produce objects using an Edirol R-09 recorder, simply using its build-in microphone. Recordings will be edited and trimmed using Audacity - a free open source software for recording and editing sounds. Since August 2010, OUT is negotiating with Airtel Company (former Zain Company) and Auto innovation company on the possibilities of delivering learning content to the students mobile phones. The groundwork has started and the technological issues and their costing is been sorted out.

Since the mobile phone is the most available tool in the rural areas, this device is seen to be the primary platform for delivering learning objects. There is a wide selection of phones in use and many of the medium-end models will be suitable for m-learning. In the future, it will be important to negotiate with Telecom Company to see the possibility of providing suitable phones for m-learning at affordable price.

**The Use of M-learning in Poultry Farming**

As already stated, the strength of m-learning is that it has the potential for delivering information at the right time. This is very suitable for extension officers and farmers, since their learning styles favor practice and action instead of studying in formal settings. As it was mentioned before, extension officers can also motivate farmers to enroll into the courses available at certificate and diploma levels in order to build capacity for future professional poultry farmers.

As seen earlier, traditional farmers are slaughtering weak/sick poultry instead of applying medication; this is due to lack of knowledge on poultry diseases controls. Courses such as *ODP 008 Poultry Health: Poultry Diseases and Biosecurity Course* and *ODP 010 Management of Poultry Diseases* will help farmers gain knowledge on how to deal with poultry diseases; a knowledge which will eventually help to increase poultry production.

Course like *ODP 007 Gender and Socio-Economic Aspects of Poultry Production, Community Collaboration, Group Formation and Marketing* will empower community to realize the importance of poultry production. Farmers working together will easy marketing of poultry and poultry products.

In Tanzanian environment, m-learning is much more useful than computer-based learning because, for agricultural extension officers, access to computer in their workplace is difficult, but access to mobile phone is guaranteed. In order to ensure that the agriculture extension officers efficiently utilizes the materials provided, training will be offered in short face-to-face sessions, manuals, and awareness brochures will also be produced.

### **Future Prospects**

In future we are looking for the possibility of using the second life concept to extend our research work to a situation where we can develop second life application for teaching students on how to take care of the chicken and later extend the same concept to other agriculture development activities. Second Life (SL) is an online virtual world developed by Linden lab. According to (Wiki, 2011), a virtual world is a type of online community that often takes the form of a computer-based simulated environment, through which users can interact with one another and use and create objects which are used to build the entire environment. Applying the same concept in Agricultural development, one can develop a virtual world in a way that, you can bring in a piece of virgin forest land, let say 200 hectares. We then task the students to plan and develop the land, starting with planning in various aspects such as what they are going to cultivate, how they are going sow seeds, planning the make use of land, use of irrigation and human resources.

Currently where the major emphasis is on Kilimo kwanza in Tanzania, meaning Agriculture as priority one in the development of the country, but not many schools are practically teaching the subject. We believe that using technologies can influence the student's behaviour in many ways. First of all they can seem more interested in using virtual modes as a study method and because of this their learning satisfactions can be higher when compared to traditional classroom techniques (Wiki, 2011; Bishop, 2009).

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## Challenges of E-learning in Open and Distance Learning (ODL): The Case of the Open University of Tanzania

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**Abstract:** *E- Learning is relatively a new field in education in Tanzania as well as for the majority of countries in Sub-Saharan Africa. The potentials of the use of e-learning can't be underestimated. This paper investigates the challenges of e- learning integration in education at The Open University of Tanzania. The study identified the challenges to ICT integration at OUT as: inadequacy of infrastructural facilities for both academic staff and students'; ICT know how and mind set of staff and students. The study used questionnaire as the main data collection technique whereas focus group discussion supplements the data obtained from the questionnaires. The study concludes that despite some progress made in the area; much is still desired for the effective implementation of e-learning at The Open University of Tanzania. The study recommends that efforts have to be made by the institution in capacity building for lecturers, support staff such as computer technicians and students along with improvement of infrastructure to support e-learning.*

### Introduction

Our current society is transforming into an informational society in which the production and processing of information is a central activity. Communication possibilities have widened and the world has become a global village. To prepare students for future role in this information society, other skills and knowledge should be emphasized in education than was the case in industrial society (Thijs, Almerkinder & Blijleven, 2001). Today's networked world demands a workforce that understands how to use technology as a tool to increase productivity and creativity. Furthermore, employers require workers to have skills necessary to collaborate, work in teams and share information across global networks; that are to analyse issues from multidisciplinary perspective (Hawkins, 2002). Integrating ICTs in the curriculum such as the use of e-learning in Open and Distance Learning (ODL) has the potential of providing opportunity to students to learn these skills.

Being an ODL institution, the Open University of Tanzania (OUT) realizes the potentials of ICT in supporting teaching learning by distance. One of the initiatives to realize the use of ICT potentials was the establishment of Institute of Educational Technology (IET) at OUT in 1998. The IET deals with all ICT related activities in education at the OUT. These activities encompass training and consultancy, network services, software development, web design and hosting and PC maintenance and repair. Also, there are ICT resources made available to students and staff by IET. These are Staff mail, student mail, OUT intranet, Exam registration, Student Academic Record Information System (SARIS), E-learning system, library services and MIT courseware.



The aim of the study was to examine the challenges of e-learning at OUT. OUT was taken as a case study. Case studies are not meant for generalizations (Cohen, Manion & Morrison, 2000), nevertheless, they serve the purpose of highlighting what goes on in other institutions with similar characteristics.

### **The E- learning Concept**

There are many definitions of e-learning as put forward by different scholars. Stockley **Error! Bookmark not defined.** (2003) defines e-learning as “the delivery of a learning, training or education program by electronic means” (para.1). E-learning involves the use of a computer or electronic device (e.g., a mobile phone) in some way to provide training, educational or learning material. The fore mentioned author emphasizes that e-learning can involve a greater variety of equipment than online training or education, for as the name implies, "online" involves using the Internet or an Intranet. CD-ROM and DVD can be used to provide learning materials. Naidu (2006) agrees with Stockley’s (2003) definition and further adds that the term e-learning comprises a lot more than online learning, virtual learning, distributed learning, networked or web-based learning. Stockley further contends that the letter “e” in e-learning stands for the word “electronic”, e-learning would therefore incorporate all educational activities that are carried out by individuals or groups working online or offline, and synchronously or asynchronously via networked or standalone computers and other electronic devices. These two authors observe that e-learning, web-based and virtual learning are not synonymous. For the sake of this study e-learning would simply refer to learning that is facilitated by electronic means.

### **Potentials of e-Learning Integration in the Curriculum in the ODL Institutions**

Despite some challenges of integrating e-learning in ODL institutions like OUT; e-learning is inevitable. Some of the potentials of e-learning include the following:

- Students can access course outlines, assignments and even tests regardless of time and location.
- Students become more responsible for their own learning.
- Students can study at their own pace.
- Improved student support services.
- The gap that usually exists for distant learners ( student-instructor gap) is narrowed.
- Enhances interaction among students and between students and their instructors.
- Improvement of feedback to students.
- Course delivery is improved and enhanced.
- Learning becomes fun.

### **OUT Initiatives to Facilitate ICT (including e- Learning) Integration in the Curriculum**

OUT through IET has organized various staff and students training in computer general knowledge.

The courses were organized in small groups in turns. Also, there were various workshops organized by IET on issues of e-learning. One such workshop was organized by OUT in collaboration with Commonwealth of Learning (COL) and National Open University of Nigeria (NOUN) specifically the Regional Training and Research institute of Open Distance Learning (RETRIDAL) and OUT. The workshop was about e-content development for e-learning project implementation for the Open University of Tanzania.

OUT operates through its regional centres. There are 30 of these more than 16 regional centres have computer laboratories. In these regional centres computer short courses are offered. For the courses that are offered to the general public, students and staff pay a half of the price. For courses that are specific for supporting students to study and access information through ODL, students pay a quarter of the price. However, these same courses are offered free of charge during face to face sessions. Still, the OUT has the challenge of reaching students whose centres have no computer laboratories.

In addition, OUT collaborates with African Virtual University (AVU) to facilitate e-learning at OUT. Through AVU students and staff can access various books on-line. The premise for AVU has played a good role as a centre where various staff computer training have taken place. Another initiative by the OUT involves establishing a link with Massachusetts Institute of Technology (MIT) Courseware whereby staff and students can access materials free of charge. This is an Open Educational Resource (OER) where people can access courses and various learning materials on-line.

### **Related Literature**

A review of related literature revealed that ODL institutions face some challenges in integrating e-learning in their curricula. Despite the fact that some institutions started offering courses by e-learning a bit longer than others and some institutions are in their early stages of integration; there are some common challenges. Literature from various geographical locations i.e. Africa, India, and Malaysia (Tusubira & Mulira, 2004; EDUCAUSE, 2003; Mnyanyi & Mbvette, 2009) shows that challenges of e-learning integration in curriculum include the following:

- Lack of awareness of effectiveness of e-learning among population.
- Inadequate infrastructure.
- Bandwidth and connectivity issues.
- Computer literacy and digital divide.
- Lack of e-content.
- Difficulty in engaging learners on-line.
- Paradigm shift problems.
- Rapid growth of knowledge in ICT area.

Kamba (2009) observes that while some of the universities have their web-sites and e-learning information they are never used for course delivery. However, he acknowledges that different universities in Nigeria are in varying stages of e-learning applications.

### **Methodology**

The study used questionnaires as the main data collection technique for academic staff and undergraduate students. Open ended interview was used for data collection from ICT technical staff. Open ended questions and discussions were used to supplement data obtained from OUT staff and students. The sample included 20 undergraduate students, 10 academic staff, and 5 ICT technical staff. Other sources of data included the OUT website and documentary data from various sources. Undergraduate students participated in the study because are the majority of the OUT students.

### **Research Question**

The study was guided by one main research question: What are the challenges of integration of e-learning at OUT?

### **Findings and Discussion**

Data analysis of the questionnaires, interviews and discussions with the respondents revealed that OUT is in its early stages of e-learning integration in various courses. The programmes that are offered through e-learning as a mode of delivery are Bachelor of Science (BSc. ICT), Bachelor of Arts (Journalism) and Master of Law LLM (ICT). Another programme that uses a special kind of e-learning (m-learning) is the Diploma in Poultry. With exceptions of the programmes that are offered using e-learning most staff across the faculties with the assistance of computer technicians are in the process of uploading the materials of the existing courses online. Courses that are under clusterization process do not fall under this exercise. However, not all members of academic staff have been trained to prepare and make their courses available on line. This is a challenge to be addressed as for this exercise to be effective. It seems necessary that; members of academic staff should be conversant with e-content preparation. There is also a need to let the members of academic staff appreciate the potentials of using e-learning (for them to consider taking it aboard). Other online activities that are used by all OUT students are SARIS and on-line examination registration. These two services are very important achievements for the OUT. It possible for one to access students' examination results and be able to know those registered for each examination; thus, minimizing time and cost of processing examinations. It was also of interest to examine whether there were e-books that could be accessed from OUT library. The findings revealed that the library has no such service, instead it has the On-line Public Access catalogue (OPAC). However, some e-books could be accessed through AVU and MIT of which few staff and students are aware of.

Two courses that involve e-learning were examined. These were BSc. (ICT) and Diploma in Poultry. Both courses belong to Faculty of Science, Technology and Environmental Studies (FSTES).

### **Bachelor of Science (ICT)**

B.Sc (ICT) degree programme is a three years programme offered through two main modes of delivery: e-learning and intensive face-face sessions. The course is meant to produce ICT specialists who would further contribute to ICT integration in various walks of life in Tanzania as well as worldwide. All the courses are available online through Module platform. Data collected revealed that in each year there is a four weeks intensive face to face session. For the first two years each student does an industrial/practical training to have hands-on experience with the world of work. In the final year each student has a final year project.

### **Diploma in Poultry**

This is a two year programme. The course delivery is through m-learning which is a special type of e-learning. CD-ROMS are also used. It was observed that one of the students interviewed was so excited with the programme especially because of the availability of the materials despite the challenge of access to computer. The major challenge cited was that his mobile phone for the moment could not connect to the Internet. Hence, he could not access the materials any time he wanted. He could only access the learning material when he had access to computer connected to the internet. However, he observed that sometimes he printed some of the materials for ease of access.

### **Challenges of e-Learning Integration at OUT**

Findings from the data collected revealed that the main challenges for e-learning integration in the curriculum include:

- Computer access and connectivity for staff as well as students.
- Low students and staff computer knowledge.
- High costs for accessing the internet and the computer.
- Low knowledge in e-content development and delivery.
- Dominance of traditional modes of delivery and the belief that they are better.
- Lack of feedback from end-users on the main stream courses that are uploaded.
- In-affordability of computers, modems and mobile phones with connectivity.
- Low Internet access sometimes blocked and would not open up hence poor accessibility.
- Digital divide: students from the rural areas are disadvantaged.
- Unreliability of electricity and Internet connectivity. These pose a serious challenge to students as well as staff.
- Technophobia for some students as well as the staff.
- Inadequate infrastructure.
- Negligence and reluctance of some students and staff in dealing with technology know how matters (change is never embraced immediately by all people)
- Fast turnover of the technology provides a challenge to both literates and illiterates as far as the ICT is concerned.

- Lack of awareness of e-learning activities. This can very well be demonstrated by the two programmes at the OUT: AVU and MIT.

As can be observed from the findings there are too many challenges and obstacles that face OUT in integrating e-Learning into the curriculum. Despite challenges the OUT has struggled at least to start with few courses. This phenomenon is in line with Gauci (2001) and Nwuke (2001) in Mnyanyi and Mbvette (2009) who observe that:

Higher Education Institutions (HEIs) in Africa should be in the forefront of ensuring Africa's participation in the ICT revolution, but they are severely under-resourced in comparison to their counterparts in the developed world. Furthermore, the information infrastructure of African Higher Education is poorly developed and unevenly distributed. Despite these difficulties, a number of Higher Education Institutions in Africa have made significant progress in building an ICT infrastructure, and developing computer science and other ICT disciplines.

Looking at the challenges that are obtained from the study, it is evident that like other places in the world, OUT faces those challenges in e-learning integration plus other more challenges. For example for e-learning integration in many course programmes much needs to be done.

Some of the challenges addressed are presented below as they were reported.

### **Computer Access and Internet Connectivity**

As the definition of e-learning is concerned, the use of electronic devices in integration of e-learning is not an option. Henceforth, it was important to investigate issues of access to computers and connectivity by the staff and students. The findings given in Table 1 shows that OUT staff has access to computer in their offices in the following proportions:

Table 1

*Computer /staff ratio and their percentages*

Computer / Staff Ratio	n	%
1:1	2	20
1:2	3	30
1: more than2	5	50

However, some of the staff mentioned that some computers were old and outdated. Out of the 10 respondents 60% had computers at home while 40% had no computers at home. The fact that 50% of the respondents share one computer among 3 people and above shows that at some time some members of staff had no access to computer (Table 1). Again the 40% of staff had no computers at home implies that these staff

members could only access computers when they are in the office and hence they may experience some hardships in case they are not at office.

On the other hand, students' access to computer shows that majority of students had limited access to computers while few of them have multiple access as can be seen in Table 2.

Table 2  
*Places Where Students Access Computers*

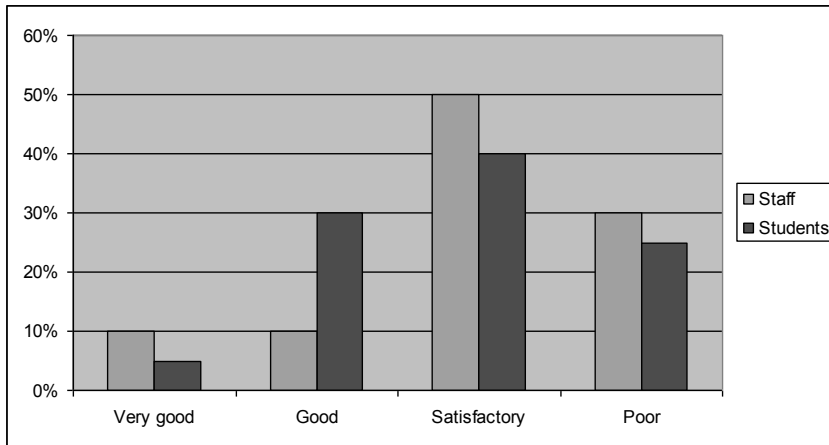
Place	n	%
At home	4	20
At internet café	20	100
At work place	4	20
At home + work place	4	20
At Regional centre	2	10
At Library	2	10

As Table 2 indicates, the internet cafe is the main place where students access computers. This indicates cost implications to students. It also implies that funds can be a hindrance to students' access to computers. Only 20% have access to computers at home, at work place and 20% at both places. These findings demonstrate that most students have very limited access to computers. From these findings one can stipulate that the situation provides limitations to effective integration of e-learning at OUT. It is important to note that the sample of the study was taken at Dar es Salaam. One can pose a question that if this is the situation in Dar es Salaam what about in the regions and the rural areas? As regards Internet connectivity, majority of academic staff members 6 (60%) have access to Internet at work place only, while 4 (40%) have modems that allow them to access the internet wherever they are.

### **Students and Staff Computer Knowledge**

For the e-learning effective implementation at any institution to be realized, the computer knowledge of staff and students is crucial. It was therefore important to examine this variable in both students and staff. The findings are presented in Figure1

Figure 1  
*Staff and Student Computer Knowledge*



According to Figure 1, it is evident that staffs as well as students are of two types; those who are good at computer knowledge and those who are poor; with varying degrees. For implementation of e-Learning both staff and students have to be computer literate. Hence: the need for capacity building for both students and members of academic staff.

Low computer knowledge seems to be a problem despite the fact that the University offers some computer short courses. Discussions with some students and staff revealed that there is some reluctance in taking computer courses due to time constraints, cost implications and sometimes just technophobia. Despite the fact that the university encourages the use of technology by the use of SARIS and On-line exam registration, it has been noted that some students are helped by their fellow students to do those activities or by internet café attendants, thus, depriving themselves the opportunity to learn.

It was found that computer specialists had education range from diploma to masters and PhD. However, given the growth rate of knowledge in the field it is evident that they too need training from time to time to keep themselves abreast with current developments in the field of ICT particularly in Learning Management Systems (LMS).

#### **Awareness of e-Learning by Academic staff and Students**

The study also examined the awareness of lecturers and students about e-learning including the presence of AVU and MIT courseware. The findings indicate that all academic staff members are aware of e-learning. They also acknowledge that e-learning is important for ODL institutions like ours. However, very few (20%) are aware of AVU and MIT which have e-learning related activities.

Eighty percent of academic staff examined reported to have attended computer and e-learning training. They maintained that these training served, as a revelation for effective implementation of e-learning but more in-depth training is required. Fewer staff reported to have attended workshop for e-content development and uploading of courses in the module platform. Discussion with those who attended the workshop revealed that with exception of computer specialists others did not practice it much after the workshop for various reasons as following: for academic staff to upload materials s/he needs to be with computer technician. This implies that both have to be available the same time. Given the activities and tight schedules at the OUT that has some practical difficulties. In addition, electricity and internet problems make the situation more difficult.

On the other hand, students' awareness was low. The majority of students under study (80%) were not aware of e-learning. This suggests that those who learn by e-learning are the ones who are aware of it. For this reason majority of respondents were not from those who use e-learning for their courses. This can partly be explained by the fact that OUT is mainly using print for its course delivery.

It is worth noting that 20% of the academic staff who responded were doubtful if at all e-learning can be done successfully in the OUT case given the challenges that it faces. The rest of staff members had opinion that it can be done though it seems that much is still needed.

### **Conclusion and Recommendation**

The study examined the challenges of e-learning in ODL with OUT taken as a case study. The findings reveal that the courses that integrate e-learning in their curriculum are BSc (ICT), BA (Journalism) and Diploma in Poultry which uses m-learning and CD-ROMs. The challenges that face e-learning at OUT can be summarised as: inadequacy of infrastructural facilities ( physical buildings, limited computers, low bandwidth and poor connectivity and unreliability of electricity for both academic staff and students; staff and students' ICT knowledge; and mind set of staff and students.

Based on the findings the study recommends the following for effective e-learning integration at OUT:

- Capacity building in ICT areas especially LMS for students, academic staff as well as ICT technicians
- Capacity building on e-content designing for academic staff and ICT technicians
- Given the high costs of computers and internet connectivity the OUT subsidy strategies need to be explored.
- Computer laboratories should be put in place at all regional centres.
- Students and academic members of staff should be motivated to take basic computer studies at their study centres (where the computers are available)



- For rural areas students there could be some ways to mobilize students and help them to get alternative source of energy, e.g., solar energy and CDs to avoid digital divide between rural and urban students
- To identify staff who have interest in e-learning so that together with computer technicians they can work in teams to serve as pioneers in the area of e-learning in the courses that do not use e-learning so far. These could work with students (however few they may be) who have access to computers (preferably from regional centres with computer labs) so as to start the process of mainstreaming e-learning in a larger OUT student population. Let us take Maxwell (2009) advice, “*Think big, Start small*”

Another research could be done with larger sample size of the students, staff and regional centres. Thus, the findings would be more representative.

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## Participative Leadership in Unfreezing Employees for Change

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**Abstract:** *The article explains the importance of participative leadership in creating employees' readiness for change. Leaders are capable of creating a positive perceptions and effective change initiatives to their employees. Through theoretical model, this article offers understanding of four leadership skills in unfreezing university employees for change. Some technique used to motivate change include effective communication, total involvement of employees in planning and decision making, building teams and analysis of university capabilities.*

**Key words:** Participative leadership style, employee positive perceptions, unfreezing, organisational change.

### Introduction

The fast changing world necessitates organisations to accept changes in their structures, processes and procedures as a prerequisite for their performance and survival. Organisational leaders on their part have been challenged with ways they can manage successful change processes for their organisations' survival in the business world. It has been recently documented that managing change relies heavily on managing people (Bauer & Erdogan, 2010). Thus, success in the process of organisational change is determined by leadership effectiveness and efficiency in managing people (Hiatt & Creasey, 2003). Gilley (2005) argues that managing change means to motivate employees and not to demoralize them. Organisational researchers and theorists have long been focusing on leadership effectiveness in leading employee motivation and successful change initiatives (Bordia, Hobman, & Jones, 2004; Eby, Adams, Russell, & Gaby, 2000; Gilley, McMillan, & Gilley, 2009; Jones, Jimmieson, & Griffiths, 2005; Labianca, Gray, & Brass, 2000; Lewin, 1951; Yukl, 2010). These theories and studies are not well known in many African organisations. Hence, the goal of this article is to explain the role of participative leadership approaches in creating university members' readiness for change. It is arguably suggested that employee motivation and effective organisational change initiatives are grounded from leaders' success at unfreezing stage of change management. University leaders would benefit from the change management skills explained in this article. We first review basic concepts and theories that guided our theoretical frame (Figure 1). Thereafter, a discussion follows, where we link each element (i.e., from the framework) with practical management endeavours in leading change processes in Tanzanian universities.

### Definition of Key Terms

The term 'unfreeze' was adapted from Lewin's (1951) model of managing change. Lewin posited three stages in the change management process. The first stage is

*unfreezing* that is meant to prepare an organisation and make it ready for change. This requires leader ability to create feelings of urgency and change employees' old minds towards organisational change (Kotter, 1996). In this endeavour, leaders use various means to portray the need for change. For example, leaders communicate effectively the vision of change through various means (oral and written) (Armenakis, Harris, & Mossholder, 1993). *Change* is Lewin's second stage. This stage covers employee motivation to participate in the change initiatives. The third stage is *refreezing*. This stage is concern with institutionalizing the new values in the organisational daily practices (Kotter, 1996). That is when the changes stick and can be identified as organisational culture. We focus our review on leadership effectiveness at the unfreezing stage of change management. We believe that efficiency at this level predicts employee positive perceptions and success in all stages of change efforts. The review intends to convey a message that employee positive perceptions and effective change initiatives would be influenced by leaders' success during unfreezing.

### **Leadership Styles in Managing Change**

Leadership styles refer to the generally constant and sensible forms of a leader's behaviour in influencing their subordinates to accomplish tasks (Ngirwa, 2012). Various leadership studies focus on mainly two types of diametrically opposed leadership behaviours: 'production oriented' and 'people oriented' (Blake & Mouton, 1985) or 'task focused' vs. 'person focused' leadership behaviours (Burke, Stagl, Klein, Goodwin, Salas, & Halpin, 2006); 'vertical vs. shared leadership' (Pearce & Sims, 2002); or 'engagement' vs. 'disengagement leadership' (Dixon, 2008). Jointly, these scholars referred to *directive leadership* style that emphasize control, close supervision and commands; and *participative leadership* style that insists human relations approaches-involve, empower, support and build teams (Euwema, Wendt, & van Emmerik, 2007; Herold, Fedor, Caldwell, & Liu, 2008; Mullins, 2005; Wendt, Euwema, & van Emmerik, 2009; Yukl, 2010). In this review, we regard participative leadership behaviours (e.g., involving subordinates in planning and decision making processes, communicating) as effective in preparing organisations for change (see Jones *et al.*, 2005). These leaders are expected in most cases to be caring, avoiding force and considering employee needs in their change management endeavors. We also regard participative leaders to be sensitive to organisation capabilities in relation to the needed changes in the process of implementing changes (Jones *et al.*, 2005).

Gilley *et al.* (2009) studied leadership behaviours' that develop into successful implementation of change. They have learned that leaders' behaviour based on employee motivation, effective communication and teamwork lead to successful change initiatives. Jones *et al.*'s (2005) results indicated that employee positive perceptions towards human relations-leadership approaches were highly related with their readiness for change and successful change implementation. According to Jones *et al.* employee readiness and effective change initiatives depend heavily on the practices of human relations approaches. Referring to Beckard and Harris (1987), Jones *et al.* added that in the process of change, leaders need to assess employee readiness

(motivation and willingness) and organisational capabilities (knowledge, skills and abilities). Although the studies were not focused on Tanzanian organisations, they fit adequately into our review purpose of this article. We put forward that participative leadership approaches (effective communication, involvement, total participation, team building) are crucial leadership strategies in the process of unfreezing organisations for change. We add to this, the organisational context (resources and workload), support (knowledge, skills, and finance) in the antecedent bin of unfreezing.

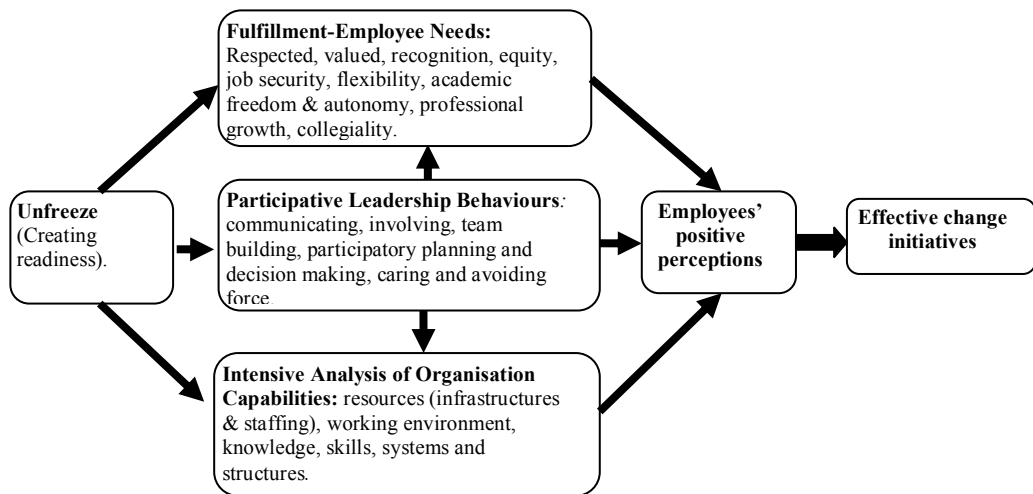
Armenakis *et al.*'s (1993) readiness model posits important elements by leaders that yield employee readiness for change. These are: effectively communicating the change to the extent that employees appreciate and feel its importance; developing employee understanding and appreciation that the change process is meant to benefit the majority of employees, promoting individuals capability for change, and changing their attitudes and beliefs to match the new vision. Armenakis *et al.* (1993) insisted that leaders need to communicate effectively and in various ways:

Persuasive communication is primarily a source of explicit information regarding discrepancy and efficacy....the form of persuasive communication employed also sends symbolic information regarding the commitment to, prioritization of, and urgency for the change efforts. For example, a CEO who travels to all corporate locations to discuss the need for change sends the message explicitly communicated in his/her comments and the symbolic message that the issues are important enough to take the time and resources necessary to communicate them directly....Oral persuasive communication involves direct, explicit message transmission through meetings, speeches, and other forms of personal presentation (p. 688).

Sometimes communication and participation in decision-making might revealed negative relationships with uncertainties in the process of organisational change (Bordia *et al.*, 2004). In this manner, effective communication and planned employee involvement create an understanding of, and positive perception to change initiatives. Eby *et al.* (2000) insisted that an organisation's readiness for change is pertinent in employee attitudes, motivation, priorities and organisational context. Thus, employees' negative perception would indicate uneasiness with the change efforts. Besides, P. Weber and J. Weber (2001) results show that perceived readiness was moderated by the leaders support. They also learned that 'employee- participation', 'autonomy' and 'feedback' determined the level of the perceived leaders support and organisational readiness (P. Weber & J. Weber, 2001). With specific attention to higher education, Gappa, Austin, and Trice (2007) posited six *Essential Elements* (i.e., *respect, employment equity, academic freedom and autonomy, flexibility, professional growth and collegiality*) that seemed important in addressing academic staff concerns, motivation and institutional effectiveness (Gappa & Austin, 2010). The elements should be practiced in management endeavours of higher education working environment (Gappa & Austin, 2010). In summary, the reviewed literature posited

important variables that influence organisational readiness for change. It provides the recipe to illustrate leadership effectiveness and efficiency in unfreezing and the outstanding employee perception and change initiatives as shown in Figure 1. Figure 1 is based on various literatures on leadership and change management.

Figure 1  
*Theoretical model*



This model consists of three main elements. Namely: participative leadership behaviours, employee needs that are to be fulfilled by leaders, and organisation capabilities in the process of organisational change. The effectiveness in these elements would influence employees' motivation and effective change initiatives. Each element is contextualized in the Tanzanian university environment in the analysis that follows. At the end of each analysis, there is contextualization of major objective (i.e., effective unfreezing on employees' perception and effective change initiatives, through the three main elements).

### Participative Leadership

The key leaders' role in creating organisational readiness for change is effective communication (Allen, Jimmieson, Bordia, & Irmer, 2007; Armenakis *et al.*, 1993; Gilley *et al.*, 2009; Kotter, 1996). In this regard, leaders are expected to communicate the vision, need and purpose of change to their subordinates. This can be appropriately done through referring to the existing world (Armenakis *et al.*, 1993). We argue that university-top managers should communicate the change to the extent that employees feel the limitations of old ways (Nadler & Tushman, 1989) and thus appreciate that change is required (Katz & Kahn, 1978 in Armenakis *et al.*, 1993).

There are various ways in which leaders communicate the change initiatives. These ways are influenced by the organisational model of decision making (top- down or bottom- up decision making) (see Miller, Johnson, & Grau, 1994). In cases of top-down arrangements, changes are communicated as orders and the room for inputs from employees is always limited. While, leaders who practice bottom up approaches value employee' inputs by involving and communicating is always interactive (Cummings & Worley, 2009; Yukl, 2010).

However, communication is more meaningful when employees are involved in initial plans and decisions of the change efforts. It may be unfortunate for instance, if leaders introduce a change at management meetings (with middle management and employee representatives) while maintaining their stands. This may discourage ownership spirit, teamwork and the managers may lose employee trust (Ngirwa, 2013). This could be the same as when faculty/department concerns are not considered in the university-management decisions. This may demoralize employees and build a culture of ignoring university tasks (Ngirwa, 2013). This actually builds a culture of "theirs and not ours". The employees' culture of not reading documents before meetings (Luhanga, Mkude, Mbwete, Chijoriga & Ngirwa, 2003) could be cultivated through this kind of management. It is human nature to feel proud when their inputs are seen in the ongoing successful projects. Besides, employees' feel more control over the change initiatives when they are involved in decision making (Bordia *et al.*, 2004).

Another ineffective of communicating the change vision could be when leaders communicate management decisions while limiting followers from airing their views. We regard this communication as being meaningless, because employees have limited chance of making contributions. This kind of leadership destructs employee talents and potentials concerning the change at hand. It is based on directive leadership behaviours that control the discussions and dialogues (Cruz, Henningson, & Smith, 1999). Directive leaders may in the end miss important inputs on the change efforts, and derive employees' negative perceptions and ineffective change initiatives (Ngirwa, 2013). Thus, top management should value and provide unconditional room for employees' inputs to change processes. Middle and lower level managers (e.g., faculty deans and heads of departments in universities) would provide a helping hand in involving and communicating change initiatives. Allen *et al.*'s (2007) study found that immediate supervisors such as heads of department in a university were helpful in communicating change related issues.

Covin and Kilmann (1990) posited positive and negative people's insights on management processes of *large-scale change programs*: on the positive part among others mentioned: "management support, preparing for a successful change, encouraging employee participation, and high degree of communication" (p. 237, 238). The negative impacts were: 'shortage of management support, top managers forcing change on unwilling organisation, inconsistent actions by key managers, unrealistic expectations, lack of meaningful participation, and poor communication'. The scholars suggested important factors for managers to consider when leading change processes.

Managers should put more efforts on the positive issues and avoid the negative issues as both affect the change processes differently. The main aim should be to gain employees' positive perceptions and successful change initiative through participative leadership (Jones *et al.*, 2005).

Euwema *et al.*'s (2007) study found out that as opposed to participative (supportive) leadership, directive leadership approaches were negatively related to employee organisational citizenship. Directive leadership behaviours (e.g., poor communication and uninvolving) may raise employee uncertainties on the need and importance of change, and job security and thus develop fear, resistance and employee morale goes down (Cummings & Worley, 2009; Ngirwa, 2013; Yukl, 2010). Berger and Calabrese (1975) in Allen *et al.* (2007) posited that uncertainties reveal insufficient information. Allen *et al.* suggested working on employee uncertainties through various communication channels. Armenakis *et al.* (1993) insisted that communication should be in *oral*-person speeches, and *written*-memos and newsletters. Therefore, we suggest that employees who are well equipped with change related information gain better understanding and motivation to change initiatives. Leaders on their part are called upon to effectively manage communication processes in the process of organisational change.

Many studies associated change failures with employees' resistance to change (Bauer & Erdogan, 2010; Hiatt & Creasey, 2003). Bauer and Erdogan grouped employee resistance/support into four main groups. *Active* resistance which involves employee voice of objections of the change initiatives, while *passive* concern with employees' underground resistance, dislike change but can't speak out their concerns, and can silently look for alternatives elsewhere (e.g., turnover). *Compliance* refers to employee partial support of the change initiatives, while *enthusiastic* support is the employee's total commitment to change. At least every manager would prefer the latter (i.e., compliance and enthusiastic support). But how to get that kind of team is to deliver human relations- participative management approaches.

Employee motivation to change initiatives would be the most preferable recipe to employee enthusiastic support. However, a university with a passive team of managers is more disadvantaged. Employees who dislike change but can't voice their views are most likely not to participate in the university change initiatives. Their turnovers should also be expected (Bauer & Erdogan, 2010). The passive resisters call for university leaders' attention on the employee-status at unfreezing stage.

Whether you are an executive, supervisor...leader or manager of any type where your job is to manage people, you likely have experienced resistance to change from employees. However, you may not recognize the role that you can play in preventing that resistance and leading change. Most managers do not make this connection until they have personally experienced failure in an important change project. "I should have communicated better." Next time I will involve more people." .... "I was undermined by managers



who felt threatened by this change and did not understand the vision.” (Hiatt & Creasey, 2003, p.2).

Human relations approaches have been positively associated with employees’ motivation to change and effective change efforts (Jones *et al.*, 2005). Armenakis *et al.* (1993) while referring to Coch and French (1948) posited kinds of participation: ‘no participation, participation via representation and total participation’. According to Armenakis *et al.* participation was found as effective control of employee resistance to change initiatives (Cummings & Worley, 2009). With reference to Tanzanian universities, there has been over the years a management strategy of *participation by representatives* in most of management processes (Luhanga, 2009). This would be effective if the representatives are ‘real representatives’, if they *enjoy* total participation in management committees and effectively provide feedback to the faculties or departments. We suggest that all employees deserve equal chances of information and involvement from top management. If Professors are involved as representatives or are well informed about management decisions, they should also think about junior staff’s inputs (e.g., tutorial assistant) on the decisions.

In summary, successful implementation of change is derived from employees’ motivation (Jones *et al.*, 2005; Ngirwa, 2013). Thus, leaders’ efficiency in communicating, team building, involving in planning and decision-making would allow successful unfreezing. Reluctance of leaders to employ participative leadership at unfreezing would naturally yield employee negative perceptions and ineffective change initiatives (Stanley, Meyer, & Topolnytsky, 2005).

### **Fulfillment of Employee Needs**

As it could be expected of any employee in an organisation, university staff require among other things, to be respected, valued, recognized, equity, job security, flexibility, collegiality, academic freedom and autonomy (Gappa, *et al.*, 2007 in Gappa & Austin, 2010). These can be met through human relations (participative) leadership approaches in implementing change. This requires leaders to communicate persuasively, involve (Allen *et al.*, 2007; Armenakis *et al.*, 1993); build teams (Gilley *et al.*, 2009), thus empower, build trust and a sense of ownership to employees (Ngirwa, 2013).

University leaders should learn individual needs and accommodate them in their change management processes. For instance, we have learned that employees need to be valued and assured of job security (Gappa & Austin, 2010). Let’s take an example of retiree senior staff (Professors and Doctors); most of them hold rich experiences and knowledge that would help university management in their endeavors in inducing change. But does the organisational climate allow their ‘voices’? If the answer is ‘yes’, are their ideas valued or accommodated? And if the answer is ‘no’ i.e. the organisational climate (e.g., end/not renewed contracts of vocal staffs) limits their inputs, what can be done? Don’t we miss their potentials? In whatever direction the

situation could be the same for employees in private universities (i.e., under contract employment). Bauer and Erdogan (2010, p. 334) note that:

By listening to people and incorporating their suggestions into the change effort, it is possible to make a more effective change. Some of a company's most committed employees may be the most vocal opponents of a change effort. They may fear that the organisation they feel such a strong attachment to is being threatened by the planned change effort and the change will ultimately hurt the company. In contrast, people who have less loyalty to the organisation may comply with the proposed changes simply because they do not care enough about the fate of the company to oppose the changes. As a result, when dealing with those who resist change, it is important to avoid blaming them for a lack of loyalty.

The central idea in this contention is that top management should value employee inputs in implementing changes. They are also called upon to positively address 'vocal employees', as Bauer and Erdogan regard them as more committed to the organisation. How do Tanzanian university leaders react to vocal employees? What is the working situation of vocal employees under contract employment? Let these questions be unfolded by researches.

### **Analyses of Organisational Capabilities**

Therefore, it is important to screen the organisation's environment in order to harness the change initiative. Jones *et al.* (2005) while referring to other scholars e.g. Sharma and Vredenburg (1998), posited organisational capabilities such as resources, technology, and managerial processes. Top managers need to review their technological systems (e.g., internet connections, power), infrastructures (offices, classes, computers, printers, etc.) and workload when planning for change.

Some universities in Tanzania have enrolled students un-proportional with the available university resources (Luhanga, 2003; Othman, 2009). The situation may lower academic staff working environment.

Our universities take pride for having raised the students' numbers, but what about the teaching facilities? Is a single class of 400 students a best way of conducting teaching? ...Are the seminar rooms meant for 20 to 30 people but now taking more than 60 people conducive for learning? (Othman, 2009, p. 11).

If we can also ask 'is that context conducive for teaching'? 'Is the intended goal of seminars still alive anyway'? 'How about marking students' scripts'? 'Is the teacher/student ratio appropriate'? Researchers in this area may reveal answers to these questions. Poor working environment, inadequate resources and heavy workload have been linked to employee negative perceptions to change initiatives (Ngirwa, 2013).

Leaders also need to review employee existing knowledge and expertise in relation to the change requirements. This will help to know if there is a need of planning for long

and or short courses for the competence of employees in the change process (see Cummings & Worley, 2009; Mills, 2008). Besides, all these should be transparently handled otherwise they might create fear, uncertainty and cynicism to employees. Indeed, communication and full participation of employees is of leaders' advantage tools in the review task. In summary, we call for top management attention to university contextual status when planning for change. This will forecast the needed degree of change, resources, knowledge, skills, staff and financial resources.

### **Conclusion**

This article offers an understanding of the role of participative leadership in creating organisational readiness to change. Our theoretical model suggests that efficiency of leaders to communicate, involve, build teams and resourcing; lead to success of unfreezing where, employees hold positive perceptions and lead to effective change initiatives. To our knowledge in Tanzanian universities, this article would be among the few (Ngirwa, 2013) attempts that have addressed this important process of unfreezing employees for organisational change. Thus, we call for researchers' attention on the topic.

### **Epilogue**

Higher education institutions in Tanzania, has been adapting changes in their attempt to satisfy society's needs. The changes influenced many developments in universities. For example the University of Dar es Salaam (UDSM) of 1961 with only 13 students (Omari, 1991) or of 1980s (Mkude, Cooksey, & Levey, 2003) is quite different from that of 2000s. The number of students has increased to 135,367 for 2010/2011 academic year (TCU, 2013), the increase of infrastructures, academic staff, changes in organisational structure, and establishment of entrepreneurial programs. Moreover, its links with the business world are also lucid. For instance, the establishment of the "Mlimani City" and the Radio and TV "Sauti ya Mlimani" which have been helpful in society development. There are also engineering projects like Kibaha Business/Technology Incubator, Lushoto and Morogoro Business (Mshoro, 2006) and political research- REDET (Luhanga, 2009). These have been useful in society. However, UDSM has currently been explained to be deteriorating in its quality of education and environmental wellbeing of its academic staff and students (Othman, 2009).

The Open University of Tanzania (OUT) as the only university that offers opportunities for employers and employees to study at their work stations has gained recognition in the country. From 1994 when it was started, a sea of Tanzanians has been cherishing their professions through degrees obtained from OUT. At least in all regions in Tanzania OUT is a known university as witnessed by beautiful and modern buildings of the university. The number of students at OUT is above the normal number of students in other universities in Tanzania (see TCU, 2013). This has been possible due to its visionary management and mode of delivery (distance education). Besides, OUT has established new and unique programs such as: Law degree in ICT, Teacher

Educator Diploma and Foundation courses which are not offered by any other university in Tanzania. However, the available number of Academic staff (see TCU, 2009) compared to the numbers of students, the teacher/students ratio cannot easily be calculated, though teaching by distance mode. The resources and staff working environment is also a university challenge.

We have also been witnessing mushrooming of University-Constituent Colleges like RUCO, TUMAINI, MUCE, DUCE just to mention few, let alone the increase of university-student enrollments. The changes note medals to university top managers for their competence in moving the university services near to society and institutions development in particular. However, only visible and quantity part of the changes can be eyed and measured. How about their (universities) psycho-social management capabilities? How do university leaders manage institutional changes? Yet, we see the importance of adding this resource (review) in leaders' shelves, as we call for their attention to employees and organisational readiness for successful implementation of changes. Researchers are motivated to fill knowledge gaps that exist in the area of change management in Tanzanian universities.

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## Enhanced Efficiency and Productivity in Implementation of Face-to-Face Sessions in the Open University of Tanzania

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**Abstract:** *This paper focuses on efforts being made to improve the face to face sessions in the OUT Regional Centres in Tanzania. It shows students' concerns and highlights the insights for improving future practices to enhance both effectiveness and productivity of face to face sessions. Prior to 2005 face to face sessions used to be held twice per year, each time for one day duration and carried out on the same day throughout the country. A number of problems cropped up including poor attendance by both students and tutors, limited contribution from some facilitators, too short a time, too few facilitators, their inadequate participation and productivity. In 2006 a modality of utilizing tutors from both the Head Office and Part-Time-Tutors from the respective Regional Centres was adopted and together with the injection of some degree of flexibility partly improved the organization*

*Staff, who leave the OUT Head Quarters to the Regional Centres have so far not been able to meet students' expectations despite the flexibility and improved organization of the face to face sessions. Students are of the opinion that funding should be improved, that there should be involvement of more tutors to cover each unit course, which they consider to be essential. However, with the introduction of the new assessment system face to face sessions have assumed new roles of assessing the readiness of students to undertake their annual examinations through students' portfolio with the new role face to face sessions are no longer discretionary.*

### Background

Face to face sessions are designated periods during which students meet their lecturers and Part-Time-Tutors to discuss, dialogue and interact with each other with a purpose of providing guidance on the part of tutors, sharing knowledge and experiences between staff and students and among students themselves doing practicals or field work and solving academic and social problems. Such sessions include: Science practicals, Geography field work, law projects, orientation of new and continuing students, teaching practice for both regular and licensed teachers and Special Education, as well as the general face to face sessions designated to cover all students over and above faculty specific subjects requirements. Apart from the last-mentioned face to face sessions the others receive very close supervision and guidance using specifically identified lecturers/tutors for a specific period of time. This paper focuses on the more general face to face sessions designed to be carried out in the Regional Centres with the facilitation of staff from both the Head Office and in the Regional Centres.

Face to Face sessions constitute one of the five strategies used for supporting the print, which is the main medium of delivery in the Open University of Tanzania. The report of the Committee, responsible for the establishment of the Open University of Tanzania categorically states that face to face sessions must be “*conducted regularly in a*



*dispersed form at study centres with the help of “Part-Time-Tutors”* (URT, 1990; p.100). The regularity referred to in the Committee’s report could be interpreted to mean as spelled out in the University’s prospectus or subjectively differently, as it was not defined. Similarly, the phrase “*dispersed form at study centres*” was not defined and so could be interpreted differently by Directors of Regional Centres.

The role of face to face sessions is described by the report as to “*compensate for the limitations of the print and electronic media*” (Ibid p. 101). The Rolling Strategic Plan 2004/5 – 2008/9 categorically states that in order to enhance teaching and learning OUT must “*ensure all scheduled face to face sessions are held in all centres*” (OUT, 2004 p.86). These statements underscore how OUT values the importance of the face to face sessions as one of the strategies of delivering the curriculum. Initially the OUT management set aside two days per year for the face to face sessions directive as reflected in the almanac of the University’s Prospectus prior to 2006.

So, the face to face sessions were until April, 2005 (when flexibility was injected in) being held nationally twice per year for one day on each occasion for specified and designated dates except for Regional Centres, which did not have directors. Such centres were overseen by directors of respective nearby Centres. In such cases face to face sessions were held a week later to allow for the overseeing director(s) to lead the sessions in such Regional Centres.

The way the face to face sessions were conducted differed considerably from one centre to another depending on the commitment and creativity of the directors of the respective Regional Centres. The OUT Head Office allocated funds to the Regional Centres for their respective directors to use for running the face to face sessions. It was up to the directors of Regional Centres to plan how to use the funds. Each Regional Centre had its own ways of carrying out the face to face sessions. Under such conditions quality assurance and control remained a matter of concern.

### **The Problem**

As time advanced students increasingly expressed dissatisfaction with the way the face to face sessions were being implemented. The sessions were described as being not very productive, were focused largely on non-academic issues, limited time allocated to academic discussions, inadequately preparedness of some of the face to face facilitators and limited seriousness and commitment of some of the students. The dissatisfaction covers a wide range of issues such participating and financing face to face (Kihwelo, 2007).

As a result of students’ dissatisfaction with the face to face sessions Senate directed that the face to face sessions be re-organized to make them more efficient, effective and productive. To implement the directive Directors of Regional Centres were required to solicit problematic issues and difficult topics from students and to identify Part-Time Tutors in their respective regions or elsewhere, who would be deployed to address the

issues raised. Directors of Regional Centres were directed to submit to the office of the Deputy Vice Chancellor (Academic) their respective face to face programmes and budgets for addressing the issues raised by students. Each Director's programme was required to show the problem areas, the identified experts/facilitators, who could lead the discussions and for how long. Directors of Regional Centres were further directed to ensure that, where they fail to identify experts from their respective regions to address their identified specific problems should indicate so to the OUT head office so that expert tutors can be identified from elsewhere and posted to them. In order to operationalize the directive further, all directors of Regional Centres spent some time on 20<sup>th</sup> February, 2005 after their two days induction course on the Rolling Strategic Plan to deliberate on the conduct of the next face to face sessions. During the meeting the following were agreed upon:

1. Directors, students, leaders of Student Organization (OUTSO) and Part-Time-Tutors to meet in their respective Regional Centres under the chairmanship of the Director of each of the respective Regional Centres to prepare a plan on how best the next face to face session scheduled for 2<sup>nd</sup> April, 2005 could be conducted more effectively, productively and efficiently to benefit participating students.
2. Future face to face sessions be carried out within a time frame of one month and not necessarily on one and the same day throughout the country as it used to be done previously provided financial resources permit.

The drive to carry out this study emanated from the author's desire to make a follow up of the case study done in Kilimanjaro Regional Centre in 2003 during which a number of weaknesses were identified and so wanted to explore more on what was happening in some of the remaining Regional Centres in terms of the organization and implementation of the face to face sessions with the purpose of identifying current practices and what can be done to improve the future organization and implementation of the face to face sessions so that participating students and the University as a whole can benefit from more such sessions in terms of effectiveness efficiency and productivity than previously.

### **The Objective**

The overall objective of this study is to find out how the face to face sessions have so far been organized and implemented in the Regional Centres, students understandings of the meaning of the face to face sessions, problems encountered during organization and implementation for the purpose of identifying ways of improving their future implementation. More specifically, the study seeks to:

- (i) Describe the organization and implementation of face to face sessions in the Regional Centres of the Open University of Tanzania;
- (ii) describe Students' understandings (Expectations) of face to face sessions;
- (iii) identify the extent to which students' expectations are met;

- (iv) identify students' perceptions of the worth of face-to-face sessions;
- (v) identify the strengths and weaknesses of the face to face sessions as they are being organized and implemented;
- (vi) describe how students would like to have the face to face sessions re-organized and implemented to make them more efficient, productive and; the rationale behind their suggestions;
- (vii) identify problems facing the organization and implementation of the face to face sessions.
- (viii) Describe the suggested re-organization of face to face sessions for future improvements.

## **Method of Study**

### **The design**

This study is designed to get a cross sectional view of the organization and implementation of the face to face sessions against longitudinal perspective. In this context the researcher decided to get the 2005 cross sectional view of the organization and implementation of the face to face sessions followed by a review of the reports from Regional Centres concerning how the face to face sessions are organized and implemented over time. The longitudinal perspective provides evolvement information that shows whether or not the organization and implementation of the face to face sessions have improved over time or not and if not what else must be done.

### **Selection of the Regional Centres**

The purpose of this study is to get a general view of the organization and implementation of the face to face sessions. A non-probability selection of Regional Centres was adopted to allow for an in-depth study, which is in line with the fact that the researcher does not at this stage intend to test for any hypothesis but rather to document and describe in detail the organization and implementation of the face to face sessions with a view to identifying what can be done for the future improvement of the implementation and practices of the face to face sessions.

As an exploratory study the researcher decided to involve every Regional Centre with a selected group of not more than 5 respondents, all numbering 125 respondents without forcing any Regional Centre to take part. In other words only Directors Regional Centres to participate willing as expressed by returned responses to the questionnaires constituted the sample. Directors of Regional Centres were requested to inform students of the study and to ask those interested in participating in the study to fill in the questionnaire, on the basis of first come first served but taking the ratio of gender into account and return the filled in questionnaires to the Regional Centre office and subsequently to the Head Office. The implication is that if the first student, who reports willing to participate in the study is a male the next one can still be a male but the third must be a female (2:1). A total of 95 students responded to the questionnaire Representing 19 Regional Centres and 40 OUTSO leaders contributed views as a

focused group the implication of these data is to ensure that for every two males there must be one female student for purposes of ensuring that women views are represented.

### **The Population**

The target population constitutes students studying with the Open University of Tanzania irrespective of the year of study but gender inclusive. The realized respondents captured a range of years from 1 to 8 years of study as well as by both males and females.

As it can be seen in Table 1 out of the 95 respondents 63 of them or 66 percent were men while 32 of them or 34 per cent were women. This percentage reflects reasonably well the proportionate participation of both sexes since at national level women

Table 1

#### *Number of Respondents by Gender*

Gender	N	%
Male	63	66
Female	32	34
Total	95	100

admission as the percentage of total admissions was 25.1 in 2005 (OUT, 2009, p.17) academic year. So, women in the sample are to some extent over represented by a small margin.

Table 2

#### *Respondents by Programme of Study*

Programme of Study	Frequency	Relative frequency
Bed	26	28
B.A Ed.	26	28
BSc. Gen (HE)	9	10
B.B.A.	2	2
BSc. Ed.	7	7
BA Political Science	1	1
BCO Gen.	4	4
BCM Ed.	1	1
LLB	7	7
Dip CYP	5	5
Master Dist Ed.	1	1
B.A Gen	2	2
BA Special	1	1
BA Tourism	1	1
OFC	2	2
Total	95	100

Respondents are pursuing different programmes all amounting to 15 the majority of whom constitute those pursuing Bachelor of Arts with Education, Bachelor of Education, Bachelor of Science General, Law and Bachelor of Science with Education. The remaining programmes are rather thinly represented as shown in table 2. In terms of years of study table 3 shows that the majority (72%) of respondents have studying experiences with the Open University of Tanzania of between 2 and 8 years and have had sessions of face to face experiences. The first year students constitute 28 per cent of the group and did not therefore have wide experience of face to face sessions except for the orientation of the new and continuing students.

Selecting respondents was done by the Directors of Regional Centres after the announcing the intention to carry out the study and inviting those interested to participate. Questionnaires were distributed to students on the basis of those who had

Table 3  
*Respondents by Year of Study*

Year of study	Frequency	Relative Frequency
1 <sup>st</sup>	27	28
2 <sup>nd</sup>	17	18
3 <sup>rd</sup>	18	19
4 <sup>th</sup>	7	7
5 <sup>th</sup>	15	16
6 <sup>th</sup>	8	9
7 <sup>th</sup>	0	0
8 <sup>th</sup>	3	3
Total	95	100

expressed interest to participate in the study to ensure that only interested ones were given the questionnaire, instructed to respond the questionnaire and to return them to the Regional Centre.

### **Sources of Information**

Information was obtained from a questionnaire to which 95 students responded. The questionnaire included items, which solicited information to address the concerns reflected in the objectives of the study. The questionnaire generated quantitative information from respondents responses, which are expressed in frequencies and percentages; Secondary information was obtained from reviews of published and unpublished documentary information, mostly quarterly implementation reports from Directors of Regional Centres and the face to face sessions reports; Views of the focused Group constitute the discussions of Students government leaders.

### **Data Management, Analysis and Interpretation**

Given the fact that this study is basically exploratory most of the questionnaire questions are of general nature but informative. The quantitative data from the

questionnaire questions were tallied and presented in terms of frequencies and percentages using a calculator and were disaggregated by gender, programme and year of study as shown in tables 1, 2 and 3. The qualitative data and information were subjected to content analysis whereby large quantities of the information/data were reduced to provide insights and knowledge representing facts and practical guide to action. The data have been presented in prose, direct quotations and tables.

### **Issues of Validity and Reliability**

No study is of any value if the results are not valid and reliable. As Elliott (1990) clearly and rightly points out *“the validity of knowledge claim lies not so much on the extent to which they reflect a set of neutral facts but rather on the pragmatic test of ability to realize societal values better”*. Stating it in a different way, the knowledge claims mirror social construction of reality of the phenomenon. The data and information collected are not only be correctly observed but also accurately recorded and properly interpreted. Respondents to the questionnaire questions did so voluntarily and were not forced to participate in the study and so their responses reflect their own perspectives. Using the principle of triangulation their information and data were checked against other views collected qualitatively through documentary reports or discussions with focused groups to establish their credibility consistency and authenticity.

It should be noted that in qualitative approaches to research the equivalence of the internal validity, external validity, reliability and objectivity are the credibility, transferability, dependability and conformability respectively (Bhola, 1990). That implies that one approach must not be judged against the criteria of another approach but rather by its equivalence.

### **Findings**

The findings concerning the organization and implementation of face to face sessions are reported in Figure 1.

#### **The Organisation and Implementation of Face to Face Sessions**

The response to the question seeking information on the organization of the face to face sessions show that Directors of Regional Centres mobilize students and Part-Time-Tutors for the next face-to-face sessions at the Regional Centre level just a couple of weeks before the day when the actual activity takes place much, as the university yearly almanac is in place and are aware of it. The programme for the day is organized by the Director of the Regional Centre sometimes with or without an effective involvement of OUTSO leaders or the students themselves. Prior to 2005 the day for face to face session normally started with the meeting of students, tutors/lecturers and Director of the respective Regional Centre in a designated hall generally hired for the occasion. The Director of the Regional Centre introduce Part-Time-Tutors, lecturers and OUTSO Government leaders to students after which the Director proceeded with administrative announcements. OUTSO leaders held their meetings thereafter, largely because it was

the only time students could gather together in a relatively large numbers and so OUTSO leaders took advantage of it to hold their meetings. By so doing they thus effectively reduced the time for academic dialogue, discussions and interaction. With the introduction of planned time table from the Head Office OUTSO meetings have not been featuring prominently in the same sessions any more. They gathered together again to start interacting with tutors and among themselves as illustrated on table 4

The findings show five versions of practices in conducting the face to face sessions in the Regional Centres. The first four options pertain to the period prior to 2005 and the fifth option depicts the situation after 2006. The first option concerns sessions held in one day. This option has two versions; one concerns students assembling in one hall, start off with routine and administrative chores of both the Directors followed by OUTSO leaders of Regional Centre and then followed up by students breaking into groups to discuss some issues with their unit course tutors from the Regional Centre

Table 4

*Respondents' perceptions of the organization and implementation of the face to face sessions*

Type of organization		Way conducted
1.	One day, at the OUT Regional Centre in a single hall for all students.	(i) Generally described as not well structured to emphasize the academic aspects; (ii) dominated by administrative announcements, invited guest speakers' speeches; (iii) OUTSO leaders given roles to play; (iv) A few facilitators meet with a few groups of students and discuss some presented topics; (v) OUTSO meetings conducted; (vi) Routine work for the rest of day.
2.	One day with students grouped into 3 to 4 units course programme level with between 3 and 5 part-time tutors.	(i) Initial gathering in a hall, where Administrative and logistical issues/take place. (ii) Tutors (mostly from Education) are allocated to groups in different rooms, where students are invited to ask questions and get responses from the tutors; (iii) Some facilitators give lectures, which are later discussed and any question raised are answered during the day.
3	1 to 2 days in the districts. Roles distributed between the directors of respective Regional Centres and other facilitators	Students are informed to remain in their respective districts in designated meeting places and lecturers follow them there.
4	DRCs and Part-Time	(i) Difficult topics from students are sent to DRCs,

	Tutors follow students in their respective districts.	who arrange for Part-Timers to meet at the district level;
		(ii) The Director of Regional Centre or Part-Time-tutors travel to the districts and deliver lectures on a course units already identified, which are then discussed including questions and answers.
5	Three days devoted to certificate and undergraduate students and one to two days for postgraduate students.	(i) DVC-Academic discuss guidelines with Deans/Directors of Faculties/Institutes/Department and DVC(RS) to make the essential preparations; (ii) DVC-Academic requires DRCs to cooperate with students and submit difficult topics to Deans through DVC (RS); (iii) DVC-Academic in cooperation with Deans and Directors prepare teams of academics to serve two adjacent Regional Centres each.

concerned. The second option pertains to the session held in one day with an increased number of tutors participating and allowing for more groups of unit courses for discussions. These had an initial meeting in one hall, where administrative and logistical issues were discussed and carried out and then followed up by the students breaking into groups to discuss difficult topics on the basis of questions and answers or some of the facilitators giving lectures and answer questions raised by the participating students thereafter.

The third type of organization, which emerged from the data is where the Director of a Regional Centre together with Part-Time-Tutors prepared responses to students' prior questions and then travelled to districts to present them to the students in designated places and then discuss them further with the students. In this case the face to face sessions took one or two days. The limiting factors with this type of option were the finances because facilitators could not stay in the districts longer than the financial resources could permit to sustain them.

The fourth option was that DRCs and Part-Timer-Tutors followed students in their own districts. The facilitators prepared lectures on difficult subjects previously submitted by students, and deliver them at a district level in a designated place. The third and fourth options described above were not common because the main limitation was the amount of funds allocated to the Regional Centre and therefore to stay at the district level.

The fifth type of organization actually originated from the Head Office and directed from the Office of the Deputy Vice Chancellor, Academic (DVC – Ac) with effect from 2006. Deans of Faculties under the coordination of the DVC academic with the cooperation of DVC (Regional Services) as a team worked out a modality of



organizing and implementing the face to face sessions in the Regional Centres. Members from each of the faculties and directorates including Deans and Directors

Table 5

*Face to face session schedule*

Days	Days of the Week					Fr	St	S
	Fr	St	S	M T	W T*			
Programmes	Non-degree Undergraduates		and	Post Graduate Traveling Time		Non-degree and undergraduates		
Regional Centres			Tanga			Kilimanjaro		
			Manyara			Arusha		

The alphabetical letters stand for days of the week. Fr = Friday, St = Saturday, S = Sunday, M = Monday, T = Tuesday, W = Wednesday and T\* = Thursday.

visited a Regional Centre, where they spent at least three days imparting mostly study skills and discussing issues of general nature but not necessarily focused on an academic content of particular course topics or units. An extra one or two days were devoted to post-graduate students within the same region. The attention was given to post-graduate students during the week days before the next weekend, which was devoted to non-degree and undergraduate students as illustrated in table 5 as an example.

The procedure was that at least one member from each faculty/directorate formed part of a team of tutors to provide face to face services to two adjacent Regional Centres. A typical team had one staff from each of the following faculties/Institutes/Directorate: Law, Science, Technology and Environmental Studies, Arts and Social Sciences, Business Management, Educational Technology, Faculty of Education; Institute of Continuing Education and Directorate of Post Graduate Studies. Each member of the team was expected to have prepared lectures, talking notes to deliver to the students of the respective Regional/Coordination Centres – including problematic issues submitted to each of the faculties through the Deputy Vice Chancellor (Regional Services) from the Regional Centres; general faculty messages, study skills to be imparted to students and the ability to respond directly to questions from students in the respective Regional Centres. Below is an example of a summary of what transpired in the Regional Centres during face to face sessions, as presented by Kihwelo (2007) and synthesized by the researcher.

In a nutshell the majority (94%) of responses want and value the face to face sessions but they have got to be more meaningfully re-organized and conducted more

effectively and efficiently. In support of this statement Gwalema (2006 p.3) is of the opinion that *“there is need for greater cooperation between Deans of Faculties and Directors of regional Centres during the preparation of the face to face sessions”*. In the case of Mwanza, Mara and Kagera Regional Centre poor attendance was attributed to *“coincidence with the standard seven examinations. A substantial number of OUT students are Primary School teachers who could not attend the face to face sessions due to their involvement in invigilation of examination”* In Iringa, Mbeya, Ruvuma and Rukwa criticism was levelled against *“ changes in the almanac for creating a lot of inconvenience”*. In the case of Dar es Salaam Amaa ( 2006 p.5) observed *“The students attendance in the face to face sessions was poor and students were coming one at a time depending on their convenience. Instructors had to wait there for students the whole day and the briefing exercise had to be re-done for each individual case. After the students had realized that there were no lectures as expected they did not even see the need of the exercise hence the poor attendance.*

### ***Suggested re-organization of the face to face sessions***

Respondents were asked to propose ways by which the face to face sessions could be re-organized and conducted more effectively and productively. The findings are presented in annex 6.

- (i) 39 per cent of the responses want each unit course offered to have an appropriate expert/lecturer to address the issues identified by students or give a lecture/series of lectures on difficult topics pertaining to the unit course.
- (ii) 23 per cent of the responses want the number of face to face sessions to be increased to between 4 and 12 sessions per year; implying that there should be at least one day of face to face session after every three months or one face to face session every month;
- (iii) 13 per cent of the responses are of the view that students must remain central in identifying difficult topics for discussion and must present them to their respective Deans/Directors early enough to allow for tutors to make adequate prior preparations to enhance interactions during the ensuing discussions.
- (iv) 9 per cent of the respondents want students to be availed summaries of the tutor/facilitator preparations of difficult topics/issues, which they can take home for future reference to enhance their understanding;
- (v) 8 per cent of the responses cover suggestions such as carrying out the face to face sessions early during the year and not near the examinations or Timed Tests; students to be encouraged to make paper presentations; the face to face sessions, and timetables to be prepared on the basis of difficult topics in unit courses identified by students to ensure all of them are addressed, avoid subject collisions as well as to save time by addressing critical and felt needs and issues.
- (vi) The remaining 8 per cent constitute irrelevant and non-response to the item.

To these proposals are added those from focused groups: mainly the views of OUTSO leaders concerning what they consider could be done to improve the conduct and implementation of the face to face sessions. The OUTSO Leaders, who met during the

USRC meeting, which took place in November, 2008 at Singida Regional Centre observed that the face to face sessions were inefficiently conducted. This focused group of 40 participants deliberated how the issue of face to face sessions implementation could be improved and recommended three main scenarios: firstly, the face to face sessions to be held zonally implying the deployment of all the tutors in all the Regional Centres constituting the zone could increase and broadening the subject coverage. Secondly the focused group proposed the use of resource people in the locality, which serves the same purpose of broadening coverage, reduce the cost of the face to face sessions as well as to enhance contacts between students with tutors within easy reach of the Zone/Region instead of having to contact staff at the Head Office by distance while it could be done through face to face. Thirdly, the issues and problems raised by Regional Centres within the Zone should be considered; a measure to ensure that each Regional Centre's concerns are attended to and not to be submerged within the zonal perspective.

### **The Rationale for the Proposed Suggestions.**

Respondents were requested to give reasons for their proposals for improving the implementation of the face to face sessions. Response options are presented in annex 7:

The proposal for increasing the number of facilitators (13% of the responses) is based on the respondents' views that it will:

- Ensure that every student, who turns up for the face-to-face sessions will have an opportunity to interact with his/her unit course facilitator;
- most if not all students' concerns will be addressed to their satisfaction and;
- since the all the assumption is that students concerns will be addressed frustrations among students will decrease; participation will be enhanced and there will be greater understanding and subsequently improved students' performance.

In July 2009 Senate removed all assignments, reduced Timed Tests from two to one (30% of the total marks), remained with annual examination (70% of the marks) and instituted students progress portfolio for every subject which carry no marks but serves as a ticket for doing annual examinations. This decision constitute an improved measure of ensuring that students are fully involved in reading the study materials than the two assignments as they must satisfy at least two tutors that they are well versed with the study materials as they must have the summaries of all study materials read, difficult areas encountered, references of materials read and be able to respond to tutors questions regarding the study materials. The student progress portfolio effectively undermine any possibility of cheating through assess.

The face to face sessions which were previously used to be for discussions of difficult topics, lectures an students interactions will now be used for the assessment of students readiness to undertake their annual examinations. The session will take 6 days once per year instead of 3 days twice per year as it was the practice previously. The issue now is how will students solve the problem of difficult topics. It should be noted that the OUT

has been strengthening the Regional Centres they posting more study materials and there of the different faculties. It is expected therefore that any student finding difficulties in the course of reading study materials can visit the appropriate staff in his/her faculty for assistance. Alternatively students can raise their difficult topics in their study centres where other students and or tutors can provide some assistance.

### **Problems Raised During Face to Face Sessions**

Many of the problems raised during the face to face sessions pertain to the Institution are in Table 6. Nearly two thirds (64.7%) of the reported problems relate to failure on the part of the University to release results of assignments, timed-tests and annual examinations results in time and shortage of study materials. The next set of problems (30.7%) are also institutionally based as they relate to inadequate time for the face to face sessions, collisions in the examinations time table, ineffective communication between head office and the students in the Regional Centres especially on, unexplained changes in the prospectus, too few tutors attending the face to face sessions, inaccuracies in recording students marks and, over-crowded examination rooms implying inadequate funding for hiring spacious examination halls. Some of the problems raised are quite challenging and do not have immediate solutions. For, example, increasing the number of tutors is a process that can be quite time consuming as it involves negotiations between the University, mother ministry, Central establishment and Treasury and even then the budget ceilings may not permit a substantial increase of both academic and administrative staff.

Table 6

*Students concerns raised during 2007 face to face session*

Issue/ Problem Raised	Frequency	Relative Frequency
Assignments not composed in time and results are delayed	25	18.7
Timed-Tests results are late/or lost	16	12.0
Annual examination results are released late	17	12.7
Shortage/lack of study materials	29	21.6
Collisions in the examination time tables	6	4.5
Inadequate time for face to face sessions	7	5.2
In adequate head office students communication	4	3.0
Unexplained changes in prospectus, the clusterization.	6	4.5
Too few face to face tutors attending the sessions resulting in unresolved issues	4	3.0
Inaccuracies of academic records	3	2.2
Need to extend time for submitting assignments due to late start	3	2.2
Need for more personal computer in the Regional Centres	2	1.4

Lack of clarity on the number of units to be studied	2	1.4
Over crowded examination halls	1	0.8
Referencing	1	0.8
Teaching practice results not recorded	1	0.8
Procedures for changing programmes	1	0.8
Deadlines for the submission of assignments between the University almanac and of Deans do not match	2	1.5
Practicals are too congested	1	0.8
Specificities of licensed teachers to be made clearer.	3	2.2
<b>TOTAL</b>	<b>134</b>	<b>100.0</b>

### **Summary of the Findings**

The study aimed at finding out how face to face sessions are organized and implemented in the Regional Centres of the Open University of Tanzania; students' understandings/expectations of face to face sessions; students and Part-Time Tutors participation in the face to face sessions; the strengths, the weaknesses; the worth of the face to face sessions; students' suggestions on the re-organization of the face to face sessions to make them more effective, productive, efficient, problems, which students encounter as well as the rationale for the student's suggestions for improvement.

#### ***a) Organization and implementation of the face to face sessions***

The organization and implementation of the face to face sessions is perceived to be a function of the creativity, commitment and interpretation of the purpose of the face to face sessions by the Directors of Regional Centres and staff at both the head office and the Regional Centres. The major changes undertaken since 2005 comprise an injection of Flexibility in the implementation of the face to face sessions from one and the same day the nation to any number of day within a designated period of a month twice per year subsequently to an increase in the number of days to three for certificate, diploma and undergraduate students twice per year. For post graduate students the number of days increased from not formally recognized or specified apart from being lumped together in the one day modality twice per year along with the other programmes to two designated days twice per year. In terms of implementation, emphasis has been on using own lecturers and tutors from the Head Office and the Regional Centres rather than depending solely on Part-Time-Tutors from the regions and other institutions. The Organization is such that two adjacent Regional Centres symbiotically benefit from each other in the utilization of their respective Human and other Resources. But under the new assessment strategy the face to face sessions have assumed the role of assessing how well students have read and are ready to undertake annual examinations.

#### ***b) Students' understanding/expectations of face to face sessions.***

The results of the study show that students have two main expectations:-

- (i) Provision of solutions to what students perceive to be problematic or

difficult issues and topics and;

- (ii) Delivery of lectures aimed at enabling students to have deep understanding of the subject matter in a more friendly and interactive manner including a handout of the summary points of the lectures to students.

The majority of the respondents reported that expectations in the context of their perspectives and understanding were not met at all, or met at a very low level. The main reason is that tutors provide what they believe students need in order for them to learn well in an open and distance learning mode and; the learning skills while student's perception is different and more focused on the content of their unit courses by way of solving difficult topics through worked out solutions and providing easily understood lectures.

***(c) Strengths of the face to face sessions***

Students view the face to face sessions as important forums for their interaction and dialogue with lecturers and tutors and;

That they constitute opportunities for students and tutors to establish working relationships; including getting to know and understand each other and;

Given the new role they identify students who have sufficiently made use of the study materials from those who need to read more in order to be ready for their examinations.

***(d) The major weaknesses of the face to face sessions***

- (i) Failure of lecturers and tutors to address student's expectations largely because of the conflicting conceptualization of purpose of face to face session
- (ii) inadequate attendance by both students and tutors not only prior to 2005 but also after that year though for different reasons,
- (iii) despite well scheduled sessions and articulated procedures students' issues to be addressed are not always given the priority they deserve;
- (iv) despite the increased number of days for face to face sessions and flexibility in their implementation notwithstanding students perceive time on task to be limited because what tutors deliver is different from the students' expectations, which are solving problems and providing lectures on the subject matter,
- (v) limited active student involvement and participation due to failure of students to change their attitudes and mindset because of previous practices and experiences, which are perceived not to address students concerns and;
- (vi) while financial resources have more than doubled as a result of sending lecturers from the Head Office to the Regional Centres to meet students concerns still financial support appears to be limited because most of it is used as per diems and travel costs, which have rocketed high rather than for paying more lecturers and tutors for increased content coverage.

***(e) The worth of face to face sessions***

An overwhelming majority of respondents (87 per cent) perceive face to face sessions positively as providing good learning opportunities. However, the way the face to face sessions are conducted and implemented need to be improved in terms of re-organization and implementation from time to time.

## Discussions

The actual academic engagement and interaction time between Part-Time-Tutors and students prior to 2005 was just about three hours per day since the sessions had to cater for many things; distribution of study materials to eligible students, administrative issues, announcements, OUTSO issues and the need to adjourn early in the afternoon to allow for students to leave their respective Regional Centres to catch buses to their respective home district towns and subsequently to their respective homes. Given the large number of course units and the few experts of course units available, who used to turn up for the face to face sessions one could imagine the large number of students, who missed subject specialists to interact with them. Such students had to wait until they collected study materials or simply left their centres for their respective homes rather frustrated because of not getting their course units experts to share with them ideas and views.

Two approaches seem to be in use in conducting student/tutor discussions. The course units with the largest number of students are given priority; followed by course units with small numbers of students or vice versa. The idea is quite rational because students can benefit from each of the course units which overlap. Take Education with Economics and Geography or Education with History and English; Education with Mathematics and Physics etc. By starting with Education it gives an opportunity to education students to participate in the other unit courses like Geography, History, Economics, physics, Maths, etc. For example, there are participants, whose difficult topics fall in either the OED100, 200 or 300 series etc; such that if the facilitator's expertise is in the 100 series students, who have attended the session will have their concerns in the 100 series responded to well by the requisite tutors but on the other subsequent series say 200 or 300 will not have their respective needs met because the expert in the OED 100 series may not necessarily demonstrate the equivalent expertise in the 200 or 300 series. Even within the OED 100 series an expert in OED 101 unit course, which is History of Education is not necessarily an expert in the OED 105 (Philosophy of Teaching and General Methods) but both unit courses are within the OED 100 series.

So, the problem is very complicated and no institution can claim to manage and send facilitators to all the 26 Regional/Coordination Centres in all the unit courses. That is being unrealistic and impractical without the use of Information communication technologies (ICT) whereby one lecturer can reach thousands of participants. The use of E-learning and teaching can reduce the magnitude of the problem but the difficult we have is that not all students leave alone tutors and lecturers have own computers or laptops. For remote areas some students may not have access to the internet cafes due to long distances involved, lack of power or frequent power cuts.

### (i) *The Scenarios of Implementing Face to Face Sessions.*

The decentralized implementation of the face to face sessions at the Regional Centre level without firm guidelines on how it should be conducted with clear

outputs, which could be evaluated led to many students complains. An immediate solution was perceived to allow for flexibility in the implementation of the face to face sessions. The one month framework within which the face to face sessions were allowed to take place had the advantage that:

Any DRC could draw expertise from the other Regional/Coordination Centres including the Head Office. It also had some limitations: firstly, there was the question of financial resources, which were not sufficiently available to enable a large number of tutors to be deployed. Secondly, limited information on what expertise exists in the respective regions with which the Regional/Coordination Centres are located, a problem, which is compounded by failure of students to send to their respective Regional Centres clear difficult topics and issues rather than the course unit say OED 103 for discussion and elaboration. Instead they submitted things like OED 104, OLW 101 or OHI 333 which make it difficult for the facilitators to know what topic in OED 104 is difficult or is it the whole unit course? The one month framework did not succeed. It posed a lot of problems and was not given a second trial and was replaced by yet another modality whereby staff from the Head Office were sent to the Regional Centres. Even then the reports from the Regional Centres show that there were a lot of problems also, such as failure to budget for seminar halls, exclusion of Part-Time-Tutors from the Regional Centres including the Directors of the Regional Centres. The subsequent sessions involved the DRCs and some of the tutors but their numbers were limited by the availability of funds to sustain them. Thus, the inadequacy of tutors continues to be a problem compounded by inadequate funding, which further depressed any possibility to resolve the problems.

- (ii) The Students' understanding of face to face session *vis-a-vis* what lecturers and Part-Time-Tutors perceive to be vital skills essential for open and distance learning are not in consonance. This study results show that students' persistence of negative views that face to face sessions have not been able to fully address students' concerns because their perspectives are at variance with those of facilitators; who believe and are convinced that students are being given the right knowledge and skills in order to acquire the necessary "fishing lines" and know how to fish for themselves rather than to be given the fish. So, the respondents' recommendation that the number of face to face sessions be increased to twelve per year reflects their conviction that face to face sessions are more effective ways of imparting knowledge and skills than self-study through the open and distance mode. The value students attach to the face to face sessions partly explains why students perceive the implementation of the face to face session to have failed to achieve what they consider to be the main purpose of face to face sessions.

Among the active and partially active students, who do not participate in the face to face sessions could be the result of the following reasons:



-Failure of the sessions to meet, what students believe to be the purpose of face to face sessions (listen to lectures and resolve difficult topics); Amaa's observations support this perspective "students did not really see the importance of general information provided to them regarding examination regulations, how to answer questions in assignments, tests and examinations etc. (Amaa, 2006). There are several reports which show clearly that students think differently from tutors concerning the way face to face sessions were being conducted. Amaa (ibid) said: "The brief opening remarks were followed by an atmosphere of dissatisfactions on the part of students, who could not really understand the purpose of the face to face sessions and were anxiously waiting for the timetable for the planned activities. In addition, there was a misconception of the whole exercise on the part of students as they were waiting for formal lectures and these were not forthcoming (2006 p.3). In the case of Mtwara and Lindi students had similar thinking as reported by Chale (200 ) " *Students expected the face to face session to be subject specific rather than be told general faculty matter*" Referring specifically to Kagera Regional Centre and with reference to clusterization of course units as part of the general information from the faculty it was reported "*Students are not comfortable with the clusterization issue ... the clusterization idea was not a consensus of all the students but an opinion of a few leaders not their own*". It is very clear from the above statement that students do not value such information however important and useful it might be to them.

-Persistent negative attitudes towards face to face sessions, which are reinforced every year by the inclusion of activities, which were initially responsible for creating the negative attitudes towards them.

-Limited number of facilitators participating in the face to face sessions as a result of

- their limited availability and the available ones being
- Susceptible to further reduction through natural and unnatural deaths or drawn away by the effect of greener pastures elsewhere or hedonic reasons as well as the fact that it takes a long period to train replacements.

-Inefficient communication with students and Part-Time-Tutors, whenever there is a sudden change of decision to the effect that information does not reach all concerned in time; and even when it does the time remaining is too short for employed students to process both permission and funds afresh and still meet the deadline. It should however be noted that participation in the face to face sessions has not been low all the time but rather fluctuating from one session to the next and for different reasons as observed by the Director of Rukwa Regional Centres below.

*"The number of participating students increased from 24 last face to face to 97 meaning that they have been allowance (sic) of time for students to collect themselves from their districts to come to the Centre headquarters. Also, there was no interference in terms of collision with some other government business as happened last time. This means that the DVC (Academic) have (sic) taken into consideration the importance of including in his time table national events that in one way or another involves students"* (DRC Rukwa, 2007).

One other reason accounting for limited students participation as expressed by the same Director of Rukwa Regional Center is inadequate and inefficient communication

between Regional Centre, the Head Office and Districts within the regions as expressed in the following manner.

“this first face to face sessions in 2007 has had notable improvements in terms of students and staff participation compared with the previous one. The number control have been higher than the above list (i.e. 97) if the means of communication between the regional condition Head Quarter and district could be in good condition ... Only 4 students out of 95 from Mpanda and 6 students out of more than 40 students from Namanyere managed to attend” (DRC Rukwa 2007:3).

In overall terms, ineffective and inefficient communication concerning any changes in the university almanac is one of the main reasons for poor participation in the face to face sessions. The poor attendance of the 2<sup>nd</sup> face to face session in 2006 was due to a sudden decision to combine the face to face session it with the orientation activities, which took place sometime later and, which seemed to over-shadow the face to face component. Secondly, students, who had been granted permission to attend the sessions before the change of date had to seek another permission due to the extended time beyond what had been requested and granted, which could be either granted again or rejected.

### **Conclusions**

The OUT management has tried its best to improve both the organization and the delivery of the face to face sessions with less than satisfactory results and progress though improving every year and shifting of focus. The purpose of OUT's recent desire for a central planning monitoring and control of the face to face activities is a response to student's complains so as to enhance productivity and the quality of the outputs and outcomes. The previously one day face to face session twice per year has improved to 3 days face to face sessions twice per year for certificates, diploma and undergraduate programmes while post graduate programmes have improved from their being part of the one day twice per year modality described above to 2 days dedicated specifically to them twice per year. Thus is an appreciable improvement. Previously the conduct of the face to face sessions was largely done by Directors of Regional Centres with the collaboration of Part-Time-Tutors from the respective regions held on one and the same day throughout the nation but the situation has improved tremendously whereby a team comprising Deans of faculties and Directors of Directorates and Institutes plan together with some degree of flexibility during implementation. The Deputy Vice Chancellor Regional Services coordinates DRC's contributions of difficult topics and issues to be discussed for solutions and ensures that inputs from the Regional/Coordination Centres reach the respective Deans/Directors and the DVC (Academic) who coordinates the planning, monitoring and the implementation.

The results of this study show that the face to face sessions are well planned and organized but logistics and implementation are perceived to be unsatisfactory due to

what we call conflicting conceptualization of what constitutes the purpose of the face to face sessions and ineffective communication among and between stakeholders. While students, focus on delivery of lectures and solving difficult problems and issues as the central function of face to face sessions; tutors and lecturers focus on what they believe students need: the broad study skills, information sharing concerning the developments within their respective Faculties, Directorates and Institutes, the curriculum, citations, skills on writing of papers, research skills and how to do assignments as well as responding to Timed-Tests and Examinations. These perspectives are in reality complementary to each other and students should get both but what is at stake is the weight and timing accorded to the two perspectives. Tutors and students need to strike a balance between the two perspectives and allocate proportionate time especially because time for the face to face sessions is already increased and the fact that the new role of face to face sessions has to be taken on board.

Most of the problems raised by students are levelled against the University, which are mostly concerned with delays in releasing results of Assignments, Timed-Tests and Examinations, inadequate study materials and improper scheduling or sudden changes of activities in the almanac to the extent that information does not reach all concerned in good time to accommodate the changes. The University is already talking these issues. Already the sessions are being evaluated after their implementation and the shortcomings rectified in the next face to face Sessions.

It is very clear from the findings that students value the face to face sessions very much (93%) and perceive them as instrumental to their success in their studies. So, they need to be well implemented so that students reap their perceived benefits. The recent changes in the roles of the face to face sessions from being a modality of instruction to the role of assessment is worth noting as a critical step in the evolvement of the university. However, its role has changed from being essentially a strategy for imparting knowledge skills and clarifying difficult topics for better understanding to one primarily for the assessment of students readiness to do the annual examinations in their relevant course units but exclusively. As such, the face to face sessions have evolved from being done on one and the same twice per year three days twice per year to six days once per year; and from focusing on discussions of difficult issues through interaction between tutors and students to largely but not exclusive tutors assessing students readiness to sit for their respective course units. It is also an evolvement from being free to attend the sessions to being compelled to attend them.

### ***Recommendation for policy***

Face to face Sessions are strategies for the acquisition of academic knowledge and skills which constitute a core function of the university. It is recommended that.

The idea of organizing face to face sessions on a zonal basis proposed by student leaders because it had the potential to enable students to benefit from an increased number of staff comprising the – 3 to 4 directors of Regional Centres, the academic

staff already posted to the regions and from all the regions comprising the zones plus the ones from the Headquarters and Part-Time-Staff from the regions does no longer have the chance to be experimented because of the new role accorded to the face to face sessions of assessing student portfolios, which is best implemented on a Regional Centre basis or better still on a smaller scale .

The centralization of the Planning Committee under the chairmanship of the Deputy Vice Chancellor – (Academic) should continue to be strengthened given the new role of assessing student Progress portfolio's readiness to sit for examinations but also they can discuss with students especially difficult topics and issues encountered during their readings sections which the subject expert can elaborate her/ his interview with the students over summary of the contents of the study material and references.

The ICT knowledge and skills, which have started here at the university for all academic and administrative staff as well as students is crucial for the future improved delivery of knowledge and skills and as such, should be continuously pursued as well as enhanced and, extended to students in all Regional Centres by ensuring provisions are made available to them. To this end the issue of RC's acquisition of own premises and facilities is crucial and of paramount importance.

### ***Recommendations for research.***

Students believe that face to face sessions are more effective means of imparting knowledge. There is need to do an impact exploratory research on programme completion in OUT focusing on the role of the face to face sessions broadly defined.

The results of this study show some shortfalls in the logistics, the preparations and understandings of the purpose of face to face sessions. The process of how the new roles are going to be implemented are worth being monitored through Action research. It is recommended that a qualitative in-depth study be carried out to unearth what transpires during the process of face to face interactions in the context of the new initiatives.

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## The Relevancy of Bronfenbrenner's Ecological Systems Theory in Early Childhood Education

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**Abstract:** *The purpose of this article is to describe the relevancy of Bronfenbrenner's ecological system theory in early childhood education. Early childhood is depicted as a vital period in any individual development and learning whether cognitive, social, emotional or moral. Different theorists also recognized early childhood as a critical period for development and learning and that, children are born with physical, social and psychological gifts which allow them to communicate and learn; therefore, these gifts should be cultivated for their future participation in their society. The article also defines early childhood care and education in its holistic nature as education which includes children's survival and growth, development and learning, health, nutrition and hygiene, cognitive, social and emotional development opportunities that ranges from birth to primary school entry in formal and informal setting. Therefore, Bronfenbrenner's ecological system theory is used to describe how learning of young children is influenced by different system in her /his environment. These systems are mentioned as microsystem (family, peers, schools and neighbourhoods) mesosystem (religious institutions, health and medical institutions, other community agencies) exosystem (government policies and laws, political ideologies) and macrosystem (spiritual beliefs and cultural beliefs). It is concluded that since the interactions of these subsystem has great influence on child's development and learning, they should work together towards child care, development and learning to bring about the solid nation in terms of social and moral skills .*

### Introduction

Early childhood care and education is not new field since for many centuries there have been considerable academic interests in the field. Different educationists and theorists recognize the importance of early childhood care and education and advocated that early childhood as a critical period for a child, as it is when the foundation for later learning can be laid. It is because the most rapid brain development takes place at the first two years of life laying the pathways for significant intellectual, emotional, physical and social functions as the result of child's interaction with the environment (Keenan & Evans, 2009). Therefore, early childhood is seen as a critical period in human development.

History show that, during ancient times, Greece city states such as Athens and Spartan had recognized early childhood care and education and provided it according to the environment, social and political needs of that time. At age 2-8 boys were taught how to endure hardships such as hunger and cold while girls remain home where mothers and nurses insisted upon good behavior and self control. Plato (437-347 BC) stipulated

that children should be valued and nurtured because they would become the future citizens, leaders and guardians of their societies.

Similarly, other great theorists and teachers such as Joan Amos Comenius (1592-1670), Robert Owen (1771-1858), Friedrich Froebel (1782-1852), Jean Jacques Rousseau (1712-1778), John Heinrich Pestalozzi (1746-1827) Maria Montessori (1870-1952) and Jean Piaget (1896-1980) recognized the importance of learning and development in early childhood. They believed that early childhood education is important for the children future citizenship and that children's experience in early years are extremely influential in their later development and well being (Taylor & Woods, 2005)

In colonial Tanzania, ECCE was established by religious organizations such as bush schools which were the earliest form of formal early childhood education in Tanzania mainly provided by Christian organizations. There was also madras under Muslim organizations for Muslim children dominant in mainland coastal areas, Zanzibar and Pemba. Reading, writing and arithmetic were the main subjects including some bible knowledge for Christian children as well as Quran education and Arabic language for Muslim children (Mbiye, 2000). After independence, early childhood education was not on the public agenda but it was recently brought into government attention and social planner by two converging forces. First women were entering the paid work force in increasing number in the country as the result of families' mass movement to cities in developing countries and better education and improved opportunities for women in developed countries. Second, long term and documented studies of the impact of ECCE have reported significant benefit for youngsters who have the opportunity to participate in the programme (Weikart, 2000)

However, the role of government in both pre- and post-independence in ECE has been minimal and indirect. The government maintained an open door policy for any party interested in initiating and establishing ECCE institutions according to the laid down criteria but with very little enforcement mechanisms thus leading to over 90 per cent substandard institutions (Seif, 1992)

### **Defining Early Childhood Care and Education**

Early childhood care and education is seen as variety of types of provision for young children in different countries, regions and provinces. The term is used to refer to group setting for children between approximately three of age and six years old which are deliberately designed to support and stimulate their intellectual development (International Encyclopedia of Education, 1985). Early childhood care and education therefore is the term that frequently applied to the education of young children from birth through age eight or the type of education which takes place before formal education either at home, neighbours, childcare centre, pre-school or nursery school. This kind of education encompasses all the domains that are physical, social, intellectual and emotional domains.

EFA Global Monitoring Report (2007) on its holistic approach states that early childhood care and education includes children's survival growth, development and learning, health, nutrition and hygiene, cognitive, social and emotional development opportunities that ranges from birth to primary school entry in formal, informal setting. Although the setting in which early childhood education is provided known by a variety of names they serve particular services needed by families, community, source of funding and theoretical approach followed.

### **Rationale for early childhood care and education**

Basic learning begins with the family and the local community that is children learn from their parents, peers as well as through traditional learning system such as apprenticeship, initiation rites and religious instructions. However, early childhood care and education whether formal or informal seems to be not compulsory to some communities while its importance to the development and learning of children is well documented.

Evidence from education and related fields indicate that young children's development and learning proceeds rapidly in the early years of life whereas the basis of language is laid so as attitudes and social relationships. Not only that but also early years are crucial in the physical, intellectual and emotional development of the child .Weikart (2000) stipulates that children are born with physical, social and psychological endowments which allow them to communicate and learn; therefore if these behaviours are not cultivated they will shrivel and not thrive. Therefore it should be understood that school readiness and participation of the child in the society as an adult are usually laid down during early years. Taylor and Wood, (2005) suggest that, for a child to be ready for adult life, he or she need to grow through various stages of physical, mental and emotional development each characterized by unique need and task that support overall development.

Research suggests that most of the development of the intelligence in the children occurs before the age of seven due to the fact that most of the brain cells occurs during the first two years of life, accompanied by the structuring of the neural connections the brain. This process is not only affected by nutrition and health status of the child but by the kind of interaction the child get from the environment. Jeffrey (1997) establishes that if the brain develops well, learning potential is increased and chances of failure in school and in life are diminished. Therefore, through early childhood education children gain long-lasting academic and social benefits that that will have a positive impact throughout their lives.

### **Ecological System Theory in Early Childhood Care and Education Context**

Bronfenbrenner's ecological system theory (1979) looks at a child's development and learning within the context of the system of relationships that shape his or her environment. It stresses the importance of understanding not only the relationships between the child and various environmental systems such as family and community



but also the relationships among the environmental systems themselves. The theory view children as the active participants in creating their own environment and considers children's subjective experiences in creating their relationship and surroundings just as important as the objectives of these phenomena.

Hetherington, (1999) discussing the theory stipulates that, the theory offered the framework for organizing sets of environmental systems. In his views, the child is organized in a "sets of nested structures, each inside the next like the set of the Russian Dolls". The structures range from the immediate settings such as family, peer group to more remote contexts in which the child is not directly involved, such as society's value and legal system. According to the ecological system theory (1979), these structures of the environment are in different complex layers namely microsystem, mesosystem, exosystem, macrosystem and chronosystem.

The first layer, microsystem which is the closest to the child, surrounds the structures with which the child has direct contact. Berk (2000) affirms that the layer takes in the relationships and interactions a child has with her immediate surroundings. This includes family, school, neighbourhood or child care environment. At this level, the impacts of the interactions and relationships are bi-directional that is from and towards the child. The neighbourhoods, childcare institutions and parents may influence the beliefs and behaviour of the child, yet, the child also influences the beliefs and behaviour of the others.

Whereas the mesosystem offers the connection between the child's microsystem that is between the child's teachers and his parents, church /mosque and his neighbourhood, the exosystem defines the larger social system in which the child does function directly. The structure in this layer influence the child development and learning by interacting with some structure the child's microsystem, for example parents workplace and community-based family resources (Berk 2000)

The macrosystem is not specific but entailed the cultural values, customs and laws. The consequences of principles defined by the macrosystem have a flowing influence through the interaction of all other layers. The example is if it is the cultural belief that parents should be exclusively accountable for raising their children, that culture is less expected to provide help. Therefore, the ability or inability of parents to raise their children within the context of the child's microsystem is affected.

It is important to understand how the relations of these systems are central in the development of the child and what factors may lead to the failure of child's learning. According to Bronfenbrenner(1990) the instability and unpredictable family life which lead to the breakdown of the child's microsystem give the child little interaction with his /her other important system in their life which may have great impact in their development and learning,

### **Application of the theory in early childhood care and education setting.**

Bronfenbrenner's ecological system theory is applicable in any settings in which early childhood care and education is carried out. This is because the theory explicate the disparity in which individuals can get knowledge, development and other experiences depending on support, guidance and structure of the society in which they live. Moreover, the interactions and relationships between the systems influence the individual considerably. The microsystem (the family, peer groups, early childhood institutions or neighbourhoods) as the key unit around the child has the direct influence to the child when the two microsystems (teacher and parent) start to work together to educate the child. Even if teachers cannot be parents, they can interact with them and provide education about the developmental needs of their children.

The external factors (mesosystem) such as religious institutions, health institutions and other agencies which are not directly related to the child typically influence the child development and learning by interacting and changing its microsystem. On the other hand, exosystem (political ideologies and government laws and policies) and macrosystem (the spiritual and cultural beliefs of the society) in which the child is raised have also the core influence to all systems in the child development and learning.

Normally, the family, peer group, early childhood institutions and neighbourhoods is where children begin to learn the values, customs and ways of behaving appropriately or inappropriately to the social norm of that society in which he /she belongs. The family one is born, is his orientation family hence an individual learns social roles and beliefs of the society from that family. Without appropriate supervision and attention from the child's immediate systems children look the attention from other inappropriate places which may give rise to inappropriate behaviours. Apart from the family, religious institutions are important system in influencing child's development and learning. Its role is usually to perpetuate the moral, beliefs as accepted in the respective religious group. In this respect, its role in development and learning of children is not different from family, peers and neighbourhood. The major functions of this system is like what families do although it is not done by parents but priests ,pastors, Sunday school teachers or sheikhs and maalims. The religious teaching sometimes reinforces and compliments the family, peers, early childhood schools and neighbourhoods' teachings.

Likewise, the government laws, policies and its political ideology have great influence on the child development and learning. The proper government support, policies and political ideology provide the best environment most needed for healthy development and learning for children. Government policies and laws should support the interaction of all systems for the better development of the children, by creating the environment that meet and cherish families, schools and other systems interacting with the child in the learning process.

Additionally, cultural beliefs of the society, as one of the systems in child development and learning can thwart or boost the process depending on what is believed by that society. For instance if it is the cultural belief that, parents should be exclusively

accountable for raising their children, that culture is less expected to provide help. In the other way round, the belief that parents should interact with other systems to get support for the development of children, other systems are then expected to provide help needed.

**Ecological system theory and the situation of early childhood care and education in Tanzania.** As it was stated before, the provision of early childhood care and education in colonial Tanzania were provided by religious organization and minority racial groups. This doesn't mean that there were no kinds of education provision for young children before the colonial time. Families took a full responsibility in child rearing and early education even before the introduction of madrassa (Quran schools), bush schools, kindergartens and day care centres.

After independence, few parents put pressure on establishment of early childhood care and education institutions for their children, giving reasons that, there was growth of town hence interference of common rearing practices, working mothers, development of modern expertise and disruption of extended families. Moreover, the development of Ujamaa villages required fully participation of women in economic activities, hence early childhood institutions were seen as alternative for parental care at the time when parents are participating in economic production in the new villages. Yet, early education and care remained in hands individual families and communities without appropriate and knowledgeable establishment to provide the needed education and development.

In other occasions, religion organizations, the government with the support of donors, initiated various programmes for the care and education for young children with different names such as day care centres, nursery schools and kindergartens although in some cases the functions do not match with those institutions. Although the government took initiatives to establish early childhood institutions, until 1990 the number of these institutions was comparatively small, for example in 1988 there were 1626 registered day care centres and there were about 118, 480 children registered which constituted only 3% of all children 3-6 years old (UNICEF, 1990).

Furthermore, there was no effort by government to have a comprehensive policy on early childhood care and education; hence individual policies were formulated by different ministries that had been mandated to look after the care and education for young children. Institutions established by NGOs functioned outside government policy; likewise the policies formulated by different government ministries (Seif, 1992). This led to confusion to parents and other stake holders to in differentiating day care centres, nursery schools, kindergarten, their curricula and qualifications of the staffs. In this case, it is important to have a close look at ecological system theory and put together all systems which are very important in education for young children. Families as a microsystem of the child should work hand in hand with other systems to develop a comprehensive education for children. NGOs, CBO, religious organization

and other agencies should also interact with other child system, while government should work on formulation of policies to favour development of children. This is very crucial for any government if it aims at developing committed and trustworthy citizens.

### Conclusion

Ecological system theory demonstrates to be of importance in explaining child development and learning and the role played by different systems around the child. It also ascertains how these systems are intertwined and influencing the development and learning sequence. The theory give us the ability to understand how children's live s are balanced between every aspect of their environment, therefore we should become conscious that our actions towards our children have a lifelong impact in their relationships and adjustment. As a society then, knowing how we are influencing the lives of all people we interact with, with anticipation we can strive to become a better society for the sake of our children.

By looking at the theory, the government should also be able to develop policies and programmes that can benefit its society. Therefore, the theory in useful in that, it increases the society's consciousness that working together in harmony, provide the children with a community that hold each other , the outcome of our children will be intense. If parents, teachers, religious leaders, health institutions, different agencies and government work together towards child care, development and learning, then the nation will be of triumph in every aspect.

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