

Online education from Norway to the world – does it work?

Building partnerships to educate the world : The UNU/GVU strategy.

By

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1 Summary

Globalisation and new challenges in e.g. environment, development, and increasing need for international cooperation demand new answers to education. The Global Virtual University (GVU), a branch of the United Nations University (UNU) has just started up its first regular two-year fulltime master degree study programme in development management, with students from Ghana, Tanzania, Ethiopia, Uganda and Norway collaborating in communities of practice in common virtual classrooms. The socio-cultural pedagogical approach has been applied throughout, while the European ECTS system has been used as a basis in course development and grading. The results from the first exams indicate grades significantly above average.

2 Introduction

New technologies and increasing global economic integration have paved way for global markets. According to the State of the World Report (2004), 1.7 billion people belong to the “global consumer class”, with 240 million of these consumers in China alone. These consumers have adopted the diets, transportation and communication systems and lifestyles that until very recently were for the wealthy in Europe, North America and Japan only. Simultaneously almost 3 billion people live on less than USD 2 a day, while the richest 1% of the world’s people receive as much income as the poorest 57%. (HDR, 2002,p.2) In other words, less than 1/3 of the human population takes part in the globalisation trend, reaping at least some benefits, while half of the human population are excluded. In most Sub-Saharan African countries, it is common that about 50% of the population has to survive on less than USD 1 per day (HDR, 2002,p.159).

The gap between the world’s richest 20% and the poorest 40-50% is truly frightening. There is no easy way to close the gap. There are several prerequisites that must be in place for joining the “globalisation club”, and all of them are costly. To be an actor in the globalisation process, basic knowledge of English or other “global language” is required. Literacy is a matter of course, as is the ability to use a computer. Computers, relevant software and online access are usually out of reach for persons living on less than \$2 a day.

“...the growing digital divide is actually leading to greater inequalities in development. This is giving rise to paradoxical situations where those who have the greatest need of them – disadvantaged groups, rural communities, illiterate populations or even entire countries – do not have access to the tools which would enable them to become full-fledged members of the knowledge society” (UNESCO 2002,p.8).

Globalisation impacts on many aspects of our lives: on our economy, our workplaces, how we produce and consume, how we interact and communicate and how we develop and deliver education are some examples. Main driving forces behind globalisation are increasingly open global markets and rapid technological developments. Information and Communication Technologies (ICT) have facilitated communication around the globe, and made possible instantaneous contact between persons, organisations and businesses situated on different continents to a reasonable price.

The number of people with access to the Internet in the world approaches a total of 80 per 1000, with as many as 400 per 1000 in high-income countries; but only 1.8 persons per 1000

in the least developed countries (HDR, 2003). This elite group has the opportunity of synergic collaboration; has access to goods, services and updated information in all areas, and can work more or less independently of governments and national laws. Those who do not have access are inevitably excluded.



Student computer room, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Photo: Åke Bjørke

The dividing line goes between the “industrialised” countries and “developing” countries. Rapid population growth and lack of qualified teachers in developing countries make the need for education ever more urgent. Worst off is Sub-Saharan Africa (HDR 2002:189), with poor infrastructure, lack of expertise, poor bandwidth capacity if any, exorbitant internet connection costs and a rapidly growing population combined with dwindling resources for education. The “digital divide” is real, and accelerating. Leaders in developing countries are aware and are concerned.

” The overwhelming majority of developing countries, despite difficulties, problems and fears, seek as far as possible to take part in the formation of the global educational community” (UNESCO 2002).

Unless the international community commits itself to change this development, the poor countries of the world will be left behind. There is an increasingly urgent need for measures that includes, not excludes, and for a gradual closing of the digital divide instead of accelerating it.

3 What is GVU.

The Global Virtual University (GVU) under the auspices of the United Nations University (UNU) is an international consortium of universities offering study programmes and courses intended to be “global”, where students from different continents learn collaboratively and online, with a UN perspective on the learning content.

3.1 Mission and vision

“E-Learning for a sustainable future.” The vision of GVU is to contribute to a sustainable future with a focus on the developing countries making use of the latest e-learning pedagogy and technology.

The mission is to increase people’s sensitivity to, and involvement in, finding solutions for environment and development issues. This shall be accomplished by mobilising a network of universities in developed and developing countries to participate in developing online educational programmes in global environmental and development studies and to provide support to these universities.



*Together in a face-to-face session, but working online across continents and cultures with different groups in a virtual classroom.
Photo: Åke Bjørke*

3.2 Need for people with knowledge and skills in sustainable development

The global markets, where the multinational corporations dominate, tend to expose increasing numbers of people to a westernized "consumer lifestyle". The multinational corporations also compete for scarce natural resources. In this situation, good governance is a key for achieving a more sustainable development. Increasing awareness, changing attitudes and above all appropriate knowledge and skills are decisive factors.

3.3 Millennium Development Goals (MDG)

The eight Millennium Development Goals (MDGs) – which range from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015 – form a blueprint agreed to by all the world’s countries and the world’s leading development institutions.

"We will have time to reach the Millennium Development Goals – worldwide and in most, or even all, individual countries – but only if we break with business as usual. We cannot win overnight. Success will require sustained action across the entire decade between now and the deadline. It takes time to train the teachers, nurses and engineers; to build the roads, schools and hospitals; to grow the small and large businesses able to create the jobs and income needed. So we must start now. And we

must more than double global development assistance over the next few years.
Nothing less will help to achieve the Goals."

*United Nations Secretary-General
Kofi A. Annan*

3.3.1 Universal education

To achieve universal education for all children, it is imperative to educate enough teachers and train them according to the real needs. This is a formidable task, especially when bearing in mind that many teachers e.g. in Sub-Saharan Africa have died from AIDS and other diseases. The cost of educating enough teachers on-campus is formidable, as is the cost of employing them and giving them a decent salary. Most teachers furthermore need regular updating on their subjects as well as in new pedagogical approaches to effective learning. Online learning may reduce some of these costs substantially.

3.3.2 Skills

There is an increasing demand to acquire not only subject-specific skills but also generic communication skills, ICT skills, and collaborative skills. To meet "the needs of mass education cost-effectively, provide learning experiences of perceived quality for a disparate student group, develop generic skills as well as subject-specific knowledge and foster a culture of life-long learning" there are basically two major strategies (Lewis,1998, p.24- 25). The first is to increase access to education. This can be done by making education offers more flexible and open, modularise it and increasingly offer it as distance online learning. Developing efficient ICT infrastructure with satellite



One of the skills to learn in a GVU course is online collaboration in a virtual classroom, building a common learning environment in a community of practice. Here a group of students from Uganda.

Photo: Åke Bjørke

communication and broadband capacity to urban areas as well as to rural centres in developing countries is crucial to increase access to cost-effective mass education. The second strategy is to help students take more responsibility for their own learning. Students must learn to be more self-reliant and self-directed. Learning how to learn is a main concern to the independent learner.

A third strategy is cooperation between educational institutions in sharing educational material and other educational resources.

3.3.3 Partnership for development.

An increasing number of educational institutions now cooperate making joint study programmes, student and staff exchange and on the pedagogical use of ICT. The EU has worked intensely on developing a system for making mutual accreditation easier and course

development and implementation more transparent and standardised through their European Credit Transfer and Accumulation System (ECTS). Several African educational institutions have started adapting to the system in order to harmonise their education systems more to global demands. This development paves way for networks of international collaborating educational networks, such as the GVU.

4 Strategy for the information age: individual education for many

To meet the challenges of the dynamic knowledge society of the 21st century, we must understand how people learn and how ICT can assist in the learning process. In the last 200 years our society has been transformed from a relatively static one to a society where the only constant is change. The knowledge base in some areas is said to double every 16 months. There is an abundance of perspectives on everything, even on basic science.

The globalised world asks for creative, critical thinkers with collaborative skills, the ability to communicate cross-culturally, using ICT and with an intrinsic motivation for dynamic, lifelong learning.

The future graduate will be characterized as having:

- The ability to convert theory into practice.
- The ability to define her/his own problems.
- The skill to collaborate cross -culturally.
- The skill to systematically seek solutions to new problems.
- The skill of efficient dialogue and communication
- The ability to efficiently search for, find, assess and use relevant and reliable information
- The ability to manage his/her own time efficiently
- The dynamic attitude of a learner with systematic reflections on own learning

To achieve this, the students of tomorrow must be given opportunities to study in collaboration with others. To keep costs down, s/he should be able to combine studies with a job. The studies must be flexible enough to accommodate for this, and for the individual needs of the student and his/her employer as well. This cannot be achieved in a mass scale without using the appropriate technology.

4.1 Increased access to flexible, lifelong learning

When choosing among electronic media, the choice should be based on the technology that most efficiently facilitates “deeper learning”, making learning more effective, i.e. the students gain deeper insight and understanding in less time. What is more, the learning process should be pleasurable, thereby motivating the student to go for more – to become a lifelong learner.

4.2 Network

Joint development of courses and study programmes between the South and the North must be part of the solution. Network partners in the South must feel ownership and that they are equal partners, contributing subject content in course development. Preparing courses in the

USA or in Europe and imposing on students e.g. in Africa, will only enhance the perception of globalisation and development as a continuation of colonial relations. In contrast, joint development and delivery to a global audience of students, perceiving courses from Africa and Europe as being of equal value because of agreed upon harmonisation and standardisation procedures, will enhance the global cooperation. International, easy-to-follow quality assurance systems will make mutual recognition of competence possible.

4.3 Technology

The present situation with regard to connectivity is often characterized by a situation where in some cases an entire African university with tens of thousands of students may only have internet capacity similar to a small business or even a private person in the industrialized world. Allowing this situation to continue could have severe consequences with respect to access to information, inter-university collaboration between universities, distance learning and the web presence of the African institutions of higher education.

Many developing countries do not have the economy, infrastructure and expertise to take part in globalization, except maybe in “pockets” in the bigger cities, accessible to small elites with the money and skills necessary to use ICT.

Several indicators have been developed to objectively measure the digital divide. These indicators displays clearly that the digital divide is very real and substantial. African countries remain clustered towards the bottom of the distribution, so that the overall contribution of sub-Saharan Africa is to maintain the status quo, with no major contributions to reducing inequality. (UNCTAD : Information and Technology development indices : Minimal improvement in sub-Saharan countries.)

4.4 Complications

The situation in developing countries is complicated by factors such as economy, technology, competency and slow liberalization of the telecommunication markets (resulting in high prices, low investment in future oriented solutions, difficult climate for international cooperation etc.). It is assumed, however, that a policy of positively promoting African academic development would result in high returns for the region and the rest of the world.

The UNU/GVU on this background, is involved in developing the African University Network (AFUNET), a joint initiative of the International Telecommunications Union (ITU) and the United Nations University addressing the digital divide issues.

The AFUNET is a practical response to the World Summit on the Information Society (WSIS) Plan of Action. It is designed to enhance the capabilities of African universities to take advantage of the opportunities associated with the emergence of the global information society. Investment in African universities today would constitute a critical building pillar in the development of an African knowledge economy whose dividends will be knowledgeable young leaders and professionals well equipped to confront and tackle the challenges facing Africa today and in future.

The global objective of this project is explore and implement various measures to provide network connectivity and extend affordable and easy ICT access and services to African universities starting with a few countries and gradually extending to cover the whole continent.

4.5 Cost efficiency. Economies of scale

The GVU study programs will take advantages of ICT and e-learning in order to reach out globally at a reasonable cost.

The "value creation" of e-learning shows a very positive relationship to volumes. Economy of scale applies to this kind of activity.

The students at GVU will both benefit from the cost efficiency of online learning, and at the same time be able to participate in an international study program from their home location.

4.6 Support to students from developing countries.

The need for funding varies with the situation of the students. Some of the students will come under national systems, and thus be eligible to full or partial funding. This is the case for Norwegian students enrolled at a Norwegian university. In other cases the situation may be more difficult. As a consequence there is a need for a bursary system in order to accommodate for students in poor regions of the world.

5 GEDS: A practical implementation.

The study programme Global Environment and Development Studies (GEDS) with specialisations at masters' level intend to raise awareness, understanding and skills for handling environmental problems and help candidates steer development in a sustainable direction in their later professional careers.

The GEDS students will as a rule have educational backgrounds from anthropology, development studies, socio-economics and geography at bachelor's level, and come from various continents, with a present focus on Africa. Most of the students will have some work practice. The students are of both sexes with age range between 22 and 40 have English as their 2nd or 3rd language.

The GVU offers courses in addition to the GEDS. All credit-giving courses must have one academically responsible institution giving the credits. Study programmes and separate courses given through the GVU system must have a common quality assurance and control system. The quality issues, challenges and assurance system described below therefore applies to all GVU related study programmes and courses.

5.1 Specializations

GVU offers a master's degree programme in environmental and developmental studies called **Global Environment and Development Studies (GEDS)**, which currently include two areas of specialisation: **Development Management** and **Environmental Information Management**.

This two-year programme is designed to provide students with the knowledge in dealing with the complexity and interdependence of environment, development activities and decision-making processes.

5.2 Target groups

Entering students should have at least a bachelor's degree in a social science discipline, with at least an 80 ECTS concentration in a relevant major area. Relevant fields of specialisation are business and public administration, other areas of management or development studies, geography and other fields of social science, such as political science, sociology, or anthropology. In addition, applicants need to have a strong command of the English language, oral and written. They must be familiar with the use of PCs and Internet communication. Students who do not have the necessary experience with Information and Communication Technology (ICT) tools, and who are otherwise qualified, may take a preparatory course in the use of the computer. Preferably students should have relevant working experience, e.g. within administration, management, teaching, research or relevant project work.

Students from developing countries have priority.

5.3 Tutors

Tuition, academic and non-academic support and communication media used. Retention strategies.

The tutor's role is essential. While the subject professors have planned the course modules and the study guides in detail, and to some extent will be available for subject-relevant questions and giving guidance to the tutors, the tutors will implement the course in the virtual classroom, unless the professor wants to take a lead in the virtual classroom him- or herself. Student retention will largely depend on the tutors' ability to give sufficient support throughout the study period. Tutors will provide essential parts of the "scaffolding" helping the students to interact well with peers, help define the course, help explain and sort out misunderstandings, guide and moderate in the discussions, assess and give feedback to hand-ins. The tutor will help develop online learning skills, assist in study progress and pacing, and when relevant, enrich the discussions with new perspectives.

5.4 Quality assurance

Quality standards are crucial for a network of partner institutions. The partners must be confident that e.g. a 10 credits course is recognized as such by all partners. They must also know that the students are assessed according to the same criteria, and that students are given appropriate student support regardless of where in the network they take the course. Without such confidence, the network cooperation may fail.

Quality factors of particular interest when developing courses and study programmes are meaningful learning situations, contextualised learning, student interactivity, reflection on learning, feedback and evaluation, dynamic updating of course material, authentic learning material, appropriate support, appropriate pacing and workload and efficient online tutoring.

Tutors and students will tend to focus more on good study guides; relevant content; smooth, user-friendly technology; appropriate workload; formative evaluations that can benefit the

current learners; fair and consistent assessments and good choice of pedagogy for the online learning environment.

The partnership network will look closely at benefits, duties and costs; course efficiency e.g. through the number of graduates; standards for course development; standards for assessment; training of tutors; the possibility of course and learning object exchange and accreditation. Of considerable interest to at least some partners is mutual recognition of competence when making joint programmes. With a functioning UNU/GVU quality control committee approving study programmes and the individual course, this will mean international recognition of competence as well.

The UN organizations involved will be more interested in the possible impact on capacity and competence building that is urgently needed in the developing world, with reference to e.g. the UN Millennium Development Goals, such as universal education, ensure environmental sustainability and develop a global partnership for development

6 Does it work?

The first 26 students started their MSc in Development Management as fulltime students August 29, 2005. Four students were screened, interviewed and selected as candidates from GVU partner universities in Uganda, Ghana and Tanzania respectively, while two students came from a partner university in Ethiopia. Twelve candidates from Norway made their way through the screening and started up their two-weeks face-to-face introduction course together with their African colleagues. The face-to-face session was deemed necessary to ensure that all students had the necessary computer skills, learned and understood how the virtual classroom worked, and get their first taste of collaborative learning and negotiation of meaning in a “virtual” community of practice with tutors close at hand. Last but not least, they were also expected to make personal bonds and relations with their fellow students to ensure that online communication would go smoothly and without unnecessary conflicts at a later stage. The face-to-face session was very intense, very social, including excursions, boat-trips, parties and visits by the Norwegian prime minister and dignitaries from the UN.

6.1 Success factors

A critical success factor is deliberate choice of pedagogy. If a collaborative, socio-constructivist approach is chosen, participation is mandatory. The participant can study anywhere, anytime during the day, but not at own pace. The studies and associated results and discussions must be kept within a time framework depicted in a carefully developed study guide with overall aims, concrete objectives and appropriate tasks and activities designed to achieve the goals.

Another success factor is an appropriate student support package. In the GEDS DM study programme, the students are welcome to lease laptops on very favourable terms. In addition the African students get some economical support enabling them to study full time. Crucial is the tutor support, with professional online tutors guiding the activities.

A third factor is a well functioning “black-boxed” technology. A learning management system (LMS) with a rather intuitive interface that functions in Europe as well as in countries like Ghana and Ethiopia is a must. The Norwegian LMS; “Fronter”, functions fairly well, with online classrooms, group rooms, discussion forum and archive functions for mainly asynchronous communication, and possibilities for synchronous communication as well.

The experience so far indicate that a face-to-face session at start-up is of very high importance. It would have been challenging and take quite a lot of time to learn how to use the LMS sitting at a slow internet connection in Africa. Learning the pedagogy and building social relations with peers are obviously much easier to achieve face-to-face than online.

A critical success factor is that the students must understand that they are all responsible for building a common online learning environment. This demands regular and frequent log-in, participation in discussions, active negotiation of meaning, developing common documents, contributing with relevant opinions and information sources.

Other success factors are standardized quality enhancement systems, standardized grading and feedback systems and a transparent system for standardizing courses and grading, such as the ECTS.



According to GVU objectives, a skill to learn is cross-cultural collaboration. Here is a group from the GEDS-Development Management face-to-face session where students from at least four different countries learn to know each other in a common learning environment, face-to-face and online at the same time.

Photo: Åke Bjørke

6.2 Some challenges

The first semester has four 7,5 ECTS courses. A semester of 30 ECTS has 18-20 weeks, with an estimated 900 “notional students hours of work”. A 7,5 ECTS course on-campus translates into one quarter of a semester, or maximum 5 weeks, exam included. This is not feasible online, at least not when developing countries are involved. Due to unreliable internet connections and the need for more flexibility, it was decided to run two courses in parallel over 9 weeks, without increasing course content. Each course was carefully planned to use 225 hours or less of work for the average student according to the ECTS criteria.

The professors involved had little or no experience in developing courses according to the ECTS system and in applying a socio-constructivist pedagogy. This was an extra challenge for the course-writing teams making the study guides. A typical problem was that the professors tended to underestimate the time needed for each activity in their course and forgetting that a ten weeks running time does not imply that more content can be added to the 5-week course. In reality a course could quickly become a 10 ECTS course or more instead if care was not taken to avoid this. A course with an underestimated student workload would necessarily “steal” time or at least encroach on the parallel course in addition to adding to the weekly student workload. Before this was adjusted, the student workload in some instances went up to over 60 hours per week.



It is a strange sensation walking into a room where the students are physically present, but have their mind in the virtual classroom. The professors may wonder when it is appropriate to say something, but find that breaking the concentration by giving a lecture might not be the most efficient way to increase learning.

Photo: Åke Bjørke

The professors also tended to start giving lectures during the face-to-face session that had not been calculated for in the planning of the course, thereby increasing the workload even further. These “teething problems” mentioned; the face-to-face session was nevertheless much appreciated by all parties, and deemed a prerequisite for a continued successful course.

The students are now working from their respective universities. Most of them have their own room with extra internet capacity and printer. Most also have extra access in the evening and at night-time to avoid competing for online capacity with other on-campus students.

The students as a rule discuss the tasks and activities with their national group in parallel with the online discussions they have with their counterparts in the virtual group room, in which there are students from at least four countries involved.

Initially the participants were reluctant to challenge each other, and tended to just deliver an opinion or statement with a literature reference. Further out in the course, the students have shown that they are perfectly able to organize their work and share workload across continents and culture, negotiating meaning and increasing understanding in an open, challenging, but friendly way.

The first two exams were handed in late October, the next two exams will be held mid December. The two first exams had an above average result, for the European as well as for the African students.

When the success factors are included and possible challenges planned for, the courses and study programme so far work well.

7. Conclusion

Online education using “Fronter” as the communication medium does work across continents and interculturality. The online discussions are lively; they increase mutual understanding, make learning enjoyable and social, and enhance subject insight. The online learning environment promotes and enriches cross-cultural communication and gives the participants a direct feeling of the differences between studying in Europe compared to Africa. It is at times frustrating to experience the struggle students in developing countries have getting online, and then waiting for the pages and virtual classroom to download. Internet capacity is expected to improve annually also in Africa. The trend is that focus will move from technology over to pedagogy, online collaboration and the building of good learning environments. A challenge for the tutors, professors and students is to keep up motivation and pace during another 18 months. A planned one-months face-to-face session in South Africa as a start-up of the third semester will hopefully be a booster.

References

HDR (2002) *Human Development Report*, UNDP, New York, Oxford University Press

HDR (2003) *Human Development Report*, UNDP, New York, Oxford University Press

Lewis, R. (1998) Staff development in conventional institutions moving towards open learning, in Latchem C. and Lockwood, F. (eds) *Staff development in open and flexible learning*, London, Routledge.

UNESCO (2002) *Open and Distance Learning. Trends, policy and strategy considerations*, Division of higher education, Paris

<http://unesdoc.unesco.org/images/0012/001284/128463e.pdf>

Worldwatch Institute (2004) *State of the World Report*.