
QUALIFYING UNIVERSITY STAFF IN DEVELOPING COUNTRIES FOR E-LEARNING

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Background

Growing demands for higher education around the world render particularly universities in developing countries under pressure to accommodate larger numbers of students. As the situation is now, economy, campus facilities as well as access to qualified staff set limits for intake of new students, far below national and regional demands. Vast masses of knowledge-hungry candidates are knocking on the university gates. Available resources are insufficient to meet the needs through traditional methods and organisations.

Governments and agencies in developed parts of the world have programmes for foreign aid, financing education, health services and employment projects in developing countries. There are almost no end to the needs for solving the most urgent situations like starvation, famine and diseases in the poorest areas. Much of the efforts towards education go into primary and adult education in order to overcome illiteracy. By the time these obvious and urgent needs are supported, there are hardly any means left for higher education, let alone for in-service or further education of already qualified academics. In some cases bursaries or grants are offered for further studies or post graduate work at institutions in developed countries, thus taking the grantees away from important duties and students at their home institutions. The training in a different cultural setting may even be of less value when they return, or still worse, may tempt the grantees to continue working under better conditions in the developed parts of the world.

Could net based study programmes, developed and anchored locally, be a way to keep the academics at their home institutions, thus creating new learning environments for larger masses of their countrymen? This may improve capacity, accessibility and cost effectiveness for more students, and avoid the brain-drain from already scarce resources.

Objectives and actions

The United Nations University (UNU) [1] encourages activities that may raise competence and confidence at universities in developing countries. A special branch of the UNU, the Global Virtual University (UNU-GVU) [2], has during a pilot period of 5 years (2002–2007) initiated and established a global network of universities for developing joint degrees and building online competence for tutors and course developers. Main objectives are to support sustainable development and establishment of learning organisations and communities that strengthen local competence and meet demands for higher education. One joint master programme is already up and running with great success (GEDS) [3]; the first batch of students have graduated in 2007. Others are being planned.

By qualifying local staff in Africa, Latin America and parts of Asia to develop, organise and tutor their own online courses and study programmes, this will raise confidence and promote self reliance. It will also strengthen the local cultures and national characteristics without lowering quality of higher education. This is contrary to the practice of delivering courses and study programmes from or in more developed countries, options that may be regarded as cultural imperialism.

Two dedicated courses on e-learning, both at master's degree level, each awarding 10 credits (ECTS) [4], are offered online to professors and teaching staff by UNU-GVU:

- E-teaching 1, basic online methodology and pedagogical principles for tutors [5];
- E-teaching 2, planning, designing and development of online courses [6].

The courses are developed on the basis of material and experiences from collaborative EU projects on e-learning (MENU) [7] and take advantage of expertise in partner institutions. Jointly with UNU-GVU two Norwegian universities, University of Agder (UiA) [8] and Stord/Haugesund University College (HSH) [9], are running the courses and take the academic responsibility, awarding formal credits and diplomas to *students* who complete the work and exams.

In principle the courses are to be financed through student fees of the order US\$ 1000 for each course. During the UNU-GVU pilot period, however, available funding has allowed to establish bursaries to cover greater parts of the fees for participants from developing countries. Economy has thus not been a major obstacle for interested staff members so far. The major challenges are related to lack of time and to the unstable infrastructure, causing some of the registered students to drop out without completing the course.

The lack of infrastructure and access to modern technology is often argued against this strategy for offering higher education to target groups in developing countries. Statistics now show, however, that the situation is changing drastically:

WORLD INTERNET USAGE AND POPULATION STATISTICS						
World Regions	Population (2007 Est.)	Population % of World	Internet Usage, Latest Data	% Population (Penetration)	Usage % of World	Usage Growth 2000-07
Africa	941,249,130	14.2 %	44,234,240	4.7 %	3.5 %	879.8 %
Asia	3,735,439,436	56.5 %	461,703,143	12.4 %	36.7 %	303.9 %
Europe	801,821,187	12.1 %	343,787,434	42.9 %	27.4%	227.1 %
Middle East	192,755,045	2.7 %	33,510,500	17.4 %	2.7 %	920.2 %
North America	334,659,631	5.1 %	237,168,545	70.9 %	18.9%	119.4 %
Latin Am/Carib	569,133,474	8.6 %	116,847,600	20.5 %	9.3 %	546.7 %
Oceania / Austr	33,568,225	0.5 %	19,243,921	57.3 %	1.5 %	152.6 %
WORLD TOTAL	6,608,626,128	100.0 %	1,256,495,383	19.0 %	100.0 %	248.1 %

Figure1. Internet statistics (Internet World Stats) [10]
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Nowhere in the world is the *usage growth* as high as in Africa, Middle East, Asia and Latin America. It is thus reason to believe that within a few years' time the access to Internet will be rather widespread also in the developing world. Therefore, preparing the present staff at universities and schools in these regions for the new learning arenas may be of particular value to future strategies and activities.

Pedagogical approaches to effective learning are changing with trends and time, also for online learning. The online courses have both presented and practiced a *social constructivist* approach, a method that has caught great interest among the highly qualified *students*, i.e. professors and teachers. This is acclaimed a very suitable method to make online learning an attractive alternative for higher education, particularly in lifelong learning perspectives. Social constructivism is a variety of cognitive constructivism that emphasizes the collaborative nature of learning. According to the Berkley Graduate Student Instructors' Teaching Resource Centre (Berkley GSI) [11], social constructivism was further developed from the Soviet psychologist, Lev Vygotsky, and is now well applicable for online learning.

An extra asset here is the high level of knowledge among the participants, all of them being well qualified academics. It is thus a matter of tutoring and guidance to make collaboration, peer tutoring and constructive criticism among peers constitute a strong learning resource. To many of the participants this way of studying and learning is new, and it has taken both time and efforts to break

their academic habits and convince them of the benefits. The final results, however, have come out very positive.

In addition to the online courses offered to individuals several local f2f seminars and workshops with similar content have been conducted by UNU-GVU for groups of staff at different African universities. Ministries of education as well as university administration have seen the potential of the new learning channels and opportunities for their regions, and have asked representatives from GVU to arrange workshops and seminars for their staff. Feed-back from these seminars has been equally positive as for the online activities.

Outcomes and conclusions

During the past 5 year pilot period UNU-GVU has established its network, initiated professional study development and taken on the task of training university staff for e-learning activities. The results so far are promising, challenges and feed-back are valuable experiences for further activities and development.

Positive feed-back

The E-teaching 1 course has now been running for 3 years, a total of 5 times, while the E-teaching 2 course has only been on the net for 1 year, run twice, spring and fall 2007. The interest has been great and *students* have registered from all over the world. During this period the feed-back from students has been overwhelmingly positive. Several quotes of enthusiasm are recorded and show that there is really a potential for online learning in Africa and other developing parts of the world. A few examples from the recent courses (Training the trainers) [12] prove the point. First one example from the Middle East:

Participating in GVU E-Teaching course has proved to be a time-wise and worthwhile decision. It does fill a gap that exists in the online learning world. I recommend the GVU course without any minimal hesitation. I just would like to thank the faculty for allowing the students the golden opportunity to participate in a collaborative learning environment. We all learned this the best way available and this is by practice.

Amal Saadallah, M.D., M.Sc., Ph.D., CCRP, Saudi Arabia (E-teaching I)

Then one from Somaliland, Africa:

I thought that it was like other classes where you have to compete for higher marks and grades, instead I found myself more of a collaborator and a contributor than a receiver. The discussions are held in a more academic style and it also requires reading if you have to upgrade your reasoning.

Amir Ahmed Manghali, Capacity Building Advisor, Somaliland National Disability Forum, Progressio Hargeisa, Somaliland (E-teaching I)

and a third example from Malawi, Africa:

I support e-learning as a better option for achieving a learning goal especially in the so-called developing nations, as Face-to-Face education is becoming more and more expensive and unaffordable to the common man. The cell phone is also welcome as you can communicate with tutors when you are in a dilemma by either calling or sending sms to ask for assistance. Please continue to develop and offer on-line courses like these for adults like us to develop our selves.

Grace Gwalla, primary school teacher, Gaborone, Botswana (E-teaching II)

Expressions like these from mature, well qualified students are way beyond what has been experienced through years of “normal” university teaching. It encourages further efforts and beliefs that the method is worth while pursuing.

Challenges

Infrastructure was frequently a problem in the past, especially in developing countries where Internet access is unstable and the bandwidth is low. Some of our students e.g. in Uganda, Tanzania, Malawi have had difficulties in this respect when the electric power is interrupted for several days and the students had no possibility to log on and collaborate. As indicated above, this is now gradually improving.

Economy has been a challenge, and is now becoming an even sorer point. Most *students* from developing countries can not afford to pay course fees according to European or USA standards, and bursaries have to be established to cover the costs of running the courses. After the pilot period ended in December 2007, the UNU-GVU is looking for alternative ways for funding the activity.

Language is also a challenge. Courses using English as the working language can be hard for students who have English as their second or third language. Being able to read, write and discuss in an academic style may be too difficult for some of them and cause much extra work. The use of asynchronous discussion forum helps a bit, allowing students better time to formulate their meanings, compared to e.g. chat or even a physical class room situation.

Status

Despite uncertain funding and support, a new group of *students* has already started on the first modules of E-teaching 1 in January 2008, and more students are waiting in line. Several requests for workshops and seminars are on hold while negotiations for funding and sustainability are going on at different levels, nationally and internationally.

The UNU-GVU courses seem to fill a need for pedagogical and basic education and training for university personnel in order to exploit the possibilities of ICT and Internet in developing countries. Results and experiences of the pilot period are presented in a recently released *Pilot Phase Completion Report* (GVU 2008) [13], and are still to be more closely analysed before new steps and strategies are planned. It seems clear, however, that the interest within target groups as well as among university leadership and politicians is already great and is likely to grow in the years to come, when the infrastructure improves.

In addition to helping with primary and secondary education, one of the challenges to the developed parts of the world is to find ways of supporting activities that open up for efficient use of new technologies and relevant pedagogical approaches for offering education to the vast masses of candidates to higher education. The acquired skills and knowledge may also be used for facilitating secondary education, thus preparing more candidates for university studies. Our domain is higher education, however, and we believe that this is the most correct end to start the training of national and institutional personnel for dissemination to other areas. Experiences from fairly simple efforts with online training, as outlined above, are worth following up in the years to come.

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