Sida Evaluation 99/36

Support to Collaboration between Universities

An evaluation of the collaboration between MOI University, Kenya, and Linköping University, Sweden

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Department for Democracy
and Social Development

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Executive summary

Moi University (MU) in Eldoret in western Kenya started its Faculty of Health Sciences (FHS) in 1987 with the objective to train medical doctors and other health professionals, who are well versed in both preventive and curative service. The faculty now has 102 teaching staff, 260 medical students, 76 students in the three year environmental health programme and it starts a programme for the Bachelor degree in Nursing Science in the fall of 1998. The first 18 medical students, including 5 females, graduated in 1997.

From the start, Problem Based Learning (PBL) and Community Based Education and Service (COBES) was used to provide training in Primary Health Care (PHC) in the education. PBL is characterised by use of problems as stimulus for learning, and by high student's responsibility for learning. Community Based Education and Service (COBES) is designed to provide students with competence in community health practice.

The Faculty of Health Sciences at Linköping University (LU) introduced PBL in the medical education in Sweden. The MU-LU collaboration started by MU approaching LU for assistance in establishing PBL in its medical programme. The partners jointly approached Sida for funding that was initiated in 1990. During eight years of collaboration the goals have extended to general capacity building at the faculty, staff and student exchange, library and IT development, and research training. With the overall aim to give advice on future funding we have evaluated this collaboration by review of documents, group interviews and discussions with leading staff members, specific interviews with various staff members and students as well as some focus group interviews with students.

We conclude that the MU-LU collaboration has been successful and has developed into a partnership in several fields. The objectives to develop a community based training programme for medical doctors have been achieved, and new objectives have been set. However, the organisational set-up and annual plans have not been changed sufficiently to meet the needs of these new objectives. If this is done the project has great potentials for fulfilling the new objectives which are in line with both Sida's health and partnership policy.

We therefore recommend a continued and increased support to the partnership between the faculties of health sciences at Moi and Linköping university and that support to components that have achieved the objectives set are excluded and that emphasis in the support is shifted as suggested below.

1. As **COBES and PBL in the medical education** has been well developed *the support for this activity can be stopped by the end of 1998. Collaboration* ***concerning*** **the WHO collaborative centre for PBL in health sciences** *is a new component that can be given support* with the aim of sharing the experiences with other institutions in the region. The cost-effectiveness and economic sustainability of COBES need to be further assessed. Collaboration between MU and LU can be useful for this activity that can be a part of the activities of the WHO collaborative centre.

2. **Educational approaches, staff development, and staff exchange** have been essential in the past collaboration but can in the future be better included in specific activities suggested and under administrative collaboration for planning. *We recommend that general support for this activity is stopped.*

3. **Under-graduate student exchange** is much appreciated and is organised in a cost-effective way. *We recommend continued support to under-graduate student exchange* but it should include more learning with clear objectives for each student and possibly be linked to courses in international health in order for student to better put their experience into a professional context.

4. A productive collaboration exists between the partners regarding the **nursing programme** to start in the fall of 1998. This collaboration is of interest for both partners and it seems as collaboration aiming at specific programmes will be a more productive way to collaborate in the future than the initial general collaboration on educational methods.
We recommend support to collaboration regarding the nursing programme.

5. **Educational programmes in public and environmental health programmes**, including health economics is most relevant for the Kenyan health sector. *We recommend support to collaboration regarding the public and environmental health programme based on the partners specific suggestion.*

6. **PhD and MPhil (licentiate) programme.**
The greatest need for the faculties that can be fulfilled within a future partnership is the research collaboration. Experiences from similar projects in other countries indicate that this is best done by granting fellowships for research training to 5–10 staff members from MU with supervisor at LU and assistant supervisors at MU. The activity seems to have developed slowly mainly due to unclear objectives and insufficient budget allocations. The undergraduate students' need for intervention oriented community-based intervention projects can be co-ordinated with the projects of this research training. *We recommend that research training of staff at MU aiming at institutional capacity building should be an objective of continued partnership collaboration. Annual PhD grants should be allocated for each student. We also suggest that support to under-graduate students intervention research projects may be included and that an academic co-ordinator should be nominated for this activity at Linköping university.*

7. MU has made special efforts to increase **gender** sensitivity but the idea of establishing a separate institute for gender in the current form with women only may not fully address the gender imbalances.
To streamline gender within the existing programmes should be considered as an option to a separate institute.

8. **The Library** at the faculty for health sciences at MU is now well functional and well used. Subscription of journal and purchase of books depend on external funding from many sources. An effective collaboration has been initiated regarding **information technology** with well balanced purchase of material, external support and staff development. This indicate that IT use can advance fast even in an African faculty of health science outside the capital.
   We recommend that the general support for the library is stopped but that sufficient and flexible future support is provided for collaboration regarding IT.

9. **The administration** of the collaboration is well functional, but financial reporting can be improved. The system with high degree of delegation from deans to co-ordinators and from Sida to the project should be maintained.
   We recommend that the administrative arrangements should be maintained, with some minor improvements.

Abbreviations

MU	Moi University
COBES	Community Based Education and Service
CBE	Community Based Education
PBL	Problem Based Learning
Sida	Swedish International Development Collaboration Agency
FHS	Faculty of Health sciences
PHC	Primary Health Care
Ksh	Kenya Shilling
MOE	Ministry of Education
MOH	Ministry of Health
LU	Linköping University
IGDR	Institute of Gender Development and Research
WHO	Word Health Organisation

1. Programme context

Moi University (MU) was established in Eldoret in 1984 as the first public university in western Kenya. Its Faculty of Health Sciences (FHS) started in 1987 with the objective to train medical doctors and other health professionals, who are well versed in the promotive and preventive aspects of health service, in addition to being skilful in disease management. The student population at the faculty presently comprises of 260 in the 5 year medical education programme, 76 in the 3 year environmental health programme and 3 studying for a Masters of Philosophy degree in medical education. The first batch of students for the Bachelor degree in Nursing Science will be admitted in the 1998/1999 academic year. The first 18 medical students, including 5 females, graduated in 1997. The faculty has 102 teaching staff in 24 departments. From the start, the goals of the faculty have been to initiate Problem-Based Learning (PBL) and Community Based Education and Service (COBES) as a strategy for strengthening of Primary Health Care (PHC) in the medical programme.

Problem-Based Learning is an educational approach, that is highly student rather than teacher centred. The aim of PBL is to overcome various draw-backs in the conventional methods of instruction, such as the passive role of students during lectures, irrelevant content in the curriculum, lack of integration between disciplines, and difficulties in applying what students learn in actual practice. PBL is characterised by use of problems as stimulus and focus for learning, by high student responsibility and self-motivation for both learning, and training in professional skills.

Table 1: Differences between the traditional and PBL approach in education.

Traditional approach	**PBL approach**
Teacher centred	Student centred
Information gathering	Problem solving
Discipline based	Integrated learning
Institution based	Community oriented
Standard programme	Elective periods
Apprentice based	Systematic organisation

Community Based Education and Service (COBES) is another feature of the medical education at MU. It is an internationally recognised term for components in training of health professionals that are designed to enable students to become competent in community health practice through active participation in the provision of health services in communities. COBES is also designed to provide opportunity for the student to appreciate the importance of community involvement in health promotion and health care.

Linköping University (LU) was founded in 1960s. In spite of being one of the youngest Swedish universities it is now well established as an innovative and modern institution in both education and research. Its Faculty of Health Sciences provides alternative educational programmes in medicine and other health professions. Problem-based learning (PBL) has been the basis for all undergraduate education since 1986. The successful implementation of PBL in the medical training in Linköping has had and is having a great impact on the training programmes in all other medical schools in Sweden.

The initiative to the collaboration between MU and LU started by MU approaching LU for assistance in establishing PBL in its medical programme. The two partners jointly approached Sida for funding and the project was initiated in 1990 with Sida funding. The goals have overtime been refined and focused on specific needs, such as capacity building both at the faculty, district and health centre levels. Sida's input consists of about Ksh 12 million per year, corresponding to 1.7 million SEK per year. It has been used for PBL and COBES development, staff and student exchange, library and learning material development, computers, development of research training.

2. The evaluation methodology

2.1 The aim

The purpose was to review the progress and the success of the different components of the Moi-Linköping collaboration, to assess their impact on institutional development and relevance of the experiences gained for similar university partnerships, and to make recommendations regarding future Sida support (See the Terms of Reference in Annex 1). Based on the nature of the Moi-Linköping collaboration we have used the methods described below, including review of official documents, as well as meetings and interviews with a wide range of individuals and groups listed in Annex 2.

2.2 Review of Documents

We started by a search and reading of the official records listed in Annex 5. In spite of good assistance the complete set or required documents were difficult to get at Sida Stockholm and in Linköping whereas they were easier available through the Sida Nairobi office and MOH headquarters in Nairobi, as well as by the co-ordinator at Moi University.

2.3 Interviews and discussions

The bulk of the information regarding background, and specific issues concerning the implementation of the collaboration was gathered during interviews and discussions with a wide range of people in Sweden as well as in Kenya as the list indicates in Annex 3. A full day of interviews with individual staff and group discussions was held at the Faculty of Health Sciences at Linköping University at the start and the end of the evaluation.

Similar meetings in groups for general interviews and discussion initiated the visit in Kenya. Interviews were conducted with specific individuals to clarify issues arising from the meetings and the review of documents. We obtained in-depth insights of the experiences of both Kenyan staff and students who had visited Linköping, and the relevance of these visits for the development of PBL and COBES in basic education, of research training and of the implementation of the collaboration itself. Other specific interviews provided clarification of how the COBES programme at Moi university is organised and financed, how the new programmes of Nursing Sciences are to be implemented, and how the Institute of Public Health is planned, how the Library is funded and functioning, and how the collaboration with the Gender Institute has been. (See Annex 4). Meetings and interviews were also conducted at the Ministry of Health and Ministry of Education in Nairobi.

To gather information on experiences and opinions on student exchange between MU and LU group interviews were conducted with the Swedish students who had just arrived from Linköping to Eldoret, Kenyan students who had visited Linköping and those who were to visit Linköping in October 1998 (See Annex 5). These interviews covered views on benefits of the student exchange, preparation of students before, student expectations and the impact of the experiences gained

2.4. Limitations

The consultants visited a community drug project, initiated by the community in collaboration with the students as part of the COBES programme and participated in one morning session of project presentations by students. Beside this no direct data collection was made from communities served or education activities implemented.

Another limitation of the study was that documentation were not accessible in a way that enabled us in the time available to show all achievements and assess the impact. Moreover, the programme involves two universities, two ministries, Sida and the community. Because of this complexity we have chosen a participative approach spending most time discussing with the involved parties rather than trying to make objective observation by outsiders. This approach was very productive due to the exceptionally friendly and constructive way we have been interacting with involved parties. We do not feel that the friendly atmosphere made us less critical or less objective, but we regard this collegial approach as the most productive way to evaluate this type of partnership programmes. We learnt a lot and hopefully our discussions and exchange of experiences with colleagues in Linköping and Eldoret have contributed to the future design of the project as much as, will, this written document.

3. Findings and discussion

We found that Sida's support to the MU-LU collaboration is special from several organisational points of view. It first started as an initiative from the Kenyan institution that after establishing links to the Swedish institution and the two partners thereafter approached Sida for funding. This project therefore constitute a true institutional collaboration that has developed into a partnership, This was done before this form of collaboration had become Sida policy and before partnership had become an international "buzz-word". Secondly the support has been given through the Swedish bilateral support to the Ministry of Health in Kenya although MU is part of the Ministry of Education. It was interesting to note that the funding of a partnership programme between a Swedish university and Moi University through Sida's bilateral agreement with the Ministry of Health has greatly increased the contacts between MU and the Ministry of Health. This was said to be true even for activites outside this project, as noted by staff members in both institution.

Our overall impression is that the collaboration has gone through three phases. The first being a dynamic start with a limited focus on transferring experiences in problem based learning from LU to MU. The second phase was characterised by widening of the scope of the collaboration, but at the same time struggling with several organisational and financial difficulties. During the last few years these administrative problems have been overcome, clear and well-collaborating co-oridnators assigned at both faculties and the project has also benefited from good administrative routines at the Ministry of Health and Sida-office in Nairobi. We have therefore chosen to concentrate almost all efforts on the last year of the project and on future prospects rather than trying to analyse reasons for and extent of problems solved in the past.

Presently the Faculty of Health Science receive international support in the form of institutional collaboration with Linköping university in Sweden, Maastrich University in the Netherlands and Indiana University in the US. The organisational forms and scopes of these three collaborations differed in a way that enable interesting comparisons.

The Dutch collaboration with the faculty of Health Sciences was part of a general support to the university where the amount of support to the faculty of health sciences in financial terms was bigger than the Swedish support. This had the advantage that more costly activities and items could be financed through this programme. However, although a full time expatriate staff member was included to co-ordinate the project and that it was designed to be demand driven it seems as much of the daily decisions still laid in the hands of Dutch administrative officers outside the two collaborating institutions. This seemed to decrease the cost-effectiveness of the project and the higher degree of delegation from Sida to the partners was mentioned as a clear advantage of the Swedish support. Our observations made us agree. The research training was on the other hand well on its way within the Dutch collaboration whereas it had been delayed in the Swedish due to more unclear agreement about objectives between the partners and Sida.

The collaboration with Indiana university is based on American volunteers that raise the funding. This made the collaboration more adaptive to local needs than the government financed collaborations with Sweden and the Netherlands. The American collaboration included a financial support system for students that due to social class were unable to finance their studies. It is noteworthy that support from US had taken action against this inequity whereas the Dutch and Swedish government supported programmes had not. This can largely be attributed to differences in the source of funding. The individuals who donated the money are more motivated to

see direct support to students in greatest need. The Indiana collaboration is therefore complementary to the Dutch and Swedish collaboration. The latter two need more of co-ordination.

It was stated by several staff members at MU that having several but still only a few collaborating partners is optimal. It definitely increases the independence and possibility to gain relevant experiences for MU when collaborating with different European universities at the same time. In the following we will only refer to these related partnership collaborations when directly relevant for the activities within the MU-LU collaboration.

3.1 Medical education

The medical education at Moi university is a six years programme (Bachelor of Medicine and Bachelor of Surgery – MbChB). The last year is internship outside the faculty and the first six years comprises of four phases: Basic scientific concepts and principles, normal tissue and body systems, pathology and patient management. The goal is to produce medical doctors, who are relevant to the health setting in Kenya, particularly for implementing PHC, and other parts of the government health policies. PBL and COBES are important strategies in the medical education and its development has been the major component of the Sida supported collaboration with Linköping University.

COBES related courses account for 30% of the total student learning time and is integrated in each of the first five years of training. In year one and two, the COBES periods are 6 weeks long, three weeks in the class room and three in the field. In the first year the COBES period gives an introduction to basic epidemiology, behavioural sciences and management as well as an orientation to health centres and the community. The students write a report at the end of COBES-I. COBES-II is organised in the same way, but here students are exposed to more advanced community analysis techniques. In COBES-III, the students develop a research proposal, learning to apply the different techniques earlier learnt. In COBES-IV they carry out the proposed research and in COBES-V in their final year they have a longer period of district health service attachment (Table 2).

Table 2 . Structure of the COBES Programme in Medical Education at MU

COBES I	**Introduction to the community** Pre-COBES and COBES field activities a total of 7 weeks
COBES II	**Community diagnosis** Pre-COBES and COBES field activities account for 6 weeks
COBES III	**Urban investigative project I** Involves problem identification and proposal writing for a total of 6 weeks spread over a one year period
COBES IV	**Urban investigative project II** Involves conducting a research project developed in year III and report writing. Again a total of 6 weeks equivalent time is spread over one year
COBES V	**District health services attachment** Involves 5 weeks attachment to a District Hospital and 1 week used for report writing and presentation. Students cover clinical, management, administration and community health areas.

The COBES programme is now well functioning and a recent evaluation with structured questionnaires to students and teaching staff document that it seems to achieve the objectives to the degree that can be expected (Nangami 1998). The impressions we got from the evaluation, interviews and assisting training sessions made us quite impressed. Both teachers and students also seem satisfied with the programme and we could only identify two problems.

The major future problem is that COBES in its present form is a costly form of training since the participation of teachers in the community training requires allowances and transport costs that still partly are covered by the Sida funding. Experiences from similar community based learning programmes for medical students in neighbouring African countries indicate that the running cost of transporting and lodging students and teachers is the crucial issue for sustainability. MU is providing core budget for this and to maintain this budget line is crucial for sustainability, but the design may also be changed to decrease cost. No careful cost analysis of the alternative designs of the different components of COBES seems to have been done.

For COBES-I and II, students who are accompanied by a tutor spend three weeks at the selected five rural health centres. The cost for having a lecturer at the rural areas for three weeks is Ksh 21,000/-. This is the cost considered appropriate to attract lecturers, but given the current resource constraints at MU and the country in general, it is highly doubtful whether this can be maintained in its current form. Because most vehicles are given to the faculty of Health Sciences and the COBES programme from donors or the government, their cost is not reflected. The cost of COBES education is therefore currently underestimated.

Given also the innovative nature of the PBL and COBES, other aspects such as learning materials, lecturers, the District Health Management Teams within an environment where movement of district health professionals is not attuned to the needs of COBES will require constant reorientation, training and retraining, and hence recurrent funding. The very nature of COBES where attachment to district and rural health facilities is the basis on which COBES is organised raises the need for upgrading the health facilities, not just to make them viable for learning but also in providing accommodation for the attached students.

The other problem is that involved communities expect more of interventive health projects rather than only descriptive studies by students. Continuous documentation of health problems even if done in very participative manner is not motivating for the communities. The mainly descriptive field research, that has been carried out, does not respond to the needs of the communities. This problem has been fully identified by the teaching staff and the students projects are now being re-directed towards operational research reflecting community health problems. COBES-co-ordinators indicated, that few intervention projects have yet been carried out and a major restriction was once more funding. A description of a health problem is mostly cheaper than to do something about it. However, in the academic year 1997/98 some intervention studies have been started. They mostly focus on health education in the community.

A success story
One of the most interesting intervention projects was a community pharmacy established in collaboration between students and a peri-urban community of Eldoret. It was started using the prize money won by earlier students in a regional competition for good student projects. This shows the dedication of the teaching staff. Our field visit to this project revealed a most impressive example of productive interaction with the local community. Local leaders had mobilised a group of men to build a small house for the pharmacy and young volunteers were trained by the student and they were now running the pharmacy in a temporary building. Drugs were well chosen, the accounting regarding drugs sold was well kept and community auditing of funds was functioning. The small pharmacy provided the ten most essential drugs at less than a third of the prize in commercial outlets and this was already after some months a well known fact in the community. The student group had paid a number of visits to the community traveling by local bus to train the volunteers and to supervise the activity. Although prone to many types of failures the community pharmacy was a splendid example of "small is beautiful" and was one of the most stimulating success story we have seen in rural Africa.

The focus of COBES III-IV should change to intervention studies in order to avoid community fatigue and improve sustainability. In this context it would be of interest if more faculty members could start larger intervention studies as part of their PhD training. Such research projects could both provide PhD training for staff and enable involvment for students. Different groups of students could fit into them and have sub-projects within the larger projects

The designation in 1995 of the faculty of Health Sciences at MU as a *WHO collaborating centre* for PBL is an indication and recognition of its contribution to innovative medical education and practice. There are plans to make regular international courses for participants paying fees. In March 1998, training and orientation courses was organised for new faculty staff and clinical officers from St. Mary's Mumias College. The faculty members had done consultancies to Tumaini Christian Medical College in Tanzania, which is interested in setting up the PBL system. A Zambian scholar has also visited the centre to obtain insight regarding how PBL and COBES works. Within its short life of existence MU, is becoming a focal point for the PBL in the African Region, and this is an area where Sida support would increase the capacity of MU in its regional teaching role. In the same way as LU with its innovations has influenced medical training in the whole of Sweden MU should be supported to do the same in its region.

3.2 Staff exchange and development

The MU-LU collaboration was initiated based on MU's decision to start PBL, which was already established at LU. Staff members from MU thus visited LU to see PBL in practice in order to increase their knowledge and skills. Staff members from LU have participated in a number of seemingly successful staff development workshops in Kenya. During 1990–1998 about 27 staff visits have been made from MU to LU. During the past years the number of visits has dropped and in 1997 only two visits were made. One was by the co-ordinator and the other by a staff member involved in malaria research, one of the few research projects being implemented.

During the first phase of the project, staff from MU mainly concentrated on understanding how PBL operates. Later, the need to have research collaboration became apparent. The academic staff was therefore encouraged to prepare research proposals and look for relevant academic professionals in LU with whom to collaborate. From the interviews held with various academic staff, who have visited LU since 1992, it was very obvious that the exchange of experience of

PBL has been very successful indeed. However, there has not been a similar success in initiating research collaboration. Only a few of the studies proposed are being implemented and others are still being developed. An understandable problem for staff from MU has been to find suitable staff in LU with competence to supervise and collaborate in the areas identified by MU staff. This seems to have been overcome by now and the present delay in advancing with research training seems to have other reasons as discussed in the section about research.

The need to move from collaboration in PBL to research training not only applies to medicine. The new programmes including Bachelor of Science in Environmental Health and in Nursing Science may still need staff exchange to develop PBL but also research training for part of the staff. Staff exchange in other technical areas and in administration may also be beneficial in the future.

Staff members from LU have also participated in teaching, planning meetings and as external examiners at MU. Presently several retired professors at LU are actively involved in this collaboration and have participated in the staff exchange. In addition LU has initiated contact with voluntary organisations and has attracted individuals and people outside the university, who also have been involved in the exchange of staff. They have contributed both technical materials as computers and funds. However, it appears to us as the collaboration with Kenya is to a large extent organised and perceived as a humanitarian aid activity rather than a central professional activity for teaching and research about global health issues. The collaboration could probably be more fruitful if LU continues to develop the competence in international health among its staff members and added a more professional approach to the high degree of volontary motivation. The 1998 paper on internationalization by the Swedish National Agency for Higher Education should stimulate LU to that.

3.3 Student exchange:

The Moi-Linköping collaboration involves student exchange between the two institutions. During 1993 to 1998 a total of 47 students have exchanged visits as shown in Table 3.

Table 3: Student exchange 1993–1998

Year	From MU to LU	From LU to MU
1993	3	
1994		5
1995	7	
1996	5	2
1997	7	7
1998	4 (selected)	7
Total	26	21

The student exchange is part of their medical elective period of the Kenyan students and aims at providing them with an opportunity to acquire knowledge, skills and experience in areas of special interest. Students from MU spend about four to six weeks in Linköping and they are mainly attached to primary healthcare facilities and to the teaching hospital, where they rotate in different wards. The Kenyan students expressed concern about limited interaction with Swedish students. They may occasionally meet during ward rounds, but there is not enough systematic organisation for them to be together. Visiting students from LU join those of MU during their COBES attachment in the rural areas and in their clinical placement. Unlike MU, students

from LU, with few exceptions, do not use their time in Kenya for their medical elective periods. In spite of the PBL approach by LU the period in Kenya remains an extra-curriculum activity for most Swedish students.

The students from LU are selected through the International Unit of LU and are given orientation on practical information about Kenya. They do not attend any course in international health and are not provided with systematic learning material that introduces the students to the health situation in a country like Kenya. This was evident from an interview with the Swedish students on their arrival to Kenya. They were highly motivated, well prepared regarding practicalities and very well selected regarding suitable personalities. However, they were only aware of a few of the main diseases in Kenya and knew very little about the structure of the Kenyan health service system. Likewise students from Kenya do not go through any specific course in international health to prepare them for what they would meet in Europe. They, moreover, do not get much practical information. Students are left to informally make contacts with students, who previously visited LU or the Swedish students visiting MU. It also seems that they are not provided with learning material or teaching that helps them to structure their experiences of the wide differences in resources for health service between the two countries.

The Kenyan students were, however, reportedly happy about the exchange. Especially about interactions with Swedish students, and they would like more of student to student interaction. They were also positive to the idea of a course about the health and health service situation they would find in Sweden and Europe in general. The main problems reported by Kenyan students is the language barrier and time that is too short to allow any understanding of the routines and the Swedish health system in general. Students from LU thought, during an interview, that the Kenyan students were inactive. This may be due to the little preparation received about life in Sweden. The Kenyan students visiting LU were obviously surprised and unprepared regarding the technology in use in Swedish health facilities. One student described his experience as:

> *"In Sweden you do not need to study "doctor – patient interaction", you need to study "machine – patient interaction."*

There is limited summarised documentation available about the experiences of the students, but the project document 1995/98 states that: the experience of student exchange has been varying due to different cultures and experiences. Hence, it is important to have mature students in order to achieve the best effect. The student exchange definitely seems to be a valuable component with great potential to develop further towards more systematic learning and further integration of the period into the curriculum of the home university and more integration of the students into the student life of the university visited.

3.4 Nursing education

Staff at the Nursing Science Department at MU has up to now mainly been involved in and responsible for teaching of nursing skills to medical students, teaching of first aid to all students, tutorials for groups of medical students, and the COBES programmes for medical students. A Bachelor of Science in Nursing (BSN) degree programme was introduced at Nairobi University in 1993. The same programme will be initiated at MU in September 1998. This constitute an extension of and development to academic level compared to traditional nursing programmes.

LU has supported MU during the preparatory phase before introducing the BSN programme at MU. LU's experience in planning and executing a PBL curriculum is being shared with the Nursing Department at MU. Two lecturers from the Department of Nursing at MU have visited

LU. Two senior members of staff from the Department of Health and Environment at LU organised and held a workshop for development of the PBL curriculum in September 1995. Another workshop was held in June 1998 with the purpose of developing learning materials such as tutorial booklets and tutor guides. Materials have been prepared for the first two years of training, while those for the last two years still remain to be developed. There is need for one more workshop to complete the production of all learning materials required for the BSN programme.

There is also a need for academic and scientific training of the lecturers at the Nursing Science Department. The capacity of the department is at present limited. There are five teachers with a masters degree (one presently carrying out doctoral studies in Reading, UK) and two with a bachelor degree (one presently carrying out master training at MU). None holds a doctoral degree in the core subject "nursing science". The introduction of master programmes in nursing science requires building of competence in the department. Currently, nurses in Kenya have to go abroad for master and doctoral studies in nursing science.

3.5 Public and environmental health education

The Institute of Public Health is proposed to start during the academic year 1998/99 and the focus will be training of planners, managers, administrators as well as health promotion and disease prevention and control experts. The proposed curriculum comprises of six core courses including: Principles of Epidemiology, Principles of Public Health, Basic Biostatistics, Research Methods, Social dimensions of Health and Computer applications, with 9 area of specialisation in the MPH programme and 3 in the M.Phil., programme.

The Bachelor of Sciences in Environmental Health is already established and is in its third year of the four year programme. Main areas of the programme include Health promotion and education, pollution control, food quality control, occupational health and safety, health sanitation, enforcement of public health laws, participation in the development of health sector policies and public health training. In view of the similarity of the core courses, Public Health and Environmental Health Education may be combined. Moreover, the programmes as they are now are rather ambitious and will face the problem of financial sustainability. Their content is, however, most relevant and the MU-LU collaboration can contribute to a good development of this field but we had no time to enter in to details of the different options.

3.6 Research

Research has been an aim of the co-operation between MU and LU since the workplan of 1994/95, but this component has been slow in implementation compared to the success of the other components. This is in spite of both parties identifying an increased research capacity at the faculty of health sciences at MU as a prerequisite for sustainable development of the young faculty. In fact LU itself constitutes a very good example of how a young university rapidly can establish good research that interacts with the development of education. However, LU does not have much research directed towards global health problems and therefore an intensified research collaboration with MU is an excellent opportunity also for LU to widen its research scope through the MU-LU collaboration.

In the initial years, the collaboration entailed support for MU to establish PBL and COBES and included some research projects. Some of these studies have been done and published. How-

ever, it was soon realised that research collaboration without formal research training for MU staff would not result in a partnership in collaboration nor contribute to capacity building and a sustainable development of the staff at MU. In February 1997 staff members at MU were therefore invited to propose areas of research for a PhD degree. A preliminary list of 13 potential research training candidates was thus produced during a two week visit to MU by the retired Prof. Lewis from LU. This list was then presented to researchers at LU and during a visit in the fall of 1997 to LU by Dr Mining from MU potential supervisors were identified in Linköping for many of the candidates. Although two of the candidates are well on their way with their projects, no one has yet been formally registered as PhD students at LU. Funds are set aside for research collaboration but has only been partly spent in spite of mutual interest to advance. No detailed reason for this delay is given in the annual reports but from interviews and discussion it seems as the delay in research training is mainly due to the following three factors:

1. Unclarity in the work-plans for research training,
2. Unclarity about future funding for research training
3. Unclarity about how LU should organise this collaboration.

The work-plans and the three year plan of operation do not define that the research collaboration should include formal research training for staff members at MU. Several comments indicate that co-ordinators and other senior staff at both MU and LU did not know if Sida really would be willing to fund research training. We have not found any indication that the merging of SIDA and SAREC one and a half years ago have made any difference on this point. On the other hand we have not found any indication that Sida would not accept to finance research training. Potential supervisors in LU seem to have been reluctant to assume the responsibility for PhD students from MU due to the unclear financial arrangements, in spite of the interest in suggested research areas and motivation to assist in developing the research capacity of the partner university in Kenya. It also seems that LU and MU have not made any formal proposal to Sida on how they would like to organise the research training programme and they have not outlined in writing how the faculties would like to get organised to advance in this field.

The basis for active research is established at MU and basic funding made available through the government. A competent administration is in place, scientific information available in a well organised library and connection to internet recently achieved. All proposed candidates have a secure position and research possibilities at MU, which is crucial for a long term effect of research training to professionals from a country such as Kenya. The prerequisite is thus in place for support from Sida and collaboration with LU in developing the research capability of this new university in Kenya according to established principles (Olsson B 1995). Staff at MU has observed the need for LU to make a senior researcher available as an academic co-ordinator for this activity. MU express willingness to set aside some funds for this within the budget. With the new Sida organisation a combined support for a MU-LU partnership collaboration in education *and* research can be a most productive form for developing university partnership. In the view of the Sida policy for partnership and development of competence in both African and Swedish institutions, support to a partnership between LU and MU seems to be a "dream project".

Several of the formerly identified PhD candidates, and one additional that recently participated in a Sida funded (INEC) course in maternal health, remains most suitable for research training at LU (Table 4).

Table 4: Senior teaching staff with and without research training at the faculty of health sciences at MU.

	Total number	With PhD	In PhD training
Professors and associate professors	13	13	
Senior lecturers and lecturers	64	5	5 (+5 planned)

Five subjects are in research training within the Dutch collaboration with focus on nutrition and hopefully another five will be able to get a PhD in basic sciences through the collaboration with Indiana University in the US. This means there remains 49 lecturers to fund for research training. If training for the seven persons identified below could be included in the MU-LU collaboration, this would result in a balanced increase in capacity with an optimal trade-off between the short term need for teachers and the long term need for capacity building. There is *an urgent need* for assurance to LU and MU about future funding for research training. Funds are available for starting in the fall of 1998. Number 1 and 2 in table 5 seem to be ready for registration and it seems fully possible to get started with several of number 3 to 7 during the 1998/99 academic year.

Table 5: Research students identified

Nr.	Name	Dept	Project area	Sex
1	Fabian Esamai	Child health	Malaria	male
2	Edwin Were	Reproductive health	Cervix cancer	male
3	Teresa Njau	Nursing	Diarrhoea	female
4	Isabela Mbai	Nursing	Safe motherhood	female
5	Joice Baliddwa	Behavioural science	Infant feeding	female
6	Augustin Ngindu	Microbiology	Tuberculosis	male
7	Willis Ochieng	Forensic medicine	Occupational health	male

We noted with satisfaction that all projects concern major health problems in Kenya. All PhD projects are furthermore planned as sandwich programmes with field studies and clinical studies to be done at MU. The good gender balance is to be noted, and should be maintained in the future. However, many projects are currently oriented towards laboratory rather than community studies but a positive development towards the later was noted. The reason may be lack of competence for community based studies in the Kenyan context by supervisors in Linköping. This may be solved by involving supervisors from other universities.

The existing project research training plans for number 3–7 needs to be revised and developed during some months stay at LU. The past delays in this programme and experiences from similar programmes indicate that it is better to start with a small group of PhD students than with only one or two. The reason being that this enables the organisation of some joint courses, a joint organisation and the allocation of resources for an academic co-ordinator.

The faculty of health sciences at LU has hardly benefited from any support from Sida for staff development in international health. Neither has LU allocated any of their own resources for staff development within international health. If this programme could finance a half time academic co-ordinator and the faculty set aside a half time post in international health it seems obvious that the PhD programme for MU could advance rapidly. Additionally LU will gain considerable experiences in international health and follow the development of other Scandinavian faculties of health in this field.

3.7 Gender

Like in most other institutions in Kenya, gender disparities exist at MU. Only 15% of the academic positions are held by women, and the women are mainly appointed at lower levels as tutorial fellows, assistant lecturers and lecturers. Among the support staff, women outnumber men and are mostly hired for service jobs such as clerks, typists and secretaries. The student population reveal a low representation of females, about 20%. There does not seem to be a conscious effort to send equal numbers of males and females in the student exchange programme.

The positive aspect is, however, that MU has made special efforts to increase gender sensitivity in its programmes. At a general level, MU has introduced a scheme for paternity leave of two weeks, making MU the first institution of its kind in Africa. Women at MU have made initiatives which are now being supported by the University leadership. In 1995, a group of women in the faculty of health sciences at MU initiated a body to cater for the needs of female medical students. This evolved into a Bureau for Women Studies. Subsequently, a workshop funded by DANIDA was organised in February 1997 with objectives to revise the name of the organisation, set priorities, objectives, policy guidelines and the constitution. A seminar is planned to take place in the coming weeks to discuss and finalise the draft proposal for establishing Institute of Gender Development and Research (IGDR), to be presented to the senate.

In spite of the change of name to reflect gender concerns, it is hoped that it will not be left to women alone to organise IGDR as it now seems to be the case. The consultants raised this concern and were informed that men will also be involved.

Important at this point in time is perhaps not to establish a fullfledged institute, but rather stimulate more the process of streamlining gender in all existing programmes. It is necessary to strengthen the task force to take care of the process. Such a task force can ensure that gender concerns are addressed in all fields of MU.

3.8 Library and Learning Resource Centre

The library at the faculty of health sciencs at MU is well stocked with books, having 13,000 pieces on various areas of medicine, biological sciences, behavioural sciences and other disciplines. It subscribes to over 30 national and international journals, 15 of which are financed through the MU-LU collaboration. It is now connected to internet and has a CD-ROM supplied by the Indiana University, that facilitates search on Healthnet, Medline and Opac.

A way of sustaining the library that heavily depend on foreign funds for subscription, seems to be that subscribing to journals be reduced after a user analysis is conducted, and more investment is made in the IT to strengthen the connection to the internet. We noted an impressive cost-effective use of IT resources. Donated second hand computers from the LU as well as the Dutch collaboration were indeed in active use. Staff competence was being developed on critical IT functions and the internet connection had been successfully achieved through minor Sida funding using a local net-operator rather than through a more costly project from another donor that was still not operational. We perceive the flexible and successful way in which the IT technology development have been included in the MU-LU collaboration as an example of the strength and cost-effectiveness of partnership programmes.

3.9 Programme and financial organisation

MU has, with support from LU, now successfully established PBL and COBES in their medical education. The first group of students under this programme have graduated. Reports from external examiners including those from Nairobi University are reportedly positive. Presentation of research proposals by COBES-III students, and our interviews with 5th year students indicate a high quality of medical students. The students were confident and articulate. In addition, the students were positive to the approach because it trained them to see problems from the eyes of patients and community members.

However, all these positive developments, emphasise the need to move towards new objectives in the collaboration. This have partly been successful as in IT support, but not so successful in research training. Although proposed research areas concern major health problem any of them are far from community oriented and thereby do not match the educational goals of COBES. It seems LU has not had the full capacity to meet the new emerging demands of MU.

It may be that besides an administrative co-ordinator, LU would need a scientific (or academic) co-ordinator recruited to create a proper environment for research training collaboration. It also seems as the partnership would improve further if LU more looked upon as a way to improve its "professional capacity" regarding global health issues rather than as a way of "giving aid" to a sister institution in need.

The collaboration is planned through joint development of annual work-plans and budgets using visits to each others universities by the co-ordinators or through fax and e-mail communication. Since no special visits are done for the annual planning the work-plans remains slightly ad hoc, especially at present at the end of a three year support and with an ongoing evaluation. While the establishment of workplan and budget, transfer of money and communication seems to function relatively well at present, the financial and activity reporting is still not optimal. The planning can be improved but should remain demand driven.

The execution of the programme activities at each university and the co-ordination between the universities are managed by a co-ordinator nominated by the dean at each faculty. During the last years the co-ordinator have since January 1996 been Dr Simon Mining, senior lecturer, Dept of Immunology at MU and since several years Inger Sandström, faculty administrator, at the Faculty of Health Science LU. Both partners strongly agree that the main problem in earlier years was the unreliable telephone and fax communications between these co-ordinators. However this has immensely improved since well-functional e-mail links have been established and maintained. We also noted a very good working relation between the co-ordinators and many examples were given on fast solutions to various problems via e-mail. This is in spite of LU having chosen an administrator as co-ordinator, whereas MU has chosen as co-ordinator a scientist that work closely with an accountant at the financial department of the faculty of health sciences that takes care of the financial issues. It does seem as the manual accounting in Kenya provides faster financial information than does the computerised in Sweden.

In the first 4 years the annual budget as well as financial reports that were submitted to Sida had separate budget posts for LU and MU, but since 1995 the budgets and reports communicated to Sida only partly separate the budget posts between MU and LU. However, internally the two partners make a further separation of the budgets posts between the universities to obtain a budget that serves as basis for the transfer of funds. During all three years of the last agreement period the transfers of funds have been done similarly in the way described below. Money

transfer presently take less than 10 days from Linköping to Eldoret and is done without any major problems. The annual accounting for this project is done in a separate book at MU by the regular financial officer of the faculty for health science. One page is kept for each budget. This book and vouchers for each expenditure is kept in very good order.

The transfer of funds and financial reporting has not been well co-ordinated (table 6). MU have had to report to Sida-Nairobi before they have closed the financial year in the accounting and often before MU have received reports from Linköping on their expenditures. However, neither MU nor LU close their annual accounts at the time of annual reports. Funds not used are correctly reported as remaining and are hence continued to be spent during the next financial year, but these expenditures do not seem to be included in the subsequent annual financial report. A compilation of the annual reports therefore indicate an under spending that is not real and neither the two parties nor Sida can therefore have a clear overview of the detailed financial expenditures during the three year agreement period. The best possible overview from annual reports is given in table 7.

It also seems as great effort has been made to keep within the allocation for different budget lines. Thereby costs have been transferred from one line to the other rather than adjusting the allocations from one year to the next. In fact it does not seem as if the financial output is much used for the planning of the collaboration. Linköping needs to provide financial output in time for MU's reporting to Sida. Remaining funds from one year should be included in the reporting of next year. Costs should be placed on the appropriate budget line, and focus should be shifted to the total budget.

Table 6: Financial transfers from Sida to LU

Date year/month/day	Amount in SEK
960222	900,000
960806	900,000
961025	850,000
970630	850,000
980106	850,000
Total	4,350,000

1. At irregular intervals LU request transfer of funds corresponding to 6 months activities from Sida-Nairobi.
2. Sida-Nairobi sends clearance for transfer to Sida-Stockholm.
3. Sida-Stockholm transfer funds to LU.
4. Based on the mutually agreed budget LU keep part of these funds and transfer the rest to MU.
5. When MU has spent the funds received, they report back to LU with photocopies of all vouchers and requets an new allocation.
6. At the end of the Kenyan financial year LU sends an expenditure report to MU
7. At the end of the Kenyan financial year MU sends an annual financial report of theirs and Lu's expediture to MOH in Nairobi that reports to Sida-Nairobi.

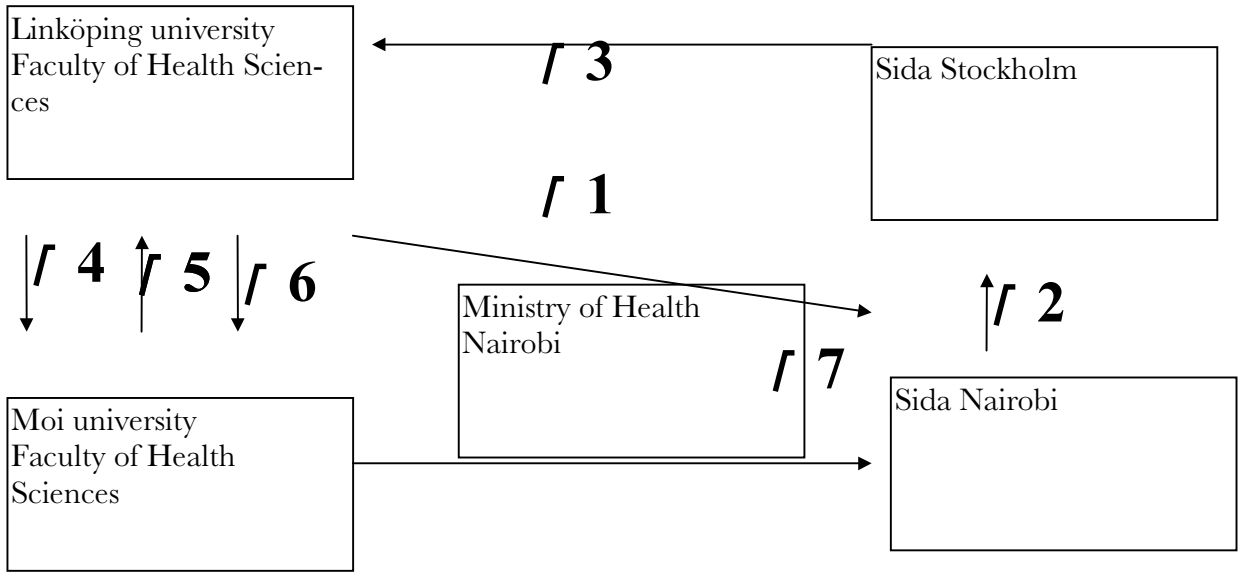

Figure 1: The seven steps in the current routines for transfer of funds and financial reporting

Table 7 Budgets and reported ***expenditures*** *for each budget year by the Sida supported collaboration between the health science faculties and Moi university, Kenya and Linköping university, Sweden.*

	Library MU	**Staff ex-change MU**	**Staff ex-change LU**	**Stud ex-change MU**	**Stud ex-change LU**	**Staff**	**Staff develop.LU**	**Rural facilities COBES MU**	**Rural facilities LU**	**Research**	**Admin.**	**Grand total**	**KSH per SEK**
90/91B	1260	304	1216			380		380	190			4072	
expend.												*4072*	
91/92B		580	686	496	328	1378	136	1794	542			5941	
expend												*1117 **	
92/93B	1200	664	686	744	492	1525	204	1350	436		200	7500	4
expend												*7403*	
93/94B	2173	1268	1204	1398	810	3077	384	3519	606		320	14760	
expend												*1509**	
94/95B												14800	
expend	*1372*	*2387*				*1628*		*5042*				*10431*	
95/96B												12700	
expend	*1441*	*2250**	*0*	***	*0*	*2550*		*2661*		*595*	*102*	*9192*	
96/97B	1400	1700	850	1100	700	1700		1900		4100	1000	14450	8.5
expend	*1300*	*0*	*578*	*516*	*672*	*1883*		*1262*		*2090*	*956*	*9258*	
97/98B	1400	1700	750	1100	700	1060		1790		3700	1000	13197	7,76
expend	*639*	*0*	*23*	*738*	*0*	*583*		*610*		*283*	*505*	*3382*	

- Value given is an estimate for the budget line since data was not available for the format of the column, or data only refers to a part of the year or is incomplete in some other way

4. Conclusions and recommendations

The collaboration between the faculties of health scinences at MU and LU has been successful and has developed into a partnership in several fields. Many of the first objectives have been achieved and new objectives have been set. However, the organisational set-up and the specifications of the annual plans have not been changed sufficiently to meet the needs of these new objectives. If this is done the partnership has great potentials for fulfilling the new objectives. We therefore recommend a continued and increased support, mainly to the new fields whereas others can be excluded since the objectives already have been achieved, as specified below.

4.1. Medical education and WHO collaboration centre.

These training modules in each year has been exceptionally well developed, as documented by internal evaluation, interviews with students, review of the curriculum and study of the reports produced. The same can also be said about the PBL of the general part of the medical programme. It remains to estimate the cost-effectiveness and sustainability of the different parts of this teaching and to make necessary revisions based on the findings. Collaboration between MU and LU can be useful for this and this activity can be included under the WHO collaborative centre. Support to more interactive research products can be included under research training as suggested below.

The nomination of MU as WHO collaboration centre for problem based learning in health sciences confirms the success of the past years development. Through regional courses the experiences can be fast shared with many other similar universities in Africa. It could also be used to make economic assessments of different educational approaches as well as the general effect on education of different financial arrangements. This would be of great use at the present situation in many neighbouring countries as well as in Kenya.

Recommendation: The support for COBES in medical education can be stopped but collaboration regarding the WHO-collaborative centre should be supported.

4.2. Educational approaches and staff development, and staff exchange.

These general activities for the teaching staff have been essential for the good development of the teaching and the general collaboration but at present there does not seem to be any need for such unspecified activities. Exchange with specific aim can be included in the activities suggested and also under administration for general planning.

Recommendation: The support for this activity can be stopped.

4.3. Under-graduate student exchange

This is much appreciated and is organised in a cost-effective way. However the periods for students in Linköping and Eldoret mainly results in new experiences. The two parties should develop this exchange to include much more of learning. If linked to the research students mentioned below an educational component should be possible to develop fast in both universities. Joint courses in international health for students from both universities and different training programmes may be considered. If new forms of student exchange can be developed this can

merit higher budget allocation for this activity. Especially if it is better integrated with the different educational programmes.

Recommendation: Support to student exchange should continue but this exchange should be developed to include learning with clear objectives for each student.

4.4 Nursing education programme

Moi university now develops a number of professional training programmes in the health sector that deserves collaboration and support. But the future activities suggested below should be well co-ordinated with those of other collaborative programmes, specially those with Maastricht university in the Netherlands.

A productive collaboration exists between the partners regarding the nursing programme to start in the fall of 1998. This collaboration is of interest for both partners and it seems as collaboration aiming at specific programmes will be a more productive way to collaborate in he future than the initial general collaboration on educational methods.

Recommendation: Support should be given to collaboration in the nursing programme.

4.5 Public and environmental health programmes

An ongoing programme in environmental health and a planned expansion into public health, including health economics. deserves support. The planning is relevant, but it needs discussion and exchange to define how it is best advanced.

Recommendation: Support should be given to collaboration in the public and environmental health programme based on the partners suggestion

4.6. Research training

The greatest need for the faculties is to expand the research collaboration. Experiences from similar situations indicate that this is best done by granting fellowships for research training to 5–10 staff members from Moi university with supervisor in Linköping and assistant supervisors in Eldoret. A very positive preparation has been done, capable candidates are identified and relevant research areas planned. The reason this has not advanced is that all involved have been unclear about what could be done within the frames of the present agreement and how the co-ordination should be best organised. It is suggested that identified candidates should be registered in the second part of 1998 and advance with their research training. With the inclusion of an academic co-ordinator in Linköping the programme could include 5–10 students.

Recommendation: It should be clear that research training of staff at Moi university should be an objective and defined annual PhD grants should be allocated for each group of supervisors-student pairs. An academic co-ordinator should be nominated in Linköping. The financial allocation for this component should be increased.

The Kenyan medical students intervention research projects (which have similarity to Sida sponsored minor field studies) are being well developed. To avoid community fatigue, student projects need to include intervention and such can be achieved at a cost of about 10.000 Ksh per student. This development is innovative and we have seen exceptionally good examples that can

be of great general importance for other training institutions. The projects can often be linked to PhD projects as discussed earlier under COBES.

Recommendation: Support should be given to collaboration on students intervention research projects.

4.7 Gender

MU has made special efforts to increase gender sensitivity but the idea of establishing a separate IGDR in the current form may lead to isolation and marginalization of women in their own institute, rather than addressing the gender disparities in the different institution and programmes at MU.

Recommendation: support to streamline gender within the existing programmes by a co-ordinating task force may be better than a separate and new institute.

4.8. Library and information technology

A functional, well used library with competent staff has been developed. Subscription of journals and purchase of books still depend on external funding but support is received from many sources for this. The activities under this budget line in the Swedish collaboration has in the last year increasingly and successfully been used for information technology development and that is recommended to continue under a new budget line. A very effective collaboration has been started in this field with well balanced purchase of material, external support and staff development. It is suggested that sufficient support is given to this collaboration in the future to let it serve as an example of how fast IT use can advance in an African faculty of health science. Linköping university is in an excellent collaborative partner for this.

Recommendation: The general support for the library can be stopped but support for IT development should be given

4.9. Administration

This is well functional, but financial reporting can be improved. The system with high degree of delegation from deans to co-ordinators should be maintained.

Recommendation: Administration should be maintained, with some improvements and addition of an academic co-ordinator for research training at Linköping university.

6. Lessons learnt

The MU-LU collaboration clearly show that it is possible to establish PBL and COBES in countries where resource are scarce. It is also clear that establishing such innovative systems of learning may require innovative ways of making the programme sustainable. Unit cost analysis is relevant at the start of such programmes. Partnership collaboration between Swedish universities and universities in Sida supported countries has potentials to be a valuable part of Swedish development collaboration. Such projects may be most cost-effective if they include several aspects of the university activities so that collaboration in research training can be used in undergraduate student exchange and if collaboration in library development could benefit from collaboration in staff development regarding financial administration, etc.

University partnership are a challenge to Swedish universities that should regard global collaboration as a central professional task for the future rather than a humanitarian oriented side-activity. Universities should be very active in proposing new forms of collaboration to the new Sida that in its turn can benefit from such partnership projects because they bring the merged parts of Sida into closer contacts. University partnership may be especially useful to bring development support to ministries into more active contacts with support to research in corresponding fields. Swedish and foreign universities can benefit from exchange of experiences regarding design and administration of partnership programmes and how to integrate such programmes into regular courses, curriculum and research training programmes.

7. Acknowledgements

We thank the staff at LU and MU, MOH and MOE and all the individuals and groups we met during this evaluation for their openness in providing the information and documents we required. Thanks also go to Sida for assigning IHCAR to carry out the evaluation and for the support given, especially by the Nairobi office and to the co-ordinator and staff at MU.

Annex 1

1998-03-17

Anders Nordström/
Lena Schildt

Diarienummer: 1.2.3.5

TERMS OF REFERENCE FOR THE EVALUATION OF THE MOI-LINKÖPING UNIVERSITY FHS COLLABORATION 1990/91 - 1997

1. BACKGROUND

Moi University was established in 1984 with the objective to focus on problems of rural development in its training and research programmes in addition to a practical orientation. The initial intake of students was 83. In 1997 the student enrollment stands at 5594 including 456 graduates. The academic year 1997 a total of 1186 students graduated from six different faculties. The academic staff number is 608 and supportive staff 1335.

In its endeavour to fulfill its objectives and mission, the University has been vigourosly pursuing teaching, research and related activities aimed at enhancing the academic potential. Towards these goals, the University has in collaboration with local and international institutions, undertaken various projects which are of major significance to academic pursuits.

The Moi- Linköping University collaboration started in 1990 emanating from a joint interest for problem and community based learning. The numbers of medical students at Moi have risen from 40 to over 300. And the first 18 medical students (5 females) graduated in 1997. Several new programmes have been developed: B.Sc. in Environmental Health (20 students in 1995/96); a postgraduate programme in Master of Philosophy in Medical Education has been approved and will commence 1997/98; Nursing Science will admit the first students in 1998/99; the curricula for promotive health programmes (Diploma and Masters in Health Promotion) as well as B.Sc for Laboratory Technology are awaiting implementation. The development of all these programmes is in line with the health sector reform recommendations of multidisciplinary training of health professionals. The programme was audited in 1994 as well as evaluated. (Ref. Coopers & Lybrand audit reports for 1990/91 - 1992/93, and "Evaluation of ...../to be completed...)

The objectives of the programme are to:

- Promote problem-solving, teamwork, reasoning, management and information searching skills among health workers and students.
- Improve the quality of health care services in the community by availing specifically trained doctors and other health professionals.

- Upgrade Primary Health Care by improving community participation and integrating hospital services.
- Increase and improve the resources for training and implementation of health services both in the library and in the skills training centre.
- Improve competence and capacity of health professionals through student and staff exchange.
- Support capacity building of staff through collaborative research activities on common priority health problems.
- Collaborate with other Sida-supported programmes and activities both within the health sector but also - if possible - within agriculture and water.

The Swedish support, totally amounting to ca SEK 11-12 million (1990 to 1997) has mainly been used for COBES training and research; educational approaches and staff development; library development, research and training; staff and students exchange; collaboration with other health programmes; procurement of teaching materials and administration.

2. PURPOSE AND SCOPE OF THE EVALUATION

During 1998 the whole Swedish Health Sector Co-operation in Kenya will be reviewed and as part of developing the new Country Strategy the future Development Co-operation in Kenya will be determined.

It will be important to clearly describe progress and possible success for the different health programmes as part of this process as well as for planning for future co-operation in the health sector in Kenya.

The experiences from the Moi-Linköping collaboration is also relevant for other countries in the region. Gaining more experiences from institutional development through institutional collaboration as a form of development co-operation is of general and great interest for Sida as an agency.

3. THE ASSIGNMENT (ISSUES TO BE COVERED IN THE EVALUATION)

The evaluation team shall:

i) describe the project and its implementation since the start 1990 in terms of objectives, main activities and inputs (financial and technical);

ii) analyse whether the objectives have been fulfilled and what main outputs have been achieved and if possible also show whether long-term effects, according to over-all objectives have been obtained;

iii) specifically describe the students and teachers respective views and perception of the problem as well as community based approach for teaching;

iv) specifically describe the outcome of the operational research projects in terms of building national research capacity and individual research training and production;

v) analyse gender differences in terms of participation and success;

vi) describe and analyse the relevance of the project in the Kenya setting;

vii) describe and analyse the Institutional Collaboration approach in terms of achieving mutual Institutional Development;

viii) describe and discuss whether the costs have been reasonable in relation to achievements and development;

ix) analyse the long term sustainability of the project and make recommendations regarding future Sida support.

4. METHODOLOGY, EVALUATION TEAM AND TIMESCHEDULE

The Evaluation team shall take part of relevant background material i.e. project documents and annual workplans, budgets and reports. Other documents describing the Swedish Health Co-operation in Kenya as well as more general documents on Institutional Development and Problem Based Learning are also relevant.

Both Linköping and Moi Universities shall be visited and key informants interviewed (students, teachers and co-ordinators). The Swedish Embassy in Nairobi, the Health Division at Sida H.q. , Linköping University and relevant departments of the Ministry of Health shall be visited.

At least 10 days shall be spent in Kenya and the full assignment shall be completed before the end of July 1998.

The evaluation team shall both collect qualitative data i.e. mainly from interviews as well as quantitative data on e.g. numbers of students, funds disbursed, through the annual reports.

The team shall consist of 2-3 persons with experience from

- higher education (medical and nursing training),
- problem and community based teaching,
- Africa (preferably Kenya or the East African region)
- Public Health Training and Research in Sweden

In Kenya the team shall work closely with relevant staff from Moi University as well as from the Ministry of Health in Nairobi.

5 REPORTING

The evaluation report shall be written in English and should not exceed 20 pages, excluding annexes. Format and outline of the report shall follow the guidelines in **Sida Evaluation Report - a Standardised Format** (see Annex 1). Five copies of the draft report shall be submitted to Sida no later than 15 July 1998. Within two weeks after receiving Sida's comments on the draft report, a final version in 10 copies and on diskette shall be submitted to Sida. Subject to decision by Sida, the report will be published and distributed as a publication within the Sida Evaluations series. The evaluation report shall be written in Word 6.0 for Windows (or in a compatible format) and should be presented in a way that enables publication without further editing.

The evaluation assignment includes the production of a Newsletter summary following the guidelines in **Sida Evaluations Newsletter – Guidelines for Evaluation Managers and Consultants** (Annex 2) and also the completion of **Sida Evaluations Data Work Sheet** (Annex 3). The separate summary and a completed Data Work Sheet shall be submitted to Sida along with the (final) draft report.

A seminar shall be arranged at the end of the assignment period in Kenya, with representatives from Moi and Linköping Universities, the MoH and Sida . The seminar will be arranged by the Swedish Embassy and the Evaluation Team shall present their preliminary conclusions.

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Annex 2

Persons interviewed during the evaluation

Moi University (MU)

Professor J. Irina	Vice Chancellor,
Dr J.K. Sang	Chief Adm. Officer,
	Public Relation Officer,

Ministry of Education (MOE)

Mr P.K. Lagat	Deputy Director of Education

Ministry of Health

Dr Gaturuku	Director, Promotive and Preventive Health
Dr Gakuru	Director, Human Resource Develop.
Ms Helena Perry	Health Co-ordinator Sida Projects

Sida – Swedish Embassy, Nairobi

Ms Lena Schildt-Herring	Programme Officer, Health,

Moi Faculty of Health Sciences

Prof. H.N.K. Arap Mengech	Dean of the FHS
DR S.K. Mining	Senior Lecturer, Immunology Co-ordinator MU-LU Coll.
Dr F. Esmai	Senior Lecturer & Head of Dept. of Child Health & Paediatrics
Mr B. Mangera	Lecturer & Head of Dept. of Nursing Science
Dr O. Nyunya	Lecturer, Reproductive Health Dept.
Dr A.C. Maritim	Senior Lecturer and Head of Dept. of Pharmacology and co-ordinator Moi-Indians FH Collaboration
Dr E. Were	Senior Lecturer & Head of Dept. of Reproductive Health
Dr W. Odero	Senior Lecturer & Head of Dept. of Health Management and Health Economics
Mr W Ocheing	Librarian
Prof. P. Kenya	Head of dept. of Epidemiology & Preventive Health, Chairperson of COBES
Dr S.K. Ndege	COBES I-II Co-ordinator
Dr M. Wierik	COBES III Co-ordinator
Dr D. Menya	COBES IV Co-ordinator
Dr M. Nangami	COBES V Co-ordinator
Dr D Ngare	Senior Lecturer & Head of Dept. of Behavioural Sciences
Ms Isabela Mbai	Lecturer, Dept. of Nursing Science
Mr C. Nyiro	Public Relations Officer, MU

Student groups
Fourth year students selected to visit LU

Students, who had been in LU

Linköping University (LU)

Ms Inger Sandström	Faculty Administrator and Co-ordinator of MU/LU Coll.
Prof. Per Bjurulf	Retired Professor of Public Health
Dr Pia Forsberg	Associate professor, Dept. of Infectious Diseases
Prof. Å. Wastesson	Former dean of Faculty of Health Sciences
Dr Per Alsen	Physician in family medicine

Student group
Students, who were visiting MU from LU

Annex 3

List of Meetings

Linköping University

1. Meeting with the Co-ordinator and relevant university administrators and other involved in the project at the Linköping FHS, 23rd April.

Moi University

1. Meeting with the Deputy Director of Medical Services, who is also director of preventive and promotive health, director of human resources at MOH, Sida representatives and Moi-Linköping co-ordinator in Kenya, 12th June 1998.
2. Lunch meeting with co-ordinators of various programmes – continuing education, rehabilitation of the disabled persons, environmental health, reproductive health and gender and health, 12th June 1998.
3. Meeting with the Dean of Moi FHS at his office 15th June 1998.
4. Meeting with Dr Wilson Odero the COBES deputy chairperson, 15th June 1998.
5. Meeting with four COBES co-ordinators 15th June 1998.
6. Participation in the presentation of research proposals by COBES 3 students, 16th June 1998
7. Visit to the printing section, 16th June 1998.
8. Meeting with the computer analyst and visit to student and staff computer rooms, 15th June 1998.
9. Meeting with the vice chancellor, Public relations Officer, University administrative officer 17th June 1998.
10. Meeting with the community group involved in the Bamako initiative in collaboration with the COBES students, 17th June, (EJ and HR).
11. Meeting with the Assistant Director of higher education, 19th June (BMA and EJ)
12. Wrap-up meeting with the Dean at Medical Faculty, Moi university, 18th June (HR, BMJ and EJ).

Annex 4

List of Interviews

1. Interview with lecturer in Department of Nursing Science (EJ), 16th June 1998.
2. Interview with two COBES co-ordinators for more clarification (BMA), 16th June 1998
3. Interview with the Moi-Linköping co-ordinator and financial officer (HR), 16th June 1998.
4. Interview with lecturers who have visited Linköping (Dr Were-gynaecologist, Dr B. Otieno Nyunya-Gynaecologist, Dr Mary Maritim-Pharmacologist, Mr Benson Mang'era-Nursing science, Ms Susan Chebet-Gender Institute/Administrator (BMA), 17th June.
5. Interview with a 6th year student on his visit to Linköping (BMA), 17th June.
6. Interview with two other collaborations – Maastricht and Indiana Universities (HR)
7. Interview with the Librarian (EJ), 17th June.
8. Interview with the co-ordinator of Public Health Institute (HR) 17th June.
9. Group interview with newly arrived students from Linköping in Nairobi, 13th June 1998.
10. Group interview with five 5th year students on their experiences with COBES
11. Group interview with four 4th year male students to visit Sweden in October 1998.

Annex 5

List of documentation and other references

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Department for Latin America

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Department for Natural Resources and the Environment

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