The COMESA E-learning Project – Sharing point for sustainable collaborative projects

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ABSTRACT

The COMESA, through its mission statement seeks to “provide excellent technical services to COMESA in order to facilitate the region’s sustained development through economic integration”. The need for an e-learning platform stemmed from the desire of “making more available and accessible learning materials from various COMESA programmes to COMESA Member States and all stakeholders and capacity-building in various COMESA programmes for their effective implementation” and they thus contracted the Virtual Centre for Innovative Learning Technologies (VCILT) to develop an e-learning platform for COMESA which would allow their staff responsible for various sectors to update the information they are in charge of.

The VCILT is currently the only centre in Mauritius actively engaged in parallel into teaching, research, consultancy and administration of e-education/e-learning/educational technology related activities. The e-learning strategy devised by the VCILT consisted of four phases: the first phase of the project consisted in installing the e-learning platform and training of the system administrator. The second phase of the project focused on the training of the trainers who would be eventually responsible for training future users. In the third phase, the trainers were given a taste of online training by interacting online on the discussion forums and in the fourth phase representatives from member states were invited to participate in an e-learning workshop so as to discover the COMESA e-learning platform and to suggest possible avenues for the utilisation and sustainability of the platform within the member states.

This paper presents collaborative ventures and potentials of e-learning as targeted by the COMESA secretariat in Lusaka for its member states, providing an evaluation of how the e-learning platform has been put to use, how the staff were trained and how the collaborative tools available on the e-learning platform augmented the objectives of COMESA to build capacity in computer-mediated communication and collaboration.
Keywords: Virtual learning environments, learning processes, electronic resources, collaborative tools, computer-mediated communications, international collaborations.

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1 INTRODUCTION
The Common Market for Eastern and Southern Africa (COMESA) regroups 19 member states, including Mauritius with total population base of around 400 million. Through the concept of a common market, the COMESA envisions itself as a body that has many benefits for its members on the economic front achievable through mobility of its resources and removal of barriers to trade among Member States for more efficient production of goods and services as well as allocation of its resources towards this production. Gwara¹ (2010), an independent economic journalist, mentions that “one of the major challenges facing the COMESA region at the moment is the provision of up to date, reliable and accurate information which is of use and of benefit to the business community. For liberalised market economies to function effectively and efficiently, the availability of market information is essential. But a greater challenge is how to position itself so as to gain from the global digital economy that is expected to be the norm in the 21st century.” COMESA thus realized the importance of disseminating timely information more efficiently but also recognized the need for broadening access to education to meet the demands for a skilled workforce. COMESA secretariat thus attempted to respond to this capacity-building challenge by the setting up of an e-learning platform with the following objectives:

I. To have a reliable and user friendly Learning Content Management System for the development and implementation of online courses and resources.

II. To have a cadre of education professionals trained in the use of the Learning Content Management System to create e-learning course materials and use the online platform to support distance learners.

III. To provide an online environment that gave access to distance learning course materials and where distance learners could collaborate and build learning communities

¹Clive Tinashe Gwara (2010), COMESA, Harnessing Information Communication Technologies for rural development. PDF accessed on 12th Feb 2011
To be able to implement the e-learning platform effectively and efficiently, the Virtual Centre for Innovative Learning Technologies (VCILT), to which the project was awarded, carried out an in-depth study into the needs of the COMESA secretariat. The VCILT, as part of a research and development unit into open and online learning at the University of Mauritius, thus proposed a learning design approach that took into account the COMESA’s strategic direction and proposed training solutions that were based on sound socio-constructivist approaches that would enhance collaboration and help to develop networks and links regionally and internationally. The choice of the e-learning platform will now be discussed.

2 VIRTUAL LEARNING ENVIRONMENT-MOODLE
Moodle (abbreviation for Modular Object-Oriented Dynamic Learning Environment) is a free and open-source e-learning software platform, also known as a Course Management System, Learning Content Management System, or Virtual Learning Environment (VLE). A VLE is software designed to facilitate learning over the internet. It runs on a web server hosted by an educational institution (in our case, the server at the COMESA Secretariat in Lusaka, Zambia) and is accessed by learners using their internet browsers (Internet explorer, Firefox, Netscape etc). The VLE would thus be able to display text, images, sound, animations and videos to its users just as in any website, however with the additional facility of channeling students to their particular courses through login restrictions, present material at sequenced stages, and monitor who has accessed which resource or activity, how many times and when. Most Virtual Learning Environments also provide collaborative spaces such as forums, blogs and wikis integrated into the system where students can interact asynchronously. Synchronous communication is mostly done using separate systems such as SKYPE or WIZIQ for better managing the bandwidth and the chat system is too taxing on the server system resources. Learning management systems also allow learners to interact with the computer using simulations or online assessments with automated feedback. After evaluating the requirements for better collaboration from COMESA secretariat, the choice of MOODLE was easily endorsed. Moodle, having sophisticated tools for communication, focuses on users building their knowledge and understanding together with other learners. It should be noted, however, that it is not only the technology that should be efficient— it is very important to take into consideration the whole e-learning environment— the users, the design, development and delivery of content and assessments, feedback mechanisms and constant evaluation of the whole system. The figure 1: COMESA e-learning platform below shows the e-learning
platform as it is accessed by a new user when they type in the URL of the site in a browser: http://elearning.comesa.int

Figure 1: COMESA E-learning platform at http://elearning.comesa.int

Moodle has the added benefits of being a very intuitive and easy-to-learn VLE, requiring a not-so-steep learning curve with easy navigation systems and user-friendly layouts that allow the user to grasp and manipulate information at a glance.

Highlighted hyperlinks in textual and iconic format inform the user that these are interactive buttons and text that will provide the learner with additional information or something to download. Most of the display of Moodle is in textual format and thus very simple to follow by the not-so-techno-savvy learner. Also this format allows the educator/teacher/facilitator to explain the links very clearly so that the user knows exactly what he will obtain by clicking on a particular interactive area. There can be links to downloadable documents, images, audio files, or links to web pages such as Youtube instructional videos.

Users navigate through the categories which can be divided into the main areas that the COMESA secretariat consists of and one can then browse within the particular category to access the particular area that he or she is interested in learning about. For instance one of the courses that was developed during the training sessions was about the Eurotrace software (figure 2 below) that the department of trade at the COMESA secretariat used frequently and which required regular training sessions.
Phase one of the project thus concentrated on the needs of the Secretariat in the first place while simultaneously pre-empting about sustainability issues for future users of the platforms such as COMESA member state stakeholders. Given that the platform would be hosted and technically managed at Lusaka, would not prevent other member states to access, host and deliver other courses from their own locations. Thus it was important for us to develop a training strategy that was based on intensive training at all levels – technical staff, content providers, content users as well as at senior management level. Training was also spanned over the year to ensure continuous support for all stakeholders.

3 TRAINING OF TRAINERS STRATEGY: SITUATED LEARNING CONCEPTS

While designing the training for the COMESA e-learning platform we came across ample literature (Henderson², 2003) about e-learning initiatives that have failed for various reasons

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² Henderson, A. (2003), *The E-Learning Question and Answer Book*, Amacom, New York, NY,
such as lack of strategic direction by management and policy makers; unplanned and uncoordinated implementation strategies that are focused on computer based training (CBT) tools; institutional views of e-learning as simply another facilitation tool; and inadequate systems design that do not include the educational approach in the design, course design, or learner and facilitator systems design. We thus carefully devised training strategies that

1) Encompassed training of senior management so that they would be aware of the higher-level commitments and decisions regarding the “time-consumingness” of creating and managing online activities, intellectual property rights pertaining to online development and delivery of courses and technology management issues regarding promotion criteria related and sustaining e-learning ventures;

2) Anchored on situated learning concepts (Lave and Wenger³, 1991) whereby learning is situated and occurs by means of legitimate peripheral participation within a community of practice – In our case, trainers are learning about Moodle by participating in a Moodle course as a student. In this way, they are building a schema that includes not only how a Moodle course is developed but how the elements they will eventually include will affect learner experience such as participating on a discussion forum, downloading and uploading content, collaboratively editing a wiki, brainstorming using a mindmap etc. Also after the face-to face session, the participants were requested to follow an online module about the Principles of Computer-Mediated Communications at the University of Mauritius.

3) Centred on the learning process in contrast to being focused on the learning contents or the technology. Indeed the integration of technology in learning, needs to address the very important issue of enhancing the teaching and learning process, rather than just being seen as a new flexible delivery medium (Nichols⁴, 2003). In other words, it offers a new paradigm for learning going beyond knowledge acquisition and knowledge application to further knowledge construction through collaboration and reflexive practices.

Situated learning theory provided us with the epistemological groundings for developing the training session. Building upon research and theories that computer-enhanced learning

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environments can effectively bring the real-world environment into the training room, Herrington and Oliver (1995) propose a model of instruction based on situated learning to be used in the design of learning environments. They suggest that the learning environment should be 1) situated in an authentic context; 2) provide authentic activities; 3) provide access to expert performances; 4) consider multiple perspectives and roles 5) support collaborative construction of knowledge 6) provide coaching and scaffolding at critical times 7) promote reflection to enable abstractions to be formed 8) promote articulation to enable tacit knowledge to be made explicit. 9) provide for integrated assessment of learning within the tasks.

Herrington and Oliver further describe the situated learning environment as allowing “the learner to collaborate, reflect, and to articulate. As the learner collaborates with other members of the environment, they are able to establish their identity. The asynchronous nature of the online environment is conducive for reflection. As the learner interacts with others, they have the opportunity to articulate, negotiate and defend their knowledge. Making their tacit knowledge explicit is very important in the process of learning and legitimate peripheral participation. Coaching at critical times, and scaffolding of support keeps learners focused and organized. “

Concurrently, mapping this model onto our training, and with a concern for cultural aspects, we proposed the following schema for the training of trainers:

<table>
<thead>
<tr>
<th>Situated learning concepts</th>
<th>Applied to training at COMESA secretariat</th>
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<tbody>
<tr>
<td>Authentic tasks</td>
<td>The learning activities involve tasks that reflect the way in which the knowledge will be used in real life settings – At the end of the training on the Moodle platform, the COMESA participants were required to create an online course of their choice. They were provided with guidance as to tools and techniques for searching of appropriate information.</td>
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<tr>
<td>Opportunities for collaboration</td>
<td>Participants were grouped and had to create learning objectives for their courses with the collaboration of the whole group. Brainstorming sessions involved discussions about which course would be the most appropriate and descriptions of target audiences.</td>
</tr>
<tr>
<td>Learner-centred</td>
<td>Activities set focused on learner support and how COMESA secretariat</td>
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environments would be able to support problem-based learning tasks. The requirements of potential learners were identified and the issue of bandwidth and digital divides was raised.

Engaging attention When creating their content, the participants had to focus on case studies and interesting complex problems and activities that promoted reflective practices rather than decontextualised theory.

Meaningful assessments Constructive learning strategies were favoured over behavioural and cognitive learning strategies activities whereby higher-order thinking was promoted for the creation of polished products rather than simple drafts. Participants were expected to present a sample online course at the end of the workshop as a demonstration of acquired competencies. Assessment of this training session was based on presentations of their own Moodle spaces (making tacit knowledge explicit) where the participants had uploaded contents and devised activities based on situated learning theory. This enabled all the other participants to voice out their appreciation and also request for further information. Assessment was yet another learning opportunity.

Nearing the end of the training session, the participants were requested to fill in an evaluation sheet describing their appreciation of the workshop and the following tables describe the feedback received:

**Reflective Practices**

The interactions between the participants was average and one reason for this might be due to the fact that they came from different departments, were conscious of professional hierarchies and had different IT skills levels and this might have proven to be a barrier to communications between the participants for explaining ideas to each other.

![Figure 4: Results on reflective practices](image-url)
Collaborative Efforts

The workshop involved active participation from all and this entailed that participants would acquire the different skills, practice these and eventually demonstrate to everyone present. Efforts were made so that everyone would feel empowered to present the work done throughout the workshop and particularly through collaboration amongst the participants.

![Collaborative Efforts graph]

What can be inferred from these results is that the learning design should focus on levelling the playing ground through scaffolding and encouraging collaborative group activities. McKinley⁶ suggests that we can achieve “cultural congruence by providing culturally relevant curriculum and materials, using constructivist approaches, providing meaningful and challenging instruction, and responding to students' traits and needs.” In her paper, she surveyed teaching strategies as applied to African-American students. They used cooperative group instruction strategies, set and maintained high standards and clear mastery expectations, and set the stage for scaffolding instruction to meet students' prior learning through careful attention to contextual features and the environment. These findings reflect situated learning concepts as instrumental to increasing collaboration and empowering “shy” learners.

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4 SUSTAINABLE COLLABORATIVE VENTURES

For the last session, and in true situated learning style, the participants were requested to chart the way forward. The online training sessions were discussed along with the contents for the next face-to-face session.

Participants requested for more time to explore the Moodle environment and some online workshops on animating presentations were requested. This would be catered for during the online sessions through hands-on development of the proposed courses.

The online workshop would also enable the participants to experience firsthand e-tutoring and the different constraints that might arise such as time management and connection speeds and general e-tutoring techniques.

Specifically, online training consisted of:

1. Weekly chat sessions based on negotiated contents
2. Reading materials to be discussed and summarised on the discussion forum.
3. Role plays and development of online activities.
4. Building of content in Moodle (Each participant will continue constructing their course on COMESA ELearning platform)
5. Discussions on quality aspects.

Figure 6: Mindmap of how the participants saw the continuity of the training sessions.
Interestingly, similar discussions took place during fourth phase of the training session with participants from thirteen different COMESA member states namely, Comoros, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, the Seychelles, Sudan, Swaziland, Uganda, Zambia, Zimbabwe after they had followed the workshop at Chaminuka Lodge. The delegates from the member states additionally suggested possible ways in which the platform could be used. They raised the issue of training, higher education programmes, collaboration and sharing of information.

After a brainstorming session, the following were proposed for the utilisation of the e-learning platform:

1. COMESA could explore the possibility of integrating the platform with existing systems (e.g., Library system which is already in place at COMESA)
2. Building capacity and integrate IT skills throughout the organisation – through Lifelong Learning programmes
3. Departmental communications/ Online Committees administration
4. Common space for sharing information & knowledge such as access to committee reports and policy frameworks.
5. Research collaboration
6. Widening access to Education and Training at all levels within COMESA
7. Sensitization on specific issues of interest to the COMESA member states such as agriculture, health, literacy, ICT skills.

Manifestly, the proposals took on a much more globalised and significant stance for the use of the e-learning platform. As motivated and concerned stakeholders, the participants had raised issues pertaining to their individual member states, but also as collective African countries with their own marginalised education systems. Teferra and Greijn\(^7\) (2010) pertinently point out that “for any nation, global competitiveness and economic success depends on the existence of capacities to create, develop, consume, package and disseminate knowledge.” The advances in ICT and the explosion of knowledge, information and data are such that the digital divide between North and South are widening, but at the same time, it would be wise to harness on the best practices of the developed countries to be able to leapfrog and foster economic development in general. Use of FOSS (Free Open Source

Software) and OERs (Open educational Resources) to re-engineer courses based on socio-constructivist learning paradigms would greatly benefit African countries to develop capacity and help them to rely less on donor support. Shabani\(^8\) (2010) mentions that “African countries need to establish appropriate mechanisms to ensure that by the time donor support comes to an end, the capacities that have been built up are sustainable, and are further strengthened at both national and regional levels.” Shabani advocates examples of various academic and scholarly partnerships and online collaboration and how some of the knowledge generated at the global level has been used to develop capacities at national and regional levels. Recognising the need for further online collaboration and the need for accredited knowledge, the VCILT-UoM is all set to promote pedagogical and technological innovation in the region.

5 CONCLUSION

There is growing recognition that knowledge is the main driver of development. Any form of development, whether defined in social, human or economic terms, has become critically dependent on knowledge. Countries with the capacity to generate and assimilate knowledge, and the capability to use it to develop new forms of organization, products and services are better able to attract investors and to take advantage of new opportunities (Szirmai\(^9\), 2008). In conclusion, to better serve its learners, an e-learning organisation and in this case, the COMESA and its member states should review their operations; look anew at learning design, pedagogical strategies and the provision of support services. In addition, it should revamp its present staff development projects, and staff deployment, especially the training of online instructors, and instructional designers, and should provide a range of incentives to encourage an interest among members to collaborate and participate in DE initiatives for the benefit of their country in a globalised world.
