INTRODUCING WEB-BASED ELEARNING PLATFORM AT AN AFRICAN UNIVERSITY

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ABSTRACT:

Web-based Elearning platforms are a relatively new phenomenon in higher education settings, providing a relatively equal footing for African universities as elsewhere to jump-start using them. Coupled with availability of freely available open-sourced platforms, cost of software should not be the bottleneck towards adoption of elearning technologies. In this paper, author aims to present and discuss pertinent issues as related to success of both introducing and making good use of elearning platforms to African university settings, by using narration and discussion of author's experience as a University Webmaster and a tutor for an undergraduate class and attempts at introducing Moodle (www.moodle.org) elearning platform to both students and fellow faculty. There are more to adoption of freely available elearning software tools in African university settings than mere availability and utility of the software tools. Both technological and non-technological issues are discussed.

1. INTRODUCTION

1.1 Introducing elearning web platform

When I was a webmaster for UCLAS -- University College of Lands and Architectural Studies (now Ardhi University; Tanzania) I had the opportunity to introduce electronic learning platform to the UCLAS Community. This was both as part of enthusiasm to introduce community-based content management to the college community, so that it would be easier to solicit contributions to the university website, as well as to improve transfer of knowledge from the instructors to the instructed.

As such, it was just a matter of putting up the elearning website as part of the mandate to maintain the college website. This was done without first following the 'traditional' way of introducing things at the university, what would be called 'community entry'.

Ideally, the path that could have been followed was to float the suggestion to my immediate boss, and then to send it through "proper" channels for meetings and committees of the university, so that in the end, if the college decides to consider introducing elearning, most likely it would have formed a study team, with a budget, to learn about best way to implement the idea to the university. They would end up with a report that would hopefully be acted upon to decide if and how to introduce elearning.

Their document would have to go through university meetings and committees to approve it, so as to make it college's official policy. The official policy would thereafter be communicated to the staff for implementation, with either or both of incentives and / or coercion for action. Most likely, the college would also attach budget to the implementation of the plan.

However, this process takes time, long time, not uncommon years could pass before the final product is commissioned.

Taking the easier route, was to base the existing "mandate" of maintaining the website, and treat elearning platform as mere extension of the university website. This is without following the lengthy route of committees and approvals, but at a risk of having neither budget nor "carrot and stick" necessary for the critical mass adoption of the elearning process. This is the path that was taken, with the blessing of immediate boss, hoping that after substantial usage, there would be official policy established to cement the advantages and to iron out shortcomings of the system.

For reasons of being able to put in place the elearning platform without budget, and without lengthy official bureaucracy, the elearning website had to be put in place without request for financing from the university. Any open source software had also to be freely available, because, even if it would have cost one dollar, the procedures of purchasing anything on the name of university were again long, time consuming, especially when you add the complexity of using foreign currency, and paying online. Thus, the software had to be free, and be able to run on the university web server without much additional load.

2. IMPLEMENTATION

2.1 Server

The computer that was serving the university community as a web server was one. It was a workhorse for the university. It was doing task of many servers: it was a mail server - processing receiving and sending of emails. It dubbed also as a DNS server, that is, it enabled translation of internet text address into numbers that are used for computers to communicate to one another. It was again, DHCP server,

providing computer internet addresses for hundreds of computers in the campus. In short, it was running all the services required to provide internet to an institution.

To this computer elearning package was to be added.

They had to run on scripting language PHP and use MySQL as database, because the existing university website was based on the PHP-MySQL combination, and was more familiar with that combination, as compared to the alternatives.

A number of elearning platforms were considered, and in some cases, installed to see how they perform. The considered applications included Atutor, Moodle, Sakai, Dokeos, Claroline and many other Learning Management Systems (LMS).

These were narrowed down to Atutor and Moodle, and finally Moodle was the preferred choice.

2.2 Using the elearning platform

Having installed Moodle, the entire university community was informed of the availability of a software "similar to Blackboard" that some staff were familiar with, inviting for self-registration and use.

A few members of staff registered and prepared some teaching materials. However, only two, this author and one other staff member used it in earnest in classes we were teaching.

For students, or anyone for that matter to register in the Moodle elearning system, they need to have email address to which the password and other communications can be sent. Although there are workarounds to waive these requirements, for self-service maintenance of student accounts emails are essential.

Not all students had email address.

So using Moodle, forced the students to create their own email addresses, if they did not have one, or to make use of their email addresses if they were dormant.

Logging-in to their email and elearning accounts made the undergraduate students spend more time on computers, particularly those students who would otherwise not use computers if they could.

The students learned to submit homework on time, because they could not 'bargain' with the online system for delayed submission, as would be the case if they had submitted physical copies.

But it was the other staff that made even more effective use of elearning platform. He uploaded almost all of his teaching materials online, and students got along, eventually. They were happy using the elearning, that they asked why the instructors in other classes are not using the elearning system.

There are many other advantages of using elearning platforms that are not discussed here.

3. PRACTICAL ISSUES

Having installed Moodle, I had to provide technical support to the teaching staff and students who made use of the system. This is an area that took ample time, for both usability and troubleshooting complaints. Also, because Moodle provide the ability to add functionality as modules, feature requests also were considered.

One big issue, however, was power cuts.

Electricity would go off with or without notice, either way, the server would be out of reach because the building it was in was not supplied with generated electricity in case of outage or the network devices along the way would be without power.

This was a major problem, particularly there were entire days in which power was not supplied due to "rationing".

Because elearning was used to supplement face to face classes, the teaching sessions would go on despite unavailability of elearning, however, it impeded smooth learning, including enforcing deadlines.

Later on there were changes in mandates of who manages the college website and new wholesale changes were introduced to the website. The old elearning website remained, though, and subsequent years that other staff continued to use it, especially because he only had to update a few of his online pages. When that staff eventually left (he was from overseas), there was no one using the system, now that both the prominent users were outside the university.

In preparing for this presentation, I emailed again the entire Ardhi university community, asking for a feedback on their awareness and experience of elearning platform implementation.

Again, from a few that replied, they were aware of some elearning application, though they did not remember 'Moodle' in particular. Although they might not be using Learning Management System such as Moodle, they do use electronic communication (emails) with students in assignments, particularly for graduate classes. The biggest problems they see are the unreliable electricity, slow internet and lack of 'political will' to engage electronic teaching aids, including learning platforms. None was aware of existence, if any, of university policy on elearning, as one put it: "Ardhi University has not invested adequately in IT to even think of applying such [elearning] methods. Students likewise do not have easy access to IT facilities - considering the mass enrolment compared to the meagre resources available! Only very few students can afford having laptops/desktops! What should be done - a comprehensive IT policy should be put in place and serious investment in IT be done."

There are positive signs, though. According another staff who responded, there are plans for a Postgraduate Diploma to be offered jointly with ITC that will have elearning component, though the plans were "still at an infancy stage."

4. ELEARNING AT OTHER UNIVERSITIES

I have been outside of the Ardhi University for years now, and there may be positive development towards elearning there that I am not aware of. At the nearby University of Dar es Salaam, a number of staff have been using "Blackboard" learning management system. As a matter of fact, a number of staff from Ardhi University had been trained how to use it, during the time it was affiliated with University of Dar es Salaam. According to a University of Dar es Salam staff, he "was involved in the Technology Enhanced Independent Learning Environment (TEIL) Project which researched on the use of ICT to enhance Teaching, Learning and Research at the University of Dar es Salaam. TEIL later became Instructional Technology Research Unit (ITRU), whose role was taken later (upon institutionalization) by another unit (Centre for Virtual Learning (CVL) at the (Faculty of Informatics and Virtual Education (FIVE), which was later absorbed in what is now the School of Informatics and Communication Technologies."

Geography Department at Kenyatta University, in collaboration with University of Dar es Salaam and Makerere University, offers a Master of Science Programme in Integrated Watershed Management, making extensive use of elearning (Obando et al., 2008).

5. DISCUSSION AND CONCLUSIONS

A number of universities in Africa, more than mentioned in this article, are using elearning as a way of teaching.

Bandwidth is increasingly becoming more affordable, with the improvements in infrastructure, making deployment of elearning more feasible.

The mere availability of elearning platform in itself is not enough to guarantee use, nonetheless, if the institutional political will or awareness is not in place, particularly before implementation of elearning platform.

Insomuch as there are technological considerations for implementation of elearning, institutional arrangements need to be planned and executed as part and parcel of elearning strategy.

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