

Breaking paths together for the Public Health higher education information services in Africa and Europe

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Abstract:

The HEI-ICI project is now in its fourth year and involves cooperation between the University of Eastern Finland (UEF) and three African partners. The main aim of the project has been to develop education in health sciences. The target group is the junior faculty from the Public Health departments, library and IT centers in the partner universities. Special emphasis has been placed on developing sustainable models in the information and knowledge management systems for education and research in all these institutions. Not only have we have utilized open-source systems and software as well as open science ideology but the project has also encouraged the partners' junior professionals to actively to instigate changes in the way that their own institutions provide library and IT services e.g. implementing up-to-date technologies and workflows. This novel approach to learning and teaching is based on the concept of co-operation, collaboration and trust between all of the participating partners, its core philosophy is the full ownership by the less developed southern partner institutions. This paper and presentation describes in detail the work done in the CUHAS (the Catholic University of Health and Allied Sciences), Mwanza, Tanzania. The introduction of e-learning and its implementation in teaching and learning in the higher institutions and research centers will exert a major impact on knowledge management and dissemination and development of information systems. Currently, Public Health teachers and students at CUHAS are using the Moodle e-learning platform. The HEI-ICI project has also created new services as well as improving existing ones, particularly to adapt to the

changing habits and reading styles of our patrons e.g. the adoption of e-resources; the introduction of the KOHA integrated library system, the exploitation of social media in learning and teaching. In addition, we will describe the whole project and its results in the other participating institutions.

Keywords: libraries, development co-operation, Egypt, Finland, Kenya, Tanzania, public health, health information services

Introduction

The Finnish Ministry for Foreign Affairs initiated a new program in 2010 (Ministry of Foreign Affairs 2010, 4):

“The intention of this programme – Higher Education Institutions Institutional Cooperation Instrument (HEI ICI) - is to create a mechanism through which HEIs in Finland and developing countries can cooperate to produce institutional reforms. The projects are aimed to promote the strengthening of developing country HEIs’ administrative, methodological and pedagogical capacity, as well as to support their own development plans. Cooperation between Finnish and developing country HEIs shall be based on needs defined by the developing country HEIs, and built on the principles of mutual learning and equal partnership.”

The University of Eastern Finland (UEF) decided to apply to participate in this program. The UEF has a long history in postgraduate research and vocation-oriented training centers in Finland. Within the UEF, the Institute of Public Health and Clinical Nutrition is the most internationally oriented unit. It has an impressive history of training professionals in health sciences and medicine, and its curriculum contains a wide range of international courses and programs provided in English. From the early initial phases of project planning, the institute decided to join forces with the Library. The aim was to integrate the development of the teaching with the services provided by the library (Laitinen, Ovaska & Saarti 2013).

Fruitful collaboration between the UEF and the three partner institutions in Africa, i.e. University of Eastern Africa, Baraton, Kenya (UEAB), Catholic University of Health and Allied Sciences, Tanzania (CUHAS) and Ain Shams University, Egypt (ASU) has been established over several years and there has been an extensive exchange of expertise in the fields of higher education and research. This collaboration provided a good springboard for the partnership projects initiated, e.g. “Improving the Quality of Higher Education in Public Health Sciences 2011-2012” (HEPHS I) and “Improving the Quality of Higher Education in Public Health Sciences 2013-2015” (HEPHS II). The projects are funded by the Finnish Ministry for Foreign Affairs (FMA) and in this paper, both projects, HEPHS I and HEPHS II, will be reviewed.

In practical terms, this project aimed at building capacities and at developing human resources in the African partner institutions to allow them to be able to address the major public health challenges at the national, regional and district levels. The identification of priority programs and modules was based on a careful assessment of local needs in the public health science higher education, and the project has been implemented via full ownership by

the southern partners. The UEF is the coordinating institution. The southern partners are also involved in developing strategies, procedures and activities in higher education which will be sustained long after the end of the project. In this respect, the project adheres to the Finnish development policy, i.e. it is sustainable and it promotes full ownership by the southern partners. (Improving the Quality of Higher Education in Public Health Sciences 2011-2012, 2010)

The past two decades have witnessed a digital revolution which has impacted on the way that scientific knowledge is disseminated. In turn, this has meant that the information skills needed in academic studies, research and working life have become increasingly important (see e.g. Road to information literacy 2012). This is especially true within the health sciences, where the growth of knowledge proceeds exponentially and health care professionals need to be aware of these findings since they can save lives.

At the same time, we have seen the rise of the open science ideology with the emphasis on open learning, open data and open access. In addition, the development of new open source software has higher education institutions to implement rather sophisticated software e.g. for distance learning and digital library use. This development has been especially crucial for the developing countries: it enables them to use up-to-date digital environment when managing the knowledge needed in higher education and research. The open access movement also provides access to much of the most recent research without the barriers of the paywalls.

Last, but not least: the academic world acts globally in the ways that it exchanges ideas, creates innovations and tackles the global challenges facing humankind. Truly effective co-operation is now possible by adopting these up-to-date technologies but they are only effective if the individuals needing these tools possess the knowledge of how to utilize these. This knowledge can inspire academic communities, making them not only more effective but also able and willing to co-operate in both research and learning development.

Training the trainees – the HEI-ICI project

The project can be divided into the following steps and aims:

1. analyzing the current situation and resources in e-learning in partner institutions (need analysis and discussions with key persons in decision making) – this was done via field trips to the African partners,
2. establishing a working platform to allow web-based collaboration – this was done by creating a project-based Moodle platform which was utilized as a discussion forum and a distance learning tool for the project,
3. training junior faculty about the utilization of web-based platforms and contact teaching, modern library and IT services – this was achieved with two visits to the UEF Kuopio campus, two junior professionals from each of the African partners (academic teacher and library/IT staff),
4. implementing in-house services at the home institutions: e-learning courses, learning environments (digital and physical), library and IT services and software implementations.
5. learning to work with individuals from different cultures – north-south and south-south collaboration.

One thread that spanned the entire project was to try to identify similar interests and to conduct as much collaboration as possible. Thus we planned and produced a Moodle information literacy course during the Kuopio visit to be implemented by all the project members in their own institutions. In addition, the project involved many site visits in Finland and job-shadowing in order to learn modern library, e-learning and IT-support services. The participants were encouraged to seek sustainable solutions that could be implemented in their home institutions, thus the emphasis was on exploiting open source and open access solutions.

One important aim was to learn to work with individuals of different cultural backgrounds. Thus, the cultural programs during the visits were a great benefit to let the other participants aware of the particular problems as well as the history and culture of each of the partners and their home countries. This has been important in building trust between the partners and it made it possible to create tailor-made, sustainable solutions for each of the partners and their home institutions.

Renewing the library and IT services at the CUHAS

The Catholic University of Health and Allied Sciences (CUHAS-Bugando) is located in Mwanza, Tanzania. The vision of the University is to "become an outstanding Tanzanian Catholic University excelling in training, research, and health care; while remaining responsive to societal needs". CUHAS-Bugando, as a Constituent University College of SAUT, became operational in September 2003. It was granted a Certificate of Interim Authority (CIA) on the 28th March 2002 and a Certificate of Provisional Registration (CPR) on 27th March 2003. Since 2005, the College has been firmly established and accorded full registration status by the Tanzania Commission of Universities (TCU). The Commission at its 53rd meeting approved a request from SAUT to transform the College to a full-fledged university and granted CUHAS-Bugando a Certificate of Full Registration.

From its very inception, it was envisaged that CUHAS would be organized in faculties, institutes and directorates. In 2009/2010 it decided to evolve into a school mode and therefore four schools were established: The Weill Bugando School of Medicine (which replaced the Faculty of Medicine), the School of Pharmacy, the Archbishop Anthony Mayala School of Nursing, and the School of Public Health. The new Schools had their first intake in the Academic Year 2010/2011. The Institute of Allied Health Sciences was established within the Bugando University of Health Sciences in 2006/2007.

The University started with a modest intake of 10 MD students. Enrolment into the MD program increased gradually but is now capped at 175. In 2010/2011, the University launched three new undergraduate programs in Pharmacy, Medical Laboratory Sciences and in Nursing Education. CUHAS-Bugando now provides training for nearly 1,700 students enrolled in the undergraduate, post-graduate and paramedical programs.
(<http://www.bugando.ac.tz/discover.html>)

Since the initiation of the HEI-IC project in spring 2012 many junior members of staff have gained expertise in information technology, information literacy and automation of library systems and these have had an enormous impact on teaching & learning and project management of IT projects. It was good to learn that the three African partners did have unified core activities and they have extended their relationships via academic resources and infrastructures. In 2012, it was decided to implement a campus network infrastructure; CUHAS was able to learn from similar partners about how they had devised and implemented their local/campus networks. A star-topology fiber backbone building to building (B2B) campus structured fiber network was installed in December 2012. Thus, today it is easier to collaborate in teaching, learning and undertake major projects in a simpler way than before due to the presence of a reliable and stable network infrastructure.

The training sessions provided much practical knowledge on the use of multimedia, video streaming recording for lectures, information quality management trends & challenges and how to overcome the exponential growth of metadata. They also tackled current and future security issues as well as providing instruction on how best to use open software platforms e.g. Moodle, in enhancing teaching and learning and how to adopt Koha for library system etc.

The customization and development of Koha and Moodle to cater our requirements are still on-going efforts. Other IT-based services projects that have emerged as a result of co-operation and collaboration include the development of an electronic student information system (eSiS) and a procurement software system (EPS) which have been fully implemented using open software tools.

The IT and Library challenges that CUHAS were facing had been mostly resolved through this collaboration. CUHAS has benefitted from working with experienced university partners, and has now conducted several project self-evaluations and there is also a programme that allows some junior to visit the University of Eastern Finland.

The impact of the project in Cuhas library

It is more than ten years now, since the Catholic University of Health and Allied Science established. Initially the library was not automated and even several modern technologies for handling the library resources had not been fully utilized e.g. the cataloguing activities, the collection database. Furthermore, the university had no experience of using Moodle as e-learning management system or in utilizing different open social media tools. Since the HEIC project started in 2012, the library's services have clearly improved as a result of the experience gained through this project.

The HEI-ICI project created a better relationship between the ICT department and library. Both started to work together as one department with integrated planning of service provision. CUHAS now has access to a customized library management system (Koha), Moodle as eLearning management system and accessing of library network (Wi-Fi) via a password when the users are in library. The university has also been active in training its staff and students on how to use the eLearning possibilities and resources. For example, we have started to catalogue our books online by using the Library of Congress and British Library tools and catalogues which were used manually before.

The following improvements have been implemented in the library as a result of collaboration in this project:

- the re-organization of our library materials using similar approaches and knowledge obtained from the UEF library during the first exchange trip in order to make them accessible for our users,
- the university has increased its library online resources,
- the library has established a book bank project, to allow the student to borrow books for the whole semester after a small payment (10%) according to the price of the book. The money gathered is invested in the purchase of new books in addition to the original 21 titles,
- the library has also increased the use and awareness of relevant open access resources and moved away from reliance exclusively on the Google search engine towards more scientific resources available,
- the library has learned how to create a library blog and use it as open source resource for our users,
- the library has extended its orientation system; previously it was only one day but it now lasts for one week to enable the students to be familiar with the library services,
- the library has started to share experience with other institutions especially in cataloguing of library material by using online cataloguing

Other experiences have been gathered from this project e.g. the different ways of teaching and learning, how best to use multimedia in teaching and learning, novel teaching techniques and the digitization of printed resources.

Conclusions

In conclusion, this novel approach to learning and teaching has been based on the concept of co-operation, collaboration and trust between all of the participating partners; its foundation is the full ownership by the less developed southern partner institutions. By empowering the academic staff of these institutions, one can ensure that the progress can be sustained, even after the financial support for this kind of project comes to an end. This present project demonstrated that this type of approach is feasible, but one must allocate enough time for negotiations and meetings. It was also noted that the integration of discipline based topics with skills to use novel teaching tools, here the e-learning environment and IL-skills, is a good way to encourage the creation of multi-disciplinary skilled teams.

We noted that the co-operation with the Public Health faculty and the library/IT staff was extremely fruitful. One can state that without the help and knowledge of the service personnel, the universities could not have achieved all the results. Thus the project helped also in understanding the role of the services - i.e. IT and library - in building modern and open learning environments.

We have also noted that there are many open source resources available to the library, IT as well as material for teaching in higher education. Although nowadays these can be accessed with very basic computer resources, at the present their exploitation demands that there is an educated faculty. It is clear that these open-access resources represent a potential treasure-trove for all academics, especially those in the developing countries: they can modernize their learning and research environments at very moderate costs.

Perhaps the most important result of the project was that we all learned about different cultures: all of the participants became aware that they face similar issues and challenges within the higher education system. It is only by joining forces and working together that we can triumph over these challenges. This project proved although it is possible to co-operate between continents with modern IT-tools, it also is important to meet people face-to-face to build mutual trust and it is crucial that we learn best by tackling problems together.

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