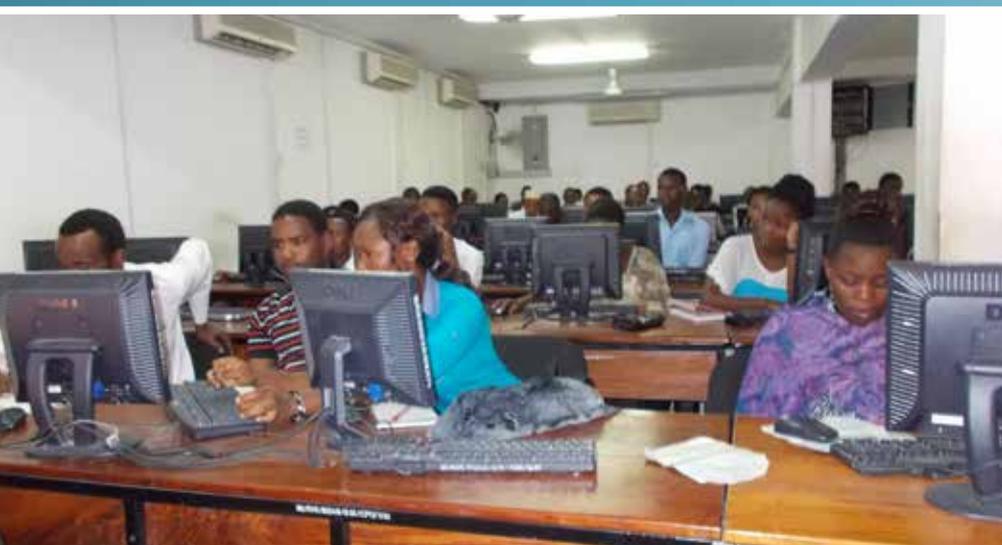


# The Broader Impact of the PHEA ETI at University of Dar es Salaam: Increasing Recognition for e-Learning

Theresa Mallinson



Partnership for Higher Education in Africa



## INSTITUTIONAL BACKGROUND

The University of Dar es Salaam (UDSM) is the oldest state university in Tanzania, having celebrated its 50th anniversary in October, 2011. When it was originally founded in 1961, it was as an affiliate college of the University of London; then from 1963 to 1970 it was part of the University of East Africa. It was officially established as an independent institution in 1970. From a modest student intake of 14 in its first year, UDSM has grown to serve more than 22,000 students.

The Centre for Virtual Learning (CVL), founded in 2005, has been the driving force behind implementation of educational technology at UDSM. The CVL, which grew out of a project run at UDSM by the African Virtual University (AVU) in 2002, provides training to technicians, academics, and students, as well as consulting to industry and the public sector. As Dr Mussa Kissaka, director of the CVL, notes, ‘We really want to make the university a Mecca for e-learning and to use e-learning as much as possible.’

The centre is situated within the College of Information and Communication Technologies (CoICT). CoICT Principal Dr Nerey Mvungi believes that using educational technology as an instructional medium is a crucial component of UDSM’s current and future growth and development.

According to Mvungi:

*When you increase the number of students, you have to change the way you interact with those students. Being able to make more and more staff members and students use the online services is one way to change.*

The CVL itself advocates for and implements educational technology changes within UDSM, and is supported by the CoICT management. However, several support staff and faculty mentioned that UDSM needed top university management to play a greater role when it comes to promoting the use of educational technologies within the institution: for example, by endorsing an educational technology policy, and rewarding faculty for their efforts in mounting and delivering courses online.

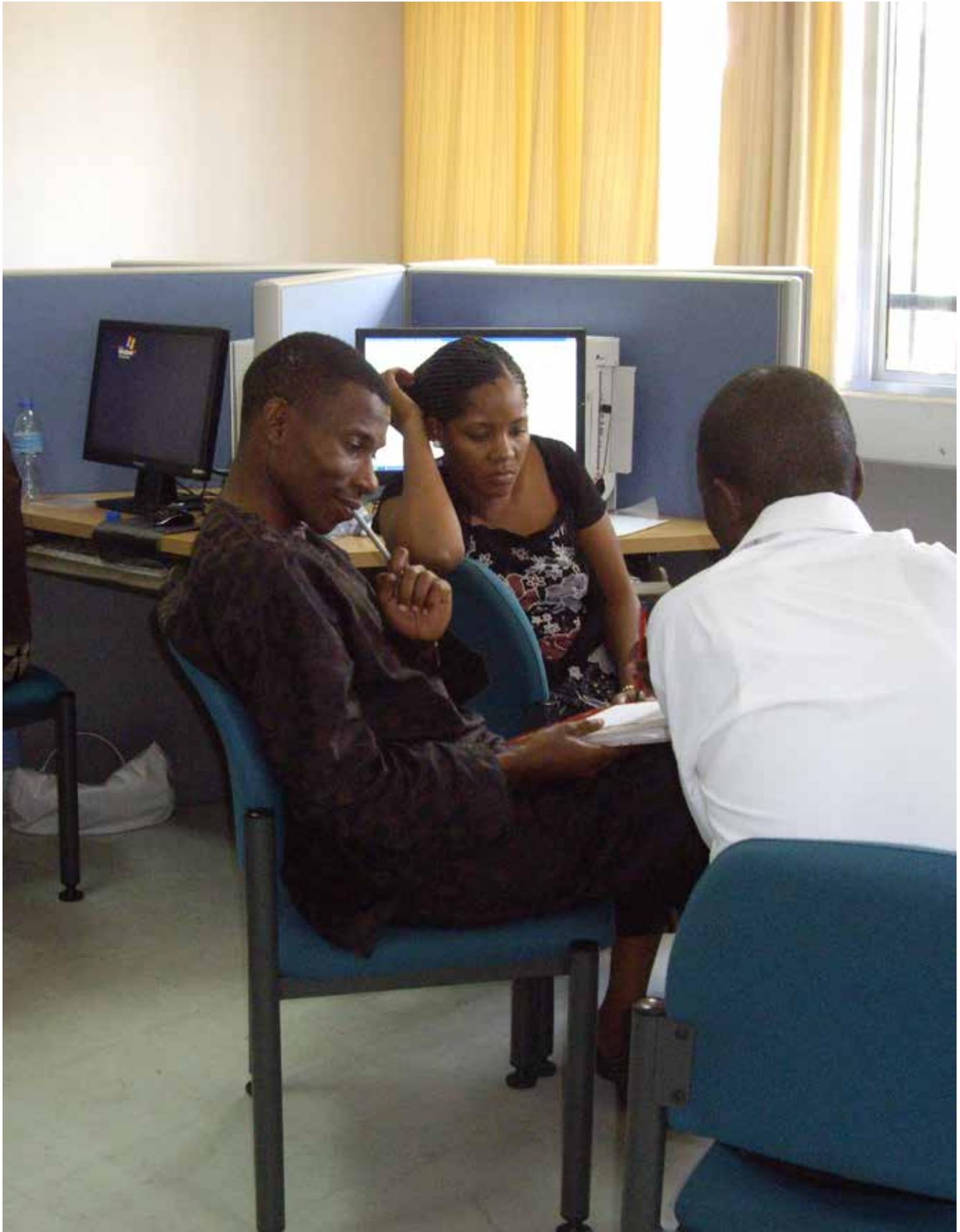
The Partnership for Higher Education in Africa (PHEA) Educational Technology Initiative (ETI) intervention at UDSM has gone some way towards addressing this challenge. Successful implementation of the PHEA ETI has generated awareness about the CVL’s role in facilitating online learning at UDSM – and has attracted the attention of senior management.

Systems Administrator Oscar Mashauri on how the PHEA ETI has influenced management thinking about online learning at UDSM:

*After this PHEA ETI project came, management started to change their minds, because they saw that online learning was very possible and there were reliable people who supported it. It’s become easier to convince them about the benefits – they see the projects, so they understand.*

## PHEA ETI BACKGROUND

UDSM was one of the seven African universities to receive PHEA ETI support. The intention was to help these universities make more effective use of educational technology to tackle some of the underlying challenges facing the tertiary education sector in Africa.



Participants at the first ETI capacity-building workshop

At UDSM, the PHEA ETI comprised the following two projects:

1. Online Course Migration and Improvement (migration from the Blackboard learning management system to Moodle).
2. Computer Science Interactive courses (creating animations and other multimedia content for online courses).

Over the course of the PHEA ETI at UDSM, migration of the learning management system (LMS) from Blackboard to Moodle developed beyond its original scope, as lecturers used the opportunity to revise their course content. Equally, Project 2 achieved its goals, then surpassed them, with animations being introduced into more courses than planned.

A feature of the CVL's engagement with the objectives of the PHEA ETI was the manner in which the team was willing and eager to explore new paths as the project developed. For this reason, an additional component, focusing on training lecturers in the use of open educational resources (OER), was included in Project 2. Further initiatives – such as development of an e-learning policy for the university, and an UDSM e-learning newsletter – also arose during the course of the PHEA ETI. These stories form the focus of this case study.

The CVL's Mulembwa Munaku, on the impact the PHEA ETI has had at UDSM:  
*Basically it was capacity building. A lot of training has been conducted due to the PHEA ETI. We now have the capacity to develop multimedia content.*

## TECHNOLOGY CHAMPIONS

When the university established the CVL, a stand-alone unit dedicated to virtual learning, in 2005, this further highlighted the importance management places on deploying educational technology. At the start of the PHEA ETI involvement at UDSM, there was already a platform upon which to build in terms of awareness and implementation of e-learning at the university. Given this, it is useful to focus on the CVL and its team as a whole – rather than on individuals – as the centre is the driving force behind promoting and implementing online learning on campus.

The CVL is responsible for providing technical support to all university departments and units when it comes to virtual learning, as well as assisting staff with formatting their courses and programmes for online delivery. The centre is divided into three sections:

- The multimedia centre, headed by Bugota Saganda;
- The internal UDSM programmes section, headed by Anthony Kigombola; and
- An external programmes section, headed by Sophie Mgaiwa.

In addition to these, other management staff members include the director, Dr Kissaka; the deputy director, Dr Juma Lungu; Mulembwa Munaku, who headed up Project 1; and Joel Mtebe, who was in charge of Project 2. The responsibilities of these CVL leadership positions rotate, with both Munaku and Mtebe being section heads at the time of the initiation of the PHEA ETI.

The CVL is the nerve centre of online learning at UDSM. Its work goes far beyond the scope of the focus areas of the PHEA ETI. For example, the centre facilitates several Pan-African e-Network courses delivered via video link-up by universities in India. In addition, it delivers several short professional development courses, accessible to the community at large.

The CVL boasts a diverse line-up of staff members, many originating from different disciplines, and their various experience has all been brought to bear to improve online learning at the CVL. In the case of Mgaiwa, the

experience she has gained through facilitating external online courses allows her to advise her colleagues who focus on UDSM's internal offerings.

Mgaiwa explains:

*I coordinate online courses originating from outside the university, and I am always looking at how they deliver, and how they support their students. This informs a lot of our practice. We always discuss how we can influence the quality of our material by seeing how other institutions are doing.*

In recent years, the CVL has also increased the extent to which it consults to industry and the public sector. One such project has been work it has done for the Ministry of Education to train secondary school science teachers in creating online content for their learners. However, such initiatives do not mean that the centre neglects its core mandate of providing support to UDSM staff and students engaged in online learning. To this end, it has a helpline that students and staff can call if they require assistance when working on the LMS. In conjunction with the migration of the LMS from Blackboard to Moodle, the CVL has also produced and distributed fliers to students, which describe in simple steps the basics of logging in and working on the new platform.

While the CVL has been implementing and promoting virtual learning at UDSM since its inception, one outcome of the PHEA ETI was a much greater awareness of the work of the CVL throughout the multiple UDSM campuses – and even beyond the university.

According to Munaku:

*Something that has been brought by the PHEA ETI is the visibility of the CVL, within the university and outside. If I used to say, 'I come from CVL', the next question would be: 'What is CVL?' But now, academic staff might ask you about something related to the CVL – it could be about courses; it could be, 'I forgot my password.'*

The CVL's Mulembwa Munaku, on the centre's growing reputation:  
*Even outside the university, the CVL has become much more known, especially what we can do. We are receiving requests to assist and participate in some outside projects. This has been brought about by the PHEA ETI.*

## THE IMPACT OF THE PHEA ETI

Since UDSM already had some experience in deploying online learning prior to the institution's PHEA ETI involvement, the university was in an ideal position to take advantage of the flexibility the initiative allowed in tailoring outcomes to institutional needs. This flexibility also allowed for the projects to develop beyond their original mandates, as well as for additional project elements to be formulated at a later date.

### From Blackboard to Moodle – an engaged migration

UDSM's migration from Blackboard to Moodle was a significant success because of the thorough and systematic manner in which the migration was managed by the CVL team. Initially, when UDSM submitted its PHEA ETI proposal, the goal was to migrate 50% of the Blackboard courses (about 200). Additional goals were to *improve* the courses that would be migrated to Moodle, as well as to capacitate academics and students to use the new LMS.

As mentioned, UDSM had been using the Blackboard LMS from 2008. However, Blackboard is commercial software, and the university had begun to find the cost of the annual licence fee prohibitive. According to Munaku, the university thought it should move to open source software. From 2005 to 2007, UDSM had used the KEWL



Participants at the first ETI capacity-building workshop

(Knowledge Environment for Web-based Learning) system, but this was not a success, as the software was still under development. It was decided to switch to the more evolved Moodle LMS. The PHEA ETI was thus the ideal opportunity for the university to have access to expertise that would support the migration from Blackboard to Moodle.

In addition, research was undertaken by the team to guide this process and a migration process model was formulated in order to undertake this task in a systematic manner. In keeping with its thorough approach, the first activity that the CVL undertook as part of the migration process was a Blackboard audit, to ascertain how many courses were in the LMS, which instructors were using the system, how many students were using it, and the status of the courses in the system (i.e. whether they were currently in use, complete, and so forth).

However, based on the results of this audit, it emerged that there were not 200 courses to be migrated. Munaku explains:

*Some of them were duplicates; some of them were dummy courses; some were course titles without content. We came to realize we had only 120 migratable courses and, of these, only 75 courses were in use. We set a new target of migrating and preparing 100 courses for Moodle.*

Ultimately, 103 courses were moved to or created in Moodle during the migration process. Since then, some have been updated further.

After completion of the audit, the next task of the Project 1 team was to create awareness among academic staff of the impending change of LMS, as well as to highlight the opportunity for training in Moodle. Letters were sent to the heads of academic units, and the CVL also posted a notice on the university's academic forum. Every effort was made to attract new staff members with no prior experience of using an LMS. For those who had previously used Blackboard, training in Moodle was mandatory.

Hawas Haule of the CVL outlines how the Moodle training was approached:

*We started with the technical people from the CVL. For the instructors [academics], training was divided into two parts: firstly, general knowledge of the Moodle LMS, and secondly, advanced Moodle, which covers more advanced features. We believed that, after completing the second part of the training, the teachers would be able to upload their course material to the LMS.*

*After completing the first and second part for instructors, we moved to the third part, which involved students.*

Dr Clarence Mgina, a lecturer in the Chemistry department, was full of praise for the practical manner in which the Moodle training was conducted: 'When the first training course was announced, I already had some electronic training. I started uploading material during the course itself, so I was learning while I was actually doing it.'

One of the benefits of UDSM's association with the ETI was that the Moodle training involved not only technical aspects of learning the system, but also conceptual thinking about preparing the courses for online use. According to the principal of the CoICT, Blackboard had mostly been used for archiving lectures, rather than creating interactive content. With Moodle, it was different.

As the migration proceeded, CVL team members experienced an attitude shift, as the importance of developing material specifically for online use became increasingly clear.

Saganda elaborates on this change in mindset:

*As we went on we came to see that maybe we had to change. We had to reshape the contents so they looked like an*

*online course, not just an online repository of contents. Online learning started with other projects; the difference that was brought by PHEA ETI was in shaping our courses to go online. The constellation of migrating from Blackboard to another LMS was not copying and pasting, but making sure the contents were relevant.*

Once the initial training process and uploading of courses onto Moodle had got into full swing, the CVL realized that post-training support was also essential.

Haule elaborates:

*Sometimes instructors were not able to catch everything in the training. Sometimes they need support outside of the classroom. We created presentations, as well as Moodle course manuals: one for staff, one for students, and another for technical administrators.*

In addition, the CVL established two dedicated phone lines, and an e-mail address, on which staff could contact them for Moodle support.

And these support mechanisms were much appreciated by the academics, among them Dr Mgina. As he explained, it was very useful always being able to call upon CVL staff for help: 'We get encouragement from the CVL; if we have a problem we have all the contact details of the staff.' He praised the range and flexibility of the support offered – whether it was with a specific issue, a general system problem or just a case of forgetting how to do something.

The training that occurred as part of the PHEA ETI has seen staff empowered, as they actively seek to increase their knowledge and skills. Munaku emphasizes the change in attitude of academic staff when it comes to online learning: 'At least now, it is at a point where you even get requests from academic staff – this was rarely seen before. Academic staff even walk from their offices to the Moodle support room looking for support staff.' And Alex Mbyalu of the CVL, who was also involved in the Moodle training, is at pains to highlight the level of staff commitment that such actions display. He notes, 'I just attended to a certain professor. For him to move from his office to go and seek someone shows he is very serious.'

Another significant benefit of the Moodle migration was the introduction of CVL and UDSM staff to Poodle – portable Moodle that does not require Internet connectivity. Poodle is an offline version of Moodle that runs off a flash stick connected to a computing device via a USB port, or installed on an internal hard drive. In a country where electricity cuts are common and Internet access is thus unstable, this functionality added great value.

Saganda summarizes the benefit for the university from deploying Poodle:

*Before the PHEA ETI, we didn't know it was possible to have a Moodle system and work with it on your hard disc. It was a great experience, because in the past we used to train instructors only when they were online and connected to the Internet, which most of the time is difficult because of power cuts and other setbacks.*

Using Poodle has now become an essential component of CVL's Moodle training, as it allows instructors the freedom to work on their courses regardless of Internet connectivity.

In terms of the PHEA ETI training, Poodle was of particular use when the CVL team travelled to Zanzibar to train instructors at the UDSM Institute of Marine Science. Saganda describes how Poodle came to the rescue:

*From the first day we had no Internet connection – it was a problem. On the second day we remembered: 'Wow, we have Poodle!' We installed it on the computers in the lab and started doing our training – we just backed up our course from Poodle and we put it on the system, and there you go.*

For a university such as UDSM, which has seen student numbers rise exponentially, moving towards blended

learning has had immediate practical benefits when it comes to managing large classes. When Dr Mgina was an undergraduate at UDSM in the 1990s, there were about 25 students taking Organic Chemistry 1. Now he is lecturer of this course, which boasts about 500 students. He says: ‘Sometimes even managing the classes in a classic way is quite difficult. The LMS helps me to issue many assignments without worrying about the marking. Students can answer as many questions as they like, so they can practise.’

Respicius Shumbusho Damian, a lecturer in the Department of Political Science and Public Administration, has also found Moodle useful in managing large classes. Along with Dr Mgina, he is one of UDSM’s ‘Moodle champions’, and has no fewer than five courses uploaded onto the system. As some of his classes have as many as 500 students, he used to find providing them with course resources something of a challenge. Damian explains how Moodle helps him:

*Sometimes you find you cannot photocopy all the books. I find Moodle useful – I can download [a chapter or paper] from an open access repository and it is simply shared among the students – they can have access to it any time.*

Overall, one of the most important factors in the migration’s success – from its initial planning to post-training support – was the way in which the CVL team viewed the exercise in terms of processes, rather than outcomes. Key to this was the focus on stakeholder engagement. The approach of bringing the end users of the LMS on board was a deliberate strategy. According to Munaku:

*It is possible to have a technical person, and tell him to sit at the back end of his computer, converting courses from one LMS to the other. Our worry was that this approach would not work in terms of enabling the staff to use the new system. The process itself of involving them has seen a lot of success. Involving the stakeholders is a thing of beauty.*

The CVL’s Alex Mbyalu, on the effect that the PHEA ETI has had on the culture of professional development and training at UDSM:

*The PHEA ETI has resulted in the formation of an institutional process where training is concerned. Now there are weekly Moodle training sessions for people who are interested. Initially, this was not there. That is now built into the culture.*

*Probably in the future the culture will be training on a daily basis. If the demand is huge, we can schedule a one-hour session every day.*

## Development of animations for online courses

Project 2 consisted of developing animations and other multimedia for inclusion in online courses. Initially, this was piloted in computer science courses, and the plan was to introduce multimedia into eight courses. The idea of incorporating this project into the PHEA ETI was a direct response to student needs. According to Munaku, ‘We observed that students were struggling in the sense that sometimes there are limited resources. We felt the challenge: the students don’t get reference materials and at some point they fail to grasp the concepts.’

As with Project 1, training to capacitate staff was an integral part of the process. Training occurred both in-house and in Nairobi. One of the effects of the ETI was that it created a culture of a cascading approach to ensure as many staff members as possible received training in the skills required for Project 2. Saganda elaborates on this approach:

*There was capacity building in terms of training selected instructors in instructional design. More than three times, experts from the PHEA ETI came here to do training of one to two weeks. So from the knowledge and the skills we gained through the workshops, we were able to train other academic staff. And sometimes we used the academic staff to impart skills to their fellows.*

Throughout the process, the technical and multimedia team at the CVL worked closely with the academic staff. According to Saganda, this was a useful approach. He explains that the CVL staff engaged in dialogue with the academics, getting to understand a bit about each course, offering advice, and getting the opinions of the academics ‘on how and where to include the animations’.

The interest and uptake by academics was such that, after the success of phase one of the project (adding animations to eight courses), a second phase was started, aiming to enhance a further five courses. Animations, combined with text, were converted into .exe files and burnt onto CDs. They were also uploaded onto Moodle and embedded within the relevant courses. As Saganda explains, this dual availability means that if students misplace their CDs, ‘they can go onto the LMS and download it and install it onto their local machines’.

As with Project 1, the CVL staff ensured that they provided information to the students on how to use the course material, taking the needs of this group of stakeholders into account. Instructions were uploaded onto Moodle, and a manual was also included on the CD about how to install the applications.

The project of creating the animations also served an important pedagogical function. As Saganda explains: ‘Some of the animations were self-explanatory, so students could do experiments and get feedback instantly.’ Thus, the students were able to engage in self-learning to a greater extent than if they were depending only on lectures from an instructor. In addition, according to Saganda, students were able to gain insight into difficult subject areas.

Head of the multimedia centre Bugota Saganda, on the impact of Project 2 at UDSM:  
*Within the university it created awareness and the knowledge that it is possible to create animations. At first it was very difficult to tell somebody that such work could be done, but if people can see it, it is very easy to say that it is possible.*

Mtebe noted that, during the process of training and course development, many lecturers were struggling to develop their offerings, owing to unreliable resources. The CVL realized that taking advantage of the many OER on offer would go some way towards solving this problem. However, the technical staff initially found it difficult to source OER, given that they were working in subject areas they were not familiar with. Saide stepped in and provided training for CVL staff on where to access OER in different disciplines and how to incorporate them in local courses – knowledge that was subsequently passed along to the academics themselves.

Saganda is positive about the impact the PHEA ETI has had in terms of exposing staff to OER:

*From the PHEA ETI, we learned about the use of OER, which we also think should be part and parcel of training. Whenever we train instructors, we plan to introduce them to the use of OER to improve their courses.*

While Project 2 focused on creating animations for computer science courses, the awareness of the availability of OER as teaching tools also spread beyond the project’s original scope to other faculties. In the Chemistry department, Dr Mgina is an avid user of animations sourced from OER repositories:

*Most of the animations I have are in biochemistry and organic chemistry: for example, chemical reactions and mechanisms. While I am looking for materials, I am also learning myself. I’ve managed to find very, very good animations that help me to help the students understand. Hence, it makes my teaching easier.*

Several lecturers felt that skills they obtained during the Moodle and OER training were transferable to their teaching of other courses – even those that are not online. Andrew Kaswa, an assistant lecturer in mechanical and industrial engineering, is one of those people:

*We were exposed to a lot of free resources online. A lot of people were not aware of these; it's helped me a lot to prepare courses, even those which I am not teaching via Moodle. Because of Moodle and the training via the CVL, they gave us all these resources where we could find books and animations.*

Head of the multimedia centre Bugota Saganda, on the effect the PHEA ETI has had on the centre:  
*For the CVL, the PHEA ETI project has created a lot of benefits because we learned a lot. Some of the technology, we wouldn't know, if it weren't for Project 2. We were forced to learn new things in order to make the project work, so we benefited.*

## **Towards an e-learning policy**

One project that was added to UDSM's PHEA ETI at a later stage was the development of an e-learning policy. The initial goal of the policy, according to Munaku, was to 'benchmark the lessons learned', which could be used as inputs into the policy at a later date.

However, as a result of consultation with the PHEA ETI team, the CVL realized the importance of embarking on formulating an actual policy. It is crucial for the future of e-learning at UDSM that guidelines, best practices and directives are formally codified. This will enable technical staff, academics and management to 'be on the same page' when it comes to growing the university's delivery of online courses.

The current UDSM e-learning policy has been revised from its initial draft, but is still awaiting the approval of management. The CVL has had to make compromises on what it believes to be best practice in order to bring all stakeholders on board. Topics that form part of the e-learning policy include: how to use educational technologies; content creation and development; how to ensure staff and students use the technologies; how to motivate lecturers to create high-quality content for the LMS; and how to recognize and reward the efforts of technology champions.

One sticking point, which has not made it into the current draft, is the promotion of OER. In its initial draft, the policy advocated the use of OER. However, as Munaku explains, 'when we presented it to the top management – deans and directors – it was felt that the use of OER contradicts the UDSM copyright and ICT policy'. Therefore, they were advised to omit advocating OER from the e-learning policy. However, in the most recent draft of the policy, management has allowed that individual lecturers who choose to publish their courses as OER – through, for example, Creative Commons licensing – should be free to do so, although the practice will not be adopted at an institutional level.

Mtebe believes that he is witnessing a softening of attitudes, as people's perceptions change with time and a growing awareness of technology. He suggests that the attendance of top UDSM management at the AVU conference in November, 2013, had an influence on this shift in mindset.

Says Mtebe:

*There were a lot of people talking about OER [at the AVU conference]. When I met the management in December, there were changes in terms of perceptions. They are happy to adopt OER, although not to share their own. But now the parameters are changing. In my opinion, I'm sure it's reaching a point where things will be okay.*

Regarding the policy in general, Munaku feels that it is 'high time to push the e-learning policy'. When it comes to issues such as motivating and rewarding staff for using Moodle, he is clear that this requires an official policy to come into effect, arguing that rewarding staff is not only an issue for management but also 'an issue of policy'.



The leader of Project 2, Joel Mtebe, presenting at the AVU conference

As he explains: ‘Even if I were given a management position, it’s difficult for me to say “I recognize these efforts”, if there is no supporting environment.’

While the final policy still needs to be signed off before it is implemented, Munaku is positive about the progress made so far, as he believes it is an instrument that will assist in creating an environment that will sustain e-learning programmes. ‘At least we now have the basics,’ he says. ‘Now what we need to do is try to revise it based on current developments and try to push it.’

### **UDSM e-learning newsletter**

One of the unexpected results of the PHEA ETI at UDSM was the advent of the e-learning newsletter, produced by the CVL. The newsletter was not part of the initial design of the ETI, but emerged at a later stage. Munaku explains the thought process behind it: ‘During the course of the project we said, “Wow, things are happening! Is there any way we can try to publicize this?” The idea of a newsletter came in, but we didn’t know how to go about it.’

Initially, the PHEA ETI steering committee, chaired by the principal of the college, was dubious about the idea of producing a newsletter, as it was felt that the CVL staff did not possess the necessary writing and editing expertise. However, the CVL forged ahead with the project, sourcing writers and designers, and came up with the first newsletter. The steering committee was presented with a *fait accompli*, at which point they realized a credible product had been produced. Subsequently, two more issues of the newsletter have been published, and management has agreed to think about how to sustain the publication post-PHEA ETI.

The newsletter, which in its latest edition (April 2013) ran to 32 pages, showcases the CVL’s achievements within and outside the university, such as the hosting of training sessions and the implementation of projects. It also serves an informational function, including features on how to log in to Moodle and how to use Poodle, for example. And the e-learning newsletter has brought the CVL much publicity and exposure – both within the UDSM campuses and beyond.

In addition to being distributed across the UDSM campuses, the e-learning newsletter is distributed to other universities, and to the heads of government ministries. It is available for download from the CVL website at <http://cvl.udsm.ac.tz>.

The newsletter’s widespread distribution initially caused some problems, owing to the restrictive nature of Tanzania’s media regulatory environment. All publications must be registered with the Ministry of Information, Sports and Culture, a fact that the CVL team did not realize. The UDSM e-learning newsletter came to the attention of the ministry when it was sent a copy, and officials promptly wrote to the vice-chancellor of the university informing him that the newsletter was not authorized. This matter was resolved when the university signed its approval of the newsletter and the correct documentation was submitted to the ministry.

### **Consulting work**

The CVL derives a major proportion of its income from external sources, including donor funding, running short courses open to the public, and consulting to both private industry and the public sector. The publicity generated by the newsletter, itself made possible by the PHEA ETI, has aided greatly in securing more such work.

The centre has received several contracts from the Ministry of Education and other public institutions, according to Munaku. This includes a project where staff were involved in creating content for secondary schools and teachers’ colleges in subjects including physics, chemistry, mathematics and biology. Munaku has no doubt as to what has enabled the CVL to win such contracts, saying, ‘We have done things the ministry can see documented in the newsletter.’

In addition to its consulting work, the CVL runs a number of professional development programmes, in the form of short courses, for people from industry. Munaku elaborates on the future opportunities such external work provides.

*We can see a big opportunity, not only within our university, but outside. We get a lot of requests to assist other universities. And the banking industry also wants to use e-learning to teach their staff. We think if we can strengthen our CVL, we stand a chance of being able to help others as well. So we can see a multiplication effect: if we can publicize ourselves, we can get a lot of paying jobs.*

Saganda is also mindful of the need for his unit to strengthen its external reach. The multimedia section is planning to create courses – not only for the university, but also for the community, with ‘demo courses so even secondary school teachers who need help can come to the CVL’.

Next on the horizon is the CVL’s probable involvement in the upcoming state-run Commission of Science and Technology (COSTECH) project. Munaku again references the newsletter, which he often uses as a calling card, as an explanation for how this opportunity arose. ‘As far as COSTECH is concerned, when they saw the newsletter, they said “Wow! We are about to advertise the tender, but whoever gets that work should work closely with the CVL.”’

## TRIBUTE TO THE LATE DR HASHIM TWAAKYONDO

The successes achieved by the CVL team during the course of the PHEA ETI cannot be noted without mention of the late Dr Hashim Twaakyondo, who passed away unexpectedly in October, 2013. He headed the CVL from its inception until 2012, when he had served the maximum limit of two terms as director. However, he continued to provide support to the centre after this time.



Dr Hashim Twaakyondo

Dr Kissaka was of the view that Dr Twaakyondo laid the foundation for the work he carries out at the CVL today.

*He was like the cornerstone of the CVL, so I've just come in to continue. Many leaders, when they finish their term, don't like to be associated with their previous unit, but it was different for him. He was ready to participate in many ongoing activities of the centre, although he had finished his term. I think that was very good.*

Munaku also praised the former director’s leadership. *He was a person who had energy to push things to happen; he had that character. Therefore, most of the things that happened were due to his pushing for them. You can have a project and you can have funds, but it can fail to deliver.*

Clearly, it was in no small part due to Dr Twaakyondo’s efforts that this was not the fate of the PHEA ETI at UDSM.

The influence that Dr Twaakyondo had on the professionalism and collegiality of the CVL is evident in both the work the CVL continues to produce today

and the way in which the staff members function as a unit. Saganda recalled the inclusive nature of Dr Twakyoondo's leadership style:

*He really managed to make the CVL staff who work here live as a family. I can remember that during his term of leadership we didn't have divisions: we worked as a team. Even during the PHEA ETI, we had regular meetings to update each other on what was happening. There was an emphasis each time to make sure everyone participated. If there is a cake, everyone shares the cake, everyone gets a piece of the cake.*

The Saide PHEA ETI support team expressed sincere condolences to the staff of the CVL and the extended UDSM community on this very sad event:

*We have been fortunate to work with Dr Twaakyoondo over the past several years through the PHEA ETI project at UDSM. His contributions to the project were substantial, and we appreciated his calm, systematic, and thorough approach to the project activities.*

*As you are aware, the UDSM PHEA ETI team are currently wrapping up this five-year project with Saide. In fact, this collaboration was so successful that we had hoped to work together on future projects in Tanzania. In his honour, we will work together to bring the PHEA ETI project to a successful conclusion. We will all miss Dr Twaakyoondo's valuable personal presence and considerable expertise.*

## CHALLENGES AND FUTURE PLANS FOR EDUCATIONAL TECHNOLOGY AT UDSM

The adoption of e-learning at UDSM is not without its challenges. From an infrastructure perspective, an erratic power supply and the lack of stable Internet access continue to hamper efforts to employ blended learning. This is a situation that frustrates Crispin Mwakajinga, a third-year BSc Computer Science student. 'When the power is off, like now, you cannot access the wireless Internet. It's the biggest problem I face in my life!'

The unreliable power supply is equally frustrating for the lecturers. Dr Mgina explains the impact this can have on his online assessment.

*When I decide to set a question, I say that students must do it between this date and that date, and that the questions have to be answered within 30 minutes. I try to do this and then the power shuts down, so I try to circumvent this problem by allowing up to three attempts and then I pick the one that has been done for 30 minutes. I normally pick the best attempt.*

As well as infrastructure challenges, there are several specific issues that need to be tackled, such as the problem that UDSM does not yet differentiate between its online and face-to-face programmes in terms of fees. As Dr Kissaka explains:

*For this year [2013/14] the university more than tripled the fees, so a lot of applicants who were ready to join our [three online] programmes had to pull out, because they could not raise enough money. I know the university is advocating online learning to increase involvement. So fees for online programmes should be somewhat cheaper than conventional programmes so they attract more students.*

Another challenge is working on quality assurance of UDSM's online offerings, in tandem with the university's Quality Assurance Bureau (QAB). Munaku explains that the unit did not have capacity in e-learning issues, being qualified in the quality assurance of conventional programmes: 'For someone to ensure the quality of online courses, he should know the ABCs of such courses.'

To tackle this problem, the CVL requested assistance from the PHEA ETI team. Together with the QAB, the CVL hosted a joint workshop on quality assurance in online learning facilitated by the Saide support team. A pilot programme was implemented to test online evaluation, and Munaku asserts that it was successful 'to some extent'.



Members of the UDSM Quality Assurance Bureau and CVL with the Saide team at the Quality Assurance Workshop, August, 2011

However, in the second half of 2012, there were changes in leadership at UDSM, including that of the QAB. According to Munaku, the bureau's new leadership first had to get to grips with core issues such as conducting quality assurance for UDSM's face-to-face teaching, which services the vast majority of students (about 20,000). Munaku is upfront about the fact that there is still much work to be done: 'That is the biggest area in which we have not achieved much: the quality assurance. We have yet to achieve what we want to and we are still lagging behind. This is now our current priority.'

Another item on the CVL's agenda for 2014 is to integrate Moodle with ARIS, the academic and registration information system, so that students have a common password and access the same system to register, log in to Moodle, and access their results. This is likely to be championed by the new deputy director of CVL, Dr Juma Lunga, who is an ICT integration specialist.

Dr Kissaka is clear that the CVL needs to prioritize its immediate focus areas. 'We are thinking of a lot of things to implement, but we are now deciding that maybe we should start with those that we have the resources for first.'

Therefore, one of the most important plans for the future is continuing to build upon the platform provided by the PHEA ETI. Munaku states that the aim is to create a supportive environment for students 'so that we do not lose them at the end of the project'. He explains:

*We want to try to sustain the achievement that happened as part of the PHEA ETI. That the CVL has instituted both phone and e-mail support for UDSM's Moodle users bodes well for this endeavour. At the same time, the centre is aiming for the continuous training of new users of Moodle, as well as to continue training lecturers in instructional design and the use of OER.*

## KEY LESSONS LEARNED

**Auditing the system:** The thoroughness of the CVL's initial audit of the Blackboard courses meant staff knew where they stood when it came to migrating to Moodle, and this is a practice that they plan to implement. Munaku

reflected that there was a need to perform regular scheduled audits on the LMS to make sure that the systems are cleaned, and to separate core courses from the dummy courses. This will also assist in ascertaining realistic figures regarding active courses and participants.

**Procurement:** According to Dr Kissaka, one of the major lessons the CVL learned during the process of the PHEA ETI was about procurement. He emphasizes the importance of accurate specifications in terms of putting out tenders for equipment in Tanzania. He has witnessed a number of UDSM departments taking delivery of very poor equipment because of poor specifications. The CVL has the experience and expertise to support all UDSM departments and units in providing these technical specifications.

**Learning from other institutions:** A key aspect of the PHEA ETI was the opportunity it afforded participants from different universities to network and learn from one another. This opportunity came about during the annual inter-institutional gathering in Johannesburg by all project leaders across the seven participating higher education institutions. Munaku described the benefits this brought about with respect to sharing experiences, which resulted in reflecting on and re-evaluating one's own institutional project progress and learning from the experiences at the other institutions.

## CONCLUSION

Although UDSM had engaged with e-learning prior to the PHEA ETI, the initiative spurred its staff, particularly those at the CVL, to new heights and more meaningful engagement with content creation and the use and management of their LMS. The seeds of online education had already been planted, but the PHEA ETI provided a nurturing environment in which the use of educational technology could grow and flourish. This was reflected in the successes enjoyed by Project 1 and Project 2.

One of the most far-reaching benefits of the PHEA ETI at UDSM is the publicity generated by and for the CVL, driven largely by its initiative of producing and publishing the UDSM e-learning newsletter.

In turn, the unit has grown in stature and recognition, both internal and external. While there are ongoing challenges to be overcome, UDSM appears well poised to continue to expand on its e-learning activities – within the university itself and for the benefit of the wider community.

The CVL's Mulembwa Munaku on the space the CVL has carved out for itself within the university.  
*First the centre has to make an effort to convince management about a certain project, but once they are convinced, we have their full support. The processes are well defined: we have our own meetings, the college meetings, the dean's committee, and then the senate. And we are allowed to go to all units when it comes to creating awareness and implementing projects. So it's up to us to stand up and shout!*

Systems Administrator Oscar Mashauri on the enduring impact of the PHEA ETI at UDSM:  
*Moodle became effective due to the PHEA ETI, so now a lot of students are using the system. It was the PHEA ETI that brought a lot of change. In spite of the fact that the PHEA ETI has ended, we are still continuing – we have gained a lot more knowledge, and we still use that to develop courses.*

CVL Director Dr Kissaka on the centre's ongoing goals. *We just have to continue from where we have ended the PHEA ETI, so it's not like we're starting from scratch: we are starting from a certain level. Our goal is to make sure we use the LMS as much as possible in our educational programmes and this is even part of the University Mission 2061 [the 50-year plan for UDSM, which celebrated its 50th anniversary in 2011] – to increase enrolment through the use of e-learning; that is one of the big pillars. We are part of the ICT development and we have a big role to play.*

The CVL's Mulembwa Munaku on the future growth of the CVL: *Our vision is at some point we want the CVL to be the first institution that offers quality online programmes on our campus and to the bigger community. That is the thinking behind us.*



The 'mdegree' tree is a striking natural feature of the UDSM campus and, until recently, all students had to queue under the tree to register – meaning that everyone who graduated from UDSM had spent their time under the mdegree tree.



Members of the UDSM CVL team: Angelina Misso (assistant lecturer), Hawas Haule (systems administrator), Amina Kiluwasha (senior systems administrator), Sophie Mgaiwa (principal systems analyst), Bugota Saganda (systems administrator), Mussa Kissaka (director, CVL), Mulembwa Munaku (assistant lecturer) and Alex Mbyalu (systems administrator)

Cover Photo (bottom left): The 'academic bridge' at UDSM is the link between the residential halls and the rest of campus: students need to cross the bridge each morning to attend lectures and access the academic facilities, such as the library.

## ABBREVIATIONS AND ACRONYMS

<b>.exe</b>	executable
<b>AVU</b>	African Virtual University
<b>CD</b>	Compact Disc
<b>CoICT</b>	College of Information and Communications Technology
<b>COSTECH</b>	Commission for Science and Technology
<b>CVL</b>	Centre for Virtual Learning
<b>ETI</b>	Educational Technology Initiative
<b>ICT</b>	Information and Communication Technology
<b>LMS</b>	Learning Management System
<b>OER</b>	Open Educational Resource(s)
<b>PHEA</b>	Partnership for Higher Education in Africa
<b>Poodle</b>	Portable Moodle
<b>Saide</b>	South African Institute for Distance Education
<b>UDSM</b>	University of Dar es Salaam
<b>USB</b>	Universal Serial Bus



## Partnership for Higher Education in Africa



### Published by the South African Institute for Distance Education (Saide)

14th Floor  
Rennie House  
9 Ameshof Street  
Braamfontein  
Johannesburg  
Tel: + 27 11 403 2813  
[www.saide.org.za](http://www.saide.org.za)  
[info@saide.org.za](mailto:info@saide.org.za)

©2014 Saide



Creative Commons BY 3.0 License (CC BY 3.0).

ISBN: 978-0-620-60353-9

Copy editor: Jacquie Withers  
Design and layout: Natalie van der Walt  
Photography: Brenda Mallinson, Theresa Mallinson  
and Oscar Mashauri

The Partnership for Higher Education in Africa (PHEA) was a joint project of the Carnegie Corporation of New York, the Ford Foundation, the John D. and Catherine T. MacArthur Foundation, the Rockefeller Foundation, the William and Flora Hewlett Foundation, the Andrew W. Mellon Foundation, and the Kresge Foundation.

The following higher education institutions participated in the PHEA Educational Technology Initiative (ETI):

Catholic University of Mozambique  
Kenyatta University, Kenya  
Makerere University, Uganda  
University of Dar es Salaam, Tanzania  
University of Education Winneba, Ghana  
University of Ibadan, Nigeria  
University of Jos, Nigeria