

Use of Information & Communication Technologies (ICT) in Open and Distance Learning (ODL):

A report on capacity building workshops for TEVET Institutions in
Zambia

Dick Ng'ambi, PhD.
Workshop Facilitator

Table of Content

1.0	INTRODUCTION	3
2.0	PARTICIPATING INSTITUTIONS	3
3.0	WORKSHOP OVERVIEW	5
4.0	WORKSHOP REVIEW FROM PARTICIPANTS PERSPECTIVES	7
4.1	FEAR OF LAGGING BEHIND THE TECHNOLOGIES	7
4.2	MINDING CONTEXT IN ICT INTEGRATION	8
4.3	REFLECTING ON OWN PRACTICE	9
4.4	SOLICITING MANAGEMENT SUPPORT IS CRITICAL	10
4.5	DEVELOPING SELF-MONITORING AND ACCOUNTABILITY MECHANISMS	11
5.0	PROPOSITIONS ON WAY-FORWARD	11
5.1	INSTITUTIONAL FOCUS	12
5.2	PEDAGOGICAL FOCUS	12
5.3	TECHNOLOGICAL FOCUS	12
5.4	PERSONAL FOCUS	12
6.0	RECOMMENDATIONS	13
6.1	WIDEN ACCESS TO KNOWLEDGE GAINED AT THE WORKSHOP TO OTHERS	13
6.1.1	<i>Action Plan:</i>	13
6.2	CREATE AND RESOURCE ODL SUPPORT TEAMS	13
6.2.1	<i>Action Plan:</i>	13
6.3	EXPLOIT AVAILABLE TECHNOLOGIES	13
6.3.1	<i>Action Plan:</i>	14
6.4	USING TECHNOLOGIES ALREADY OWNED AND USED BY STUDENTS	14
6.4.1	<i>Action Plan:</i>	14

Use of Information & Communication Technologies (ICT) in Open and Distance Learning (ODL): A report on capacity building workshops for TEVET Institutions in Zambia

1.0 Introduction

The Ministry of Education, Science and Vocational Training (MESVETEE), organized workshops on effective uses of Information and Communication Technology (ICTs) in Open and Distance Learning (ODL) in Technical Education, Vocational and Entrepreneurship Training (TEVET) from 22nd to 27th October 2012 in Kabwe and Kitwe respectively. The objective of the workshops were to build capacity in the use of ICTs in ODL teaching in TEVET to policy makers from the MESVETEE, Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) staff and ODL managers and staff from selected TEVET institutions. The workshops were facilitated by the author of this report based at the Centre for Educational Technology (CET) at the University of Cape Town in South Africa. The author is the leading expert in the field of educational technology and has extensive experience in both implementation of emerging technologies in blended programmes and research in pedagogical uses of ICTs in education.

2.0 Participating Institutions

The workshops were attended by participants from the following institutions: Kabwe Institute of Technology; Mkumi Trades Training Institute; Zambia Air Services Training Institute (ZASTI); Lusaka Vocational Training Centre; In-service Training ISTEK Lukashya; Lukashya Technical and Business College; Solwezi Trades Training Institute; Lukashya Trades Training Institute; Northern Technical College (NORTEC); Technical and Vocational Teachers College (TEVTC) and the Zambia Institute of Business Studies and Industrial Practice (ZIBSIP). Figure 1 shows a photo of the participants that attended the Kabwe Workshop and Figure 2 the participants from the Kitwe Workshop.



Figure 1: Participants at Kabwe Workshop



Figure 2: Participants at Kitwe Workshop

The institutions were at various stages of implementation of ODL ranging from those who had already implemented ODL to those still thinking about implementing it. For example, TEVTC had been running ODL for eight years and had most of its Open and Distance courses online¹. The TEVTC uses Moodle² as a Learning Management Systems (LMS). The Kabwe Institute of Technology also offered ODL programmes. The ZIBSIP has one of the most advanced ODL programmes supporting various courses³. NORTEC⁴ had completed an elaborate planning phase for ODL. ZASTI introduced ODL in Engineering Courses⁵. While these institutions had introduced ODL, others were yet to start the implementation of ODL due to various challenges, not the least of which is capacity to write ODL modules and technical challenges of delivery. The Lukashya Trades Training Institute in Kasama was grappling with ways of delivering ODL for practical courses such as Automotive Mechanics, Plumbing, Bricklaying, etc. The challenge facing Solwezi Trades Training Institute faced was how to package the existing distance courses into ODL. It follows that participating institutions represented a cross section of institutes and had varied challenges. These challenges were sandwiched between the increasing competition among government and private colleges on one hand, and the changing nature of 21st century students and need to align delivery with varying student needs.

3.0 Workshop Overview

The workshop facilitation approach involved presentations, discussion, group tasks, and practical tasks. The theme of the workshop was: teaching 21st century TEVET students. Figure 3 depicts a 21st century student immersed in different 21st century technologies.

¹ <http://www.tvtc.edu.zm/>

² <https://moodle.org/>

³ http://www.zipsip.ac.zm/index_files/ODLcourse.html

⁴ <http://www.nortec.edu.zm/>

⁵ <http://www.zasti.ac.zm/>



Figure 3: A 21st Century Student (Designer Stacey Stent – Centre for Educational Technology, UCT)

The outline of the sessions were as follows: Teaching with emerging technologies; Mobile learning - common sense issues; Mobile learning - enhancing learner experience; Open Educational Resources; Podcasting; Creating Mobile Educational Content; and Teaching with Social Media. Figure 4 is a photo taken at the workshop held at Tuskers in Kabwe and Figure 5 a workshop held at Hotel Edinburgh in Kitwe.



Figure 4: Workshop held at Tuskers in Kabwe



Figure 5: Workshop held at Hotel Edinburgh in Kitwe

4.0 Workshop review from participants perspectives

At the end of each workshop, participants were asked to reflect on their workshop experience. The comments were recorded and transcribed. Some of these comments are categorized in themes and reported below. The comments were selected because they represented views that were expressed by other participants in different ways.

4.1 Fear of lagging behind the technologies

There was a general perception that students were more technologically savvy than educators and that this created **fear** among educators of being at the 'back foot' as far as technologies were concerned.

My worry is that since we have access to the same information and resources, If as providers we have inferior tools than our students, we will be left behind, we need to update our technologies so that we can deliver...

Understanding the above worry in the context of the workshop, which emphasized that technologies were not a panacea of educational problems, the value lay in pedagogical design, focusing on a learning task and letting the technology to be used as a tool to help accomplish a task. The

technological competencies of students could be harnessed to create student-centered learning environments driven and maintained by students. One participant observed that although similar technologies were available to both educators and students, some educators did not have the pedagogical know of how to integrate technologies into teaching:

This workshop to me has brought about a lot of thought on how much we lag behind in using technology. Although we have had these equipment these have been under utilised. The challenge now is on us, how much do we need to put in because you have given us what we need.

The above statement is significant in that it shifts focus from the technologies to knowledge about what and when to apply it to effective an intended outcome. According to the above statement, the participant recognizes that **technology is already available** and that the onus is on the educators/institutions to integrate technologies in teaching. However, as rightly noted in the earlier comment, it is not enough to have access to technologies, students need to be instructed on effective ways of using the technologies as learning tools. However, as the next statement rightly suggests, meaningful use of technologies need to be mediated and educators have an important role to play:

The other thing that I have learnt also is that we have to use technology to help achieve learning outcomes, so as much as we have technology and students have it, but if they are not instructed on how best to use the technology, it will be meaningless in their hands, and yet it is a powerful tool as far as education is concerned...

The recognising that the technologies already in student hands are 'powerful tools' is a useful point of departure. This signifies an important shift in the educational landscape, as there has never been a time in history when powerful technologies have been so pervasive and ubiquitous as mobile technologies, for example. The appropriation of technologies is context depended and the educators need to model educational uses of technologies.

4.2 Minding context in ICT integration

Any effective use of technology requires a deep understanding of context including curriculum, students' physical access to technologies, envisaged learning outcomes and assessment. The integration of technology is located at an intersection of curriculum, pedagogy, technologies, learning outcomes and assessment. During the workshops, some ways of integrating and teaching with technologies were modelled, for example use of podcasting was illustrated through practice.

I want to urge my fellow participants; we don't have to wait for the govt to provide resources that are not there. There are things we can do on our own such as recording lectures, that we start on our own.

In the above statement, through observing how podcasts were used in the workshop and having listened to a presentation on use of Podcasts in Education, the affordances of Podcasting in ODL became apparent. While the workshop provided insights to some participants, others reflected on their own approaches for implementing the ODL to extent of seeing gaps in their current implementation:

For me the workshop has come at the right time, especially that we already have ODL students already.

The workshop has helped me to reflect on what we have been doing. As the workshop has been going on, I have been seeing gaps in what we have been doing. I now see that if we integrate ICT we will get more income, as more students will come in. It will help us to earn more income.

The underlying principle was that use of technologies would increase the number of enrolments, enhance student engagement with learning resources and enrich the support given to students. These factors will give ODL a competitive advantage and cost-effective. The workshop therefore provided a space to think 'aloud' in the presence of peers and experts about their own practice.

4.3 Reflecting on own practice

The reflections were not limited to participants from institutions already running ODL, but participants yet to implement ODL had an opportunity to leap-frog ODL implementation by avoiding the problems that early adopted experienced, for example, as one participant observed, the knowledge acquired from the workshop will impact on their teaching approaches:

We have a very big problem in our institutions of the books. Most of the books we have are old and irrelevant to the current situation. With all these resources I have been given, I am sure the approach on my part and those whom I lecture will change. The workshop has been enriching. Thank you very much Professor.

The challenges of lack of access to up-to-date resources, in particular books, for teaching and learning, were shared among many participants. To this end, the session on Open Educational Resources (OER) and emphasise on Massive Open Online Courses (MOOCS) and ebooks became insightful. Most participants learnt about these resources for the first time during the workshop, as this statement suggests:

I learnt a lot on my side on the tools that I can use. I learnt about the MOOCS, I have learnt it here. For me Professor, I want to thank the organisers for this WS. I have learnt about the technologies

that are emerging, such as the MOOCS. There are so many things I have learnt, first of all, thank you so much Prof.

At the end of the session on the MOOCS, participants worked in groups to consider the question: Are the **MOOCS the future of education in ODL**? The question was debated both as a group task and in a plenary discussion. Figure 6 depicts the outcome of a group 4's response to the question.

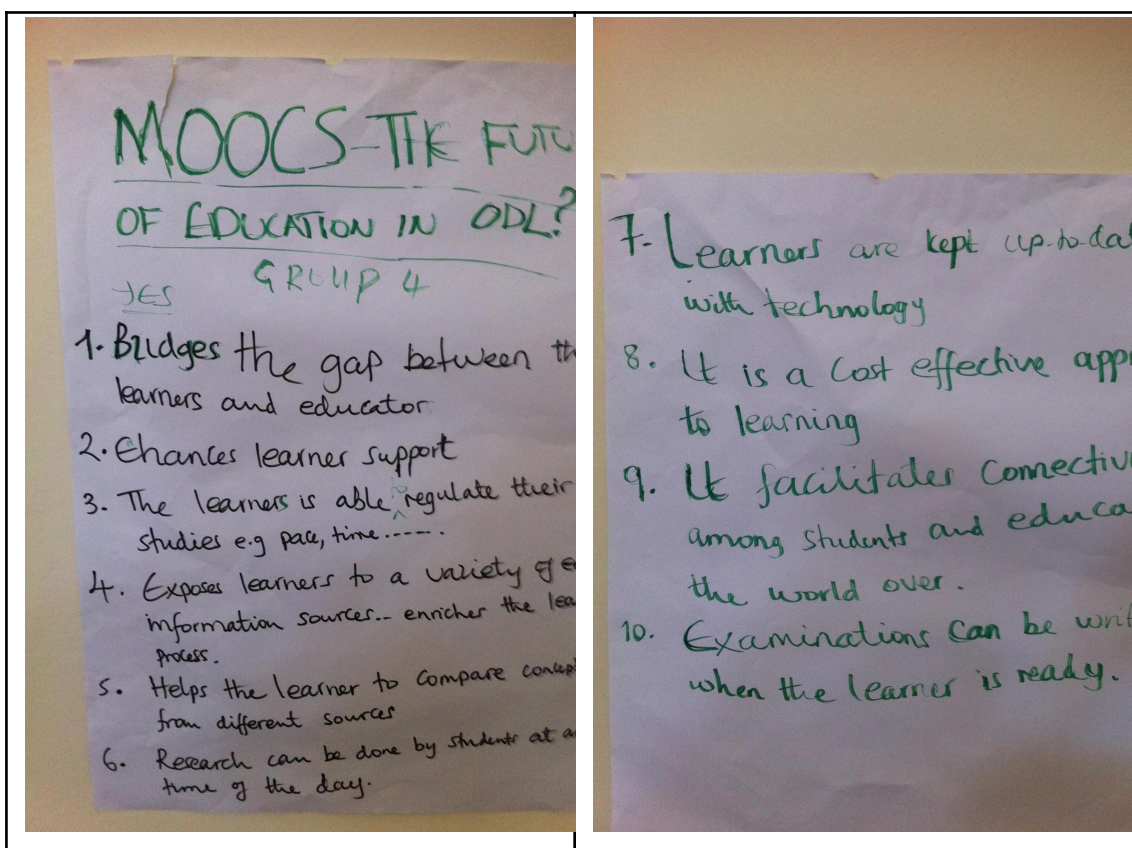


Figure 6: Outcome of Group 4 discussion – Are MOOCS the future of education in ODL

There was general cognizance, especially for successful implementation of ICT in ODL, that management support would be indispensable as one participant succinctly put it:

I have learnt that we should not only be glued to the classroom setup. At the end of this workshop, I have been equipped with the right tools and I will now be able to even entice management to get behind ODL. I am also seeing ODL to help generate a lot of income.

While this approach of 'enticing' management is commended, it is vital that managers be invited to attend a similar workshop with specific focus on strategic perspectives of ICT in ODL.

4.4 Soliciting management support is critical

Many participants underscored the fact that successful implementation of ODL was a team effort and **management support was a critical piece**. To the extent that the participant planned to 'entice' management (see previous comment), it suggested a management that was open to innovative ideas,

without which it would be difficult to move forward despite being equipped with the right tools. It must be said that ‘enticing’ management is a bottom-up approach, which must be complemented with a top-down approach where management is ‘enticing’ the practitioners to adopt the use of ICT in ODL. For example of interest to management would be issues of previously mentioned where participants associated the use of ICT in ODL with increased income. Although the workshop did not specifically discuss **cost-effectiveness of ICTs in ODL**, the participant inferred from the potential of ICT to widen access to education, increase access to freely available content, enable student-teacher, student-student, and student-content interactions, that this would allow more students to be supported, would contribute to increased enrolments and improved throughput. These are just some of the issues that would be of interest to management.

4.5 Developing self-monitoring and accountability mechanisms

Other participants echoed a need for a **monitoring group** in the form of an ICT in ODL steering committee or some other means of reporting on the progress that institutions were making in the post-workshop initiatives:

I appeal to the organisers of the workshop not just to end it here. They should make a follow up on the money that has gone into this workshop, how effective are participants using what they gained.

While we have the muscles to do the job, the organisers should follow up to see how much we are utilizing what has been given.

This approach is commended for it creates some form of **accountability** and would encourage educators to start, albeit ‘baby-steps’ in the implementation of ICTs in ODL. Another participant suggested:

I feel that Mr Konayuma must visit us to encourage us to see how we are implementing. All in all this has been very educative for me.

The participants praised the Ministry of Education, Science and Vocational Training for organizing what many called a timely, informative, eye-opening and educative workshop. One participant summed up his experience in the following comment:

The knowledge that I have gained during the WS will go a long way. I cannot hesitate to award the facilitator of this workshop a distinction.

The participants generally used the following words to describe their experience of the workshop: “very very useful”, “an eye-opener”, “opened up my mind”, “a great help”, “really made a difference”, “has come at the right time”, “been a success”, “very successful”, “a distinction”, and “informative”.

5.0 Propositions on way-forward

The participants were invited to outline the post-workshop way forward. The comments below are summarized under four themes: institutional, pedagogical, technological and personal foci. Most of the suggestions were targeted at institutional and national level challenges.

5.1 Institutional focus

- Enhance the launch of the college website
- All courses to be posted-online
- Educator my colleagues on the need to implement ODL and the importance of technology in learning and teaching in the 21st century student
- Make a plan for implementation of ODL at our institute
- To use the emerging technologies in order to contribute to the educational standards at my institutional level and the country as a whole
- Collaborate with other institutions running ODL programmes
- Lobby management for implementation of workshop outcome
- Submit a report with recommendation to management with update on implementation plan
- Call a workshop for all ODL teacher to share material from ICT
- Lobby the ministry for some more resources through management, to kick start the ODL as they provide more income

5.2 Pedagogical focus

- Implement and enhance the six levels of ODL interactions using appropriate and available technologies
- Begin to promote the seven types of interactions for achieving deep and meaningful learning

5.3 Technological focus

- Use available resources to make changes e.g. use mobile phones more
- Start a Facebook page for learners
- Fully utilize the available tools and techniques to enhance my teaching strategies e.g. social networks, teleconferencing, vodcast, podcast, multimedia presentation
- Invest in podcast software and hardware and use it for full-time & ODL students
- Collaborate with other institutions running ODL programmes

5.4 Personal focus

- I despised ODL I am a changed man
- Implement those that I can manage at personal level to better my ODI delivery e.g. access, OER sites

6.0 Recommendations

Mindful of the need to understand context, participants were asked to suggest post-workshop strategies for moving forward. The following themes emerged:

6.1 Widen access to knowledge gained at the workshop to others

Some participants suggested that it was important to change the mindsets in order to change human actions. One of the key approaches to achieving this is through training. There were general views that sharing the merits of ODL could potentially change the educators' perception of ODL. While this sharing among peers is important, sensitizing management on the value of ODL is important in order to get the top down support and to create environments in which ODL can be successfully implemented.

6.1.1 Action Plan:

Organise a workshop for senior management staff on the potential of ICTs in the effective delivery of ODL. The workshop would be non-technical but focusing on the strategic view of integration and use of ICTs for teaching and learning in general and ODL in particular.

6.2 Create and resource ODL support teams

Institutions should work together to lobby government, donors and business organisations for ICT resources, including capacity building, to implement ODL. The educators / lecturers, subject experts and instructional designers, need to have access to appropriate equipment and stable access to Internet for the purposes of developing materials and supporting open and distance students.

6.2.1 Action Plan:

Institutions should do needs assessments of ODL to determine the infrastructural and skills needs. The evaluation should aim to also identify available technologies such as mobile phones/communication etc. This is important both to gauge institutional readiness and human resource development strategies.

6.3 Exploit available technologies

There are several resources available for free on the web that can be harnessed to create educational resources for ODL. However, the general awareness of these resources among educators is extremely low. It is recommended that educators create a community of practice where such experiences and knowledge can be shared. Through the Community of Practice (COP) educators could also exchange frustrations and breakthroughs. This is particularly important given that institutions are at different levels of implementation of ODL.

6.3.1 Action Plan:

Create an ODL-COP to share experiences, best practices and quality assurance of resources. Each institution could have a ODL-COP, and/or a regional ODL-COP which meets occasionally to exchange ideas.

6.4 Using technologies already owned and used by students

It is a generally accepted fact that, as a result students growing up in the digital age, today's students (see Fig 3) are different from students of the last decade. Accepting this argument implies that today's students can only be effectively taught using technologies familiar to them. There is therefore need to re-package learning materials to suit students learning styles and these may involve use of mobile devices, that students own and already use.

6.4.1 Action Plan:

Rethink pedagogical approaches to ensure alignment-teaching approaches with the 21st century learners. Run sensitization workshops for academic staff on the changing landscape of education with particular focus on emergent pedagogical approaches for the digital age.

Prof Dick Ng'ambi, PhD.

Centre for Educational Technology

University of Cape Town

dick.ngambi@gmail.com

Skype ID: dngambi

November 2012