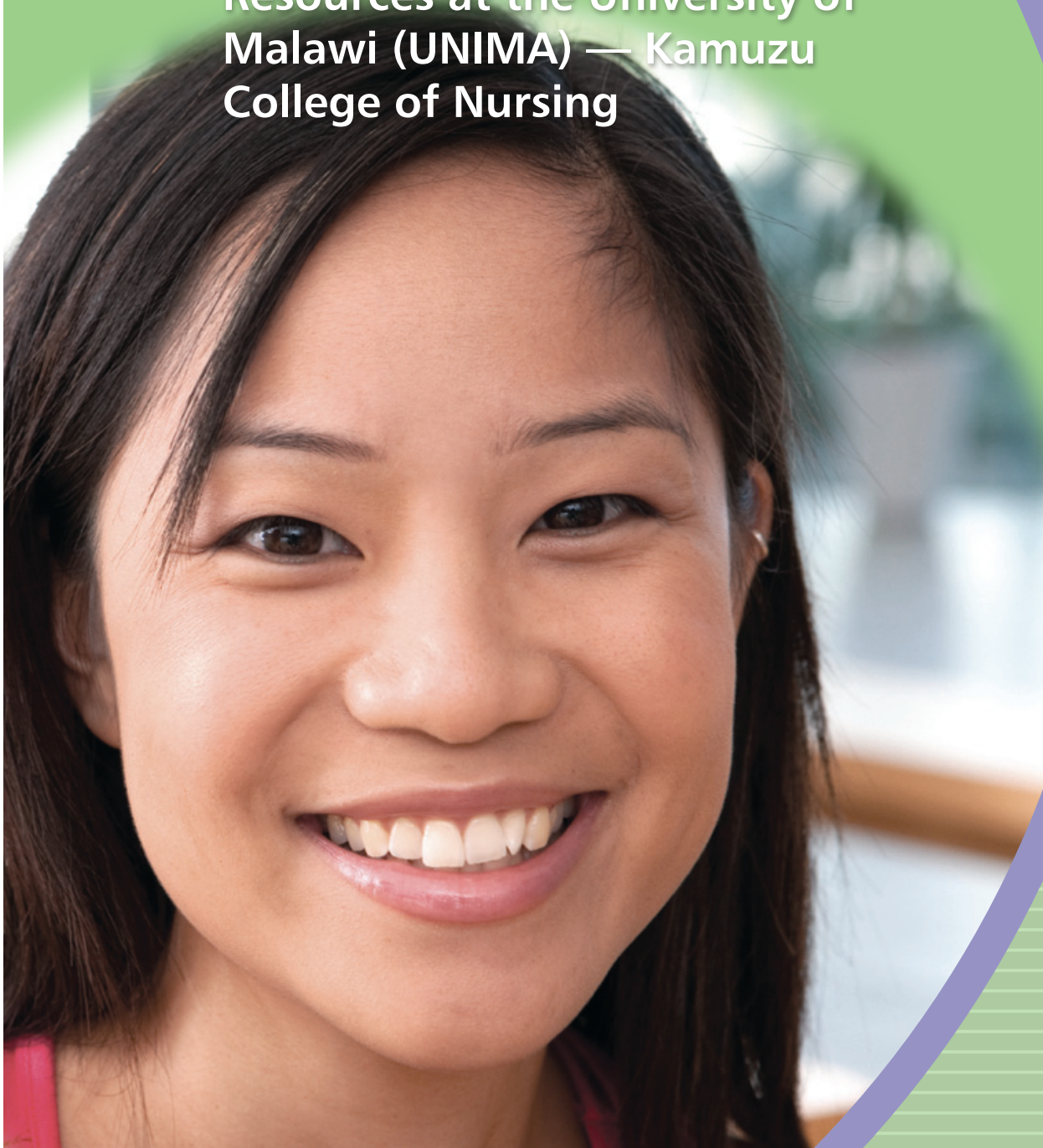# Case Study:

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The Use of Open Education Resources at the University of Malawi (UNIMA) — Kamuzu College of Nursing

Case Study: The Use of Open Education Resources at the University of Malawi (UNIMA) - Kamuzu College of Nursing

ABSTRACT:

Background: Kamuzu College of Nursing (KCN) a constituent college of the University of Malawi (UNIMA) was upgraded to a full constituent college status in 1979. Its history can be traced back from 1965 when it was called a National School of Nursing. It has two campuses Lilongwe (LL) main campus and Blantyre (BT), separated by 300kms. Its mission is "to provide quality, comprehensive and cost effective nursing, midwifery and other Health related educational programmes in response to societal needs, utilizing the primary health care and outcome based approaches through teaching, research, service provision and consultancy to promote the health of the people of Malawi, Africa and beyond."

Open Education Resources (OER) pilot project, is one of the programs for KCN to achieve its mission and vision because its use will improve the quality of teaching material as well as methods of teaching. This program was facilitated by the International Association for Digital Publications, OER Africa. The program was planned in August, 2008, and commenced in January 2009. It had three specific goals;
1. To Increase understanding of OER and address issues common across OER projects,
2. To build capacity by creating college OER champions that would advocate creation and production of OER and share lessons learned in the creation of OER materials through pilot projects.
3. To develop digital materials from OER that would support the teaching of a Certificate Course of Midwifery using Problem Based Methodology

Design and Methods: The pilot project model was based upon the participatory empowerment model by Fetterman. The model is designed to help organizations assess and improve their functioning by establishing mechanisms that allow aligning theory with action.

Findings:. The major findings of the pilot project were that; open education resources (OER) can provide significant components to assist in providing higher education as they benefit both faculty and students (need to elaborate on benefits to the student after you summarize the faculty benefits. specifically faculty preparation time is reduced. Produced materials are of high quality and faculty is able to learn and share with other academic institutions. The pilot provided new knowledge regarding methods for accessing academic information; the creation and production of educational materials for teaching and learning; and for publishing as well as sharing information. Faculty exhibit more confidence when they know that their work is of high quality. Faculty appreciated the core concept of OER which asserts that the teacher is not the sole custodian of information rather faculty and students learn from each other. Faculty, students and management understanding of the significance of OER was paramount for OER activities, implementation and sustainability. The pilot revealed that sustainability of any project/program is dependent on institutional understanding of its benefits, institution support and institutional commitment.. Although, the team faced challenges during the creation and production of the resource, results demonstrate a willingness of the team to continue creating and producing more OERs that are relevant to Malawi. Finally, faculty members expressed a desire to share completed projects with the wider community within and outside University of Malawi.

Conclusion: The pilot project has shown that the key to success in creating an OER is to understand what is unique about the project/program and build upon that to modify and localize the project. It demonstrated that implementation of new projects is frequently met with faculty resistance unless benefits are clearly identifiable. Furthermore, in light of the participatory methodology used to conduct the pilot project, it revealed the importance of building and maintaining capacity, integrating ongoing assessments and sharing the results with team members.

Academic Background and Challenge:

Kamuzu College of Nursing (KCN) a constituent college of the University of Malawi (UNIMA) was upgraded to a full constituent college status in 1979. It originated in 1965 when it was called a National School of Nursing. KCN has two campuses located in Lilongwe (LL), the main campus, and Blantyre (BT). The campuses are separated by a distance of about 300 kilometers; Undergraduate programmes are offered for a Diploma, or Degree. Additionally, Masters Degrees in the fields of Midwifery and reproductive health are offered and soon MSc in child health nursing will start.

To date, KCN is the largest national producer and a major educator of high quality professionals in nursing and midwifery for employment at government, private and mission hospitals. KCN also educates nurses who are employed as nursing and midwifery instructors in most CHAM private colleges. This mandates KCN to educate highly trained nurses who will ensure quality nursing and midwifery services in Malawi.

The mission statement for KCN is "to provide quality, comprehensive and cost effective Nursing, Midwifery and other Health related educational programmes in response to societal needs, utilizing the primary health care and outcome based approaches through teaching, research, service provision and consultancy to promote the health of the people of Malawi, Africa and beyond. To realize this mission KCN believe that both theoretical and practical approaches are necessary to promote critical thinking, decision making and change management" Additionally, faculty believe and appreciate that learning is a life long dynamic process which is participative and transformative plus goal directed using both pedagogical and androgogical perspectives of teaching and learning..

Challenges facing KCN to Provide Quality and Adequate Registered Nurses and Midwives for the Nation

a) National demand versus supply

There is pressure to increase intake for all its nursing programmes without provision of necessary logistics to support this enrollment (infrastructures, teaching staff and clinical sites). The increased intake creates challenges including an increased work-load on faculty, increased operational costs for transport of students and faculty between campuses due to lack of adequate clinical sites for practical experience and increased demand for teaching materials and library resources. These challenges require modification of teaching modes and learning experiences. KCN, as a leading institution in nursing education in Malawi is taking a leadership role in assuring quality, through innovative projects that are implemented to maintain quality teaching and maximal student learning. The integration of production and use of OER programs into the curriculum will assist in ensuring that KCN graduates develop basic competencies to effectively care for the people of Malawi.

b) Clinical teaching and supervision

The shortage of registered nurses and midwives in the clinical area poses a major challenge for students as they attempt to acquire basic competencies. This is evidenced by Malawi currently having a nurse midwife density capacity of 0.59 per 1000 people compared to the recommended density capacity of 25 per 1000 people (WHO, 2009). Thus number of skilled birth attendants is extremely low inspite of the knowledge that

a skilled health worker (midwife, doctor) is critical in the reduction of maternal deaths. This shortage of nurses and midwives forces students to function in roles similar to staff rather that working beside staff role models during their clinical placements. Due to large numbers of students faculty has been forced to reduce their clinical hours of student supervision. Additional faculty responsibilities and, the distance of clinical sites have also contributed to less clinical contact hours of faculty to students. In response to these challenges KCN is developing alternative ways to ensure the maintenance of quality of student learning in the clinical area. These methods will assist students to develop and improve skills in laboratory and clinical settings. One innovative strategy to develop and improve student competencies is OER clinical competency resource developed for student midwives.

c) Teaching and Learning in the Digital Age

University education today focuses on 'providing stimulating learning environments' rather than relying solely on didactic teaching. These learning environments are student centered and offer access to increased resource based learning. Consequently students are responsible for own learning within contextualized, scenario-based, and problem-centered methods of teaching and learning. Additionally, today's students are digital 'natives' and are more aware and have high expectations from their institution of learning. For faculty, this creates a challenge if faculty lacks computer skills and knowledge in Information Technology (IT) and or resources.

E-Learning and OER at KCN

KCN is in its infancy in understanding and adopting the concept of e-learning and OER. The following current circumstances are stimulating KCN to act quickly and integrate the new technologies:

• demand to increase its intake for nurses and midwifery students

• expectations of the nation that KCN is a role model and leader in nursing and midwifery education and have the capacity and resources for quality teaching and learning

• need for transition from teacher centered to learner centered education methodologies in order to serve the students effectively and efficiently

• type of students- currently enrolled students have high expectations of faculty and of the institution to have innovative, current resources in the skills laboratory and the clinical areas

OER Project

The OER pilot project that commenced in August 2008 had three specific goals; to increase understanding of OER and common challenges associated with OER, increase understanding of OER and address issues common across OER projects; build capacity by creating college OER champions that would advocate for OER and share lessons learned in the creation of OER materials through pilot projects; and develop digital materials from OER that would support the teaching of a Certificate Course of Midwifery using Problem Based Methodology . The pilot project model was based upon the participatory methodology of empowerment model by Fetterman's. The model is designed to empower and help organizations to assess

and improve their practices by establishing mechanisms that allow them to properly plan strategies for change. This model stresses collaboration to reinforce, test and modify internal knowledge. This model also states that, the role of the external person becomes that of a critical friend and facilitator, rather than an expert of knowledge. This model places emphasis on the insights and experiences important to the organizational members being shared with the facilitator. The outcome of utilization of this methodology is the cultivation of knowledge that informs practices and promotes continual improvement within the organization (Institute for the Study of Knowledge Management in Education (ISKME), 2008). Because of this pilot project, it is anticipated that KCN as the pioneer of OER in nursing and midwifery education, it will coordinate, collaborate, and facilitate implementation of OER in other nursing and midwifery educational settings. It should be noted that the identification of ten faculty and two (2) technical staff team to form the initial team was easy. However, over time many faculty members lost interest and only five (5) continued to the completion of the pilot. One major challenge was the time to search for suitability of materials to be included and not understanding the real benefit of the whole program as well as fear of unknown.

Perceived Project Needs & Design

A mandate existed for a pilot course, for midwifery students that would reinforce their clinical experiences and learning. The material covered was ⅓ theory and ⅔ practical skills. Additionally, the course was designed to test the objectivity of lecturers in the clinical area as they assess practical skills of students and determine proficiencies (Appendix 1 Important Areas to Consider). The OER pilot project trained faculty and staff in development of and implementation of teaching methodologies based on adopted problem based learning. The impact of the training project will impact all nursing colleges in Malawi as KCN is a major trainer of nurse educators for all nursing training institutions.

The International Association for Digital Publications (IADP) with support from OER Africa provided financial and technical support to assist capacity building amongst the KCN staff. This collaboration and support facilitated the development of an electronic version of OER materials with multimedia components to support both students and staff using Problem Based Learning (PBL) as the method of instruction (Appendix 2). A CD ROM was developed containing materials with an accompanying Facilitator's Guide that will assist staff as they assess student proficiencies. The course format was organized according to a 'Problem Solving' approach applied to midwifery education. The focus of the pilot materials was 'Antenatal, Labour and Delivery' and 'Postpartum'. Since KCN team was not conversant with OER it was suggested that IADP should look into both sourcing OER material in various repositories. However, KCN decided to create their own videos to supplement the materials sourced when possible. It was anticipated that two workshops, a few months apart, one three days the other two, could achieve these objectives. Finally the manual and facilitator's guide was to be uploaded, tagged, stored and distributed using the OER Africa platform and repository. Appendix 1 Table I highlights major challenges encountered during the sourcing, creating and production of the CD ROM.

Pilot Implementation & Processes

Prior to KCN faculty training IADP sourced relevant OER materials from OER private institutions for the team to review and to evaluate their suitability. Many materials were sourced from Michigan State University (MSU) that was, contacted by IADP/OER Africa. They provided a set of useful materials for adaptation. These materials formed the core of the OER workshop which was held between 30th March &

1st April 2009 in Lilongwe. The outcome of this workshop was the identification and selection of KCN faculty to function as content and course designers.

During the 1st workshop the participants were introduced to the OER movement and Problem Based Learning (PBL) methodologies, (Appendix2). Additionally, the participants began the process of adaptation of materials to fit the PBL teaching methodology and to place the materials within the Malawian context.

The next workshop was planned to assess and monitor progress of the work so far done, and introduce quality assurance issues. However, it was noted at that time that the KCN team needed further assistance in the development of the materials. It was at this workshop that the plan for the release of the developed materials integrated as a PBL learning pathway on a CD ROM was finalized. The structure and timetable of the project and its various components was mapped. After the 2nd workshop support by the IADP was maintained through e-mail.

The IADP team developed the HTML interface for the CD ROM and collated the draft materials submitted by KCN team ((Appendix 3). The final meeting was to complete the creation and adaptation of the resources. However, additional materials were developed during this workshop, and editing of materials. The CD interface and multimedia objects were posted on the internet so that revisions and edits could continue from both Johannesburg and Blantyre. A language editor was employed to check the materials. The editing and quality assurance processes were completed in November 2009. The resource can be accessed from www.ajmoore.co.za/kcn which is the working web site.

Pilot Products & Outcomes

The main outcome of the pilot was to develop KCN faculty capacity and sustainability of staff to create PBL courses using OER. The staff has remained excited by the opportunities PBL and OER can bring to the institution. With this pilot project staff capacity in course design has been established. The team however lack technical skills such as HTML for expansion of production of further projects.

The product, a full Midwifery course, including a PBL learning pathway, core resources (adapted from OER), facilitator materials, videos and photos of Malawi examples delivered via CD ROM is impressive. However, its effectiveness has not been completely evaluated as clinical experience policies will demand modification in order to adopt the methodology stipulated in the resource. Specifically teaching and performance evaluations will require modification.

The course's interesting mix of PBL methodology, e-learning delivery and use of OER's may prove difficult for new students to master therefore, continuous feedback and adjustments will remain necessary. The students and faculty have been oriented to the material and share excitement about the program. The courseware has been offered to the OER Community from the OER Africa platform and is licensed as, **CC: BY-NC-SA**.

 The experience of developing the OER material provided the KCN team an opportunity for integration into the wider OER community. A representative of the KCN Midwifery pilot attended and presented the teams experiences to OER practitioners from around Africa and the US at the Health OER Conference in Cape Town organized by OER Africa and University of Michigan in July 2009.

Lessons Learned

There is need to sensitize faculty, management and students to benefits and role of OER in tertiary education and KCN in particular (**Appendix 1: Table2).**

It is possible to get materials and adopt them to OER if there is good relationship and if the intention of the cause is valid. This is because the quality of the resources adapted is not purely OER because an initial search had found nothing of use in the public repositories. The materials used had been identified by MSU staff from materials not yet released as OER.

The materials are cost effective because they can be accessed for free and there were no hidden costs associated with searching or adapting OER.

It is importance to have reliable functioning internet

Technology and e-learning can play a role in enhancing future courses designed for students in tertiary education

The use of CD-ROM format is a welcome because of large numbers of students and the ongoing usefulness of the resource after graduation.

Since KCN has never used problem based learning before the team struggled to 'let go' of the old methodologies and fully integrate PBL principals in their design decisions.

The future challenges' in acquiring and adapting OER are, time to source and adapt materials, capacity building of additional staff, general sensitization of faculty and staff to benefits of using and adapting OER

Since the faculty are aware of e-Learning and OER it will be easier to adopt these but the faculty at KCN will need more time before adopting PBL

Initially it is difficult to accept an idea/program you are not sure of assist faculty

Faculty appreciated, understood and showed interest to OER and its benefits after the CD-ROM was completed and operational.

OER production is time consuming especially to search and identify appropriate resources. This is especially true when groups are not conversant with the significance of using OER resources because if not careful, textbooks which are easily downloaded from internet which are not OER materials can easily be used.

Time allocations for project work was inadequate especially when modifying resources Therefore in future OER project work must be allocated time during the normal working hours

The creation of the multimedia components is hampered by lack of the right and functioning equipment (e.g. digital camera, digital video camera, software etc.) as well as use of available resources like pones, power interruptions and intermittent internet connectivity.

Lack of proper ongoing financial support resulted in the team dwindled as the project progressed and may have reduced the morally of the team. In future capital items need to be incorporated in the project budget including capacity building

Projects need to explore ways to support its activities

The team must not be too large as it becomes difficult to control and manage and each member must have a specific responsibility.

Feedback

The team has suggested that this model be used as a basis for other e-learning programs. Some departments have asked for similar CD based materials for their courses. The Librarian has also commented that although he is not a midwife the next time his wife is pregnant he can use the video clips to conduct the palpations!

KCN OER team, noted the benefit impact of OER materials in teaching and learning methods from didactic teacher centered teaching to student centered learning where students are able to access most of the teaching materials in advance on themselves as noted during the orientation of faculty and students to OER.

Faculty has appreciated OER because of reduced time, improvement and quality of teaching methods.

Digital OER materials have demonstrated increased interest by students to actively participate in their learning and take a leading role evidenced from the excitement of students during orientation.

Faculty who have used OER and digital materials have noted that OER reduces faculty time to deliver lectures

Scenes from the 2nd Workshop June 2009

Appendix 1: Important Areas to Consider

1. Lobbying with college leadership to support and facilitate the success of OER
2. Faculty development workshops to sensitize and build institutional capacity in OER
3. Enhancing an innovative, low cost, and scalable process for converting educational materials into OER
4. Collaboratively develop educational materials as OER and deploying them into respective curricula
5. Promoting the collaboration and its outputs through networking with local and regional and international partners
6. As a long term plan to establish a framework for a study of faculty productivity and the effect of OER on learning and collaborative OER practices outcomes.

Appendix 1: Table 1: OER KCN Team Challenges

Understanding OER	The team was 'starting from ground zero in terms of understanding OER as well as creation and production of OER. Support from IADP,SAIDE and KCN management as well as commitment of the team was therefore of paramount importance for the project to take off
Power supply	Unstable power supply slowed the progress of information search as well as communication with partners. The solution is that the college is purchasing a generator as back up of power
Information communication Technology dept.	The project began when the college had no local technical support in place. The librarian was very supportive in many ways especially with information search. Currently, IT dept. is in place with basic staff
Time for the team	Unavailability of time for the team meant that the OER activities had to be conducted during off hours. This was possible because of the commitment of the team
Funding	Lack of normal funding slowed activities but management supported the team. This has showed that good support from management does encourage programs to continue regardless of other hardships but there is need to source funding for future projects

Appendix 1: Table2: Priority Issues For Promoting and Advancing the OER Movement

Raising awareness and promoting OER	Increasing awareness of OER to faculty and students and explaining its potential benefits and significance through appropriate channels and lobby with management departmental heads and stakeholders about the same for support
Capacity building	Increasing the capability of individuals, departments and KCN to create and use OER
Departmental, College and partner networking	Linking individuals ,departments colleges for the exchange of information or collaborative development of resources
Sustainability	Designing and applying appropriate models that ensures the ongoing viability of OER initiatives. Teams need to have interest and be committed Programs should have seed money while awaiting funding, and be able to solitic funds
Technology tools	Software tools to facilitate the development, access and sharing of OER
Policies	New approaches may demand new policies to support the creation and re-use of OER, and those who are implicated, such as teachers and learners
Standards	Agree on a set of criteria, some of which may be mandatory like, standards for quality of materials produced, are needed to ensure credibility of OER as well as organizational and individual
Research (future)	Investigation and inquiry into OER is significant especially in an education institution as this will among others give directions of needs, quality, sustainability and type. Additionally, any new development deserves investigation so that it is better understood

Appendix 2: Problem Based Learning

What is problem based learning?

As the word suggests, it's learning that starts with a problem situation and stimulates the learner to take the initiative to gain relevant knowledge, understanding and skill guided and supported by the facilitator. While the traditional learning approach is from the teacher or lecturer to by giving new information, describing challenges and problems and shows the learner how these can be solved by applying their new knowledge and skill in practice. So how does problem based learning differ? Here are the main points of the two learning approaches to help see the difference.

Traditional teacher driven learning	Problem based learning
Traditional lecture	Small group learning
Subject based	Problem based
Focus on concepts and description of disease	Client/Patient focused
Competitive learning	Co-operative learning
Focus is on theory and description of application to practice	Integrated application of knowledge and skills in practice

In problem based learning, the lecturer describes a problem situation, and students investigate the problem and determine what they need to know and how they can apply new and existing knowledge to respond to practical situations. Remember PBL is not the same as problem solving and students are not expected to solve the problem that has been presented. The scenario is the springboard that pushes students to investigate what their own learning needs are. But they are not alone in this process, each will be a member of a learning group and together they will navigate their way through the programme. The lecturer plays the role of facilitator that helps to keep group members on track and identifies resources. The lecturer is in fact one of the group's key resources.

Benefits of problem based learning

Working as a midwife is about being able to respond to a variety of situations in the most effective ways. After the OER team were oriented to Problem based learning they acknowledged that the method will give student midwives many opportunities to develop and strengthen a number of skills such as:
- Taking time to look at situation from different perspectives in order to gain a good understanding of the issues
- Analysing a situation and identifying various alteration to respond
- Being innovative and resourceful in responding to problem situations
- Learning to work cooperatively with others in a team

- Sharing your insights and good practice with others
- Being flexible to respond to changes in the environment
- Self confidence and self reliance in ways of working
- Taking responsibility for your own learning
- Being accountable for your actions.

It was noted by faculty that many people prefer to learn from practical examples to build their knowledge and skill. Others like to start with theory indicating that there are many ways to approach learning. However, what is important is to find the approach that is best suited for a particular programme. In a competence-based programme, the problem based learning approach offers unique opportunities for acquiring the right mix of knowledge and skills to become a competent midwife. Problem based learning can be a successful learning experience if both students and facilitators understand the process. Added concerns are that many students are not necessarily good at problem solving and they may not feel confident to work together in teams to learn and achieve the expected learning outcomes. These possible barriers are not insurmountable. The role of a student is to ask for help from facilitators and peers when there is need. Facilitators were trained to keep a lookout for students who need additional support. Working together with student team and facilitator can assist to make PBL a successful learning experience.

What happens in problem-based learning?
The PBL approach used in the Midwifery Certificate Programme is adapted to cater for the needs of midwifery students in Malawi. It was a structured learning approach that is made up of these steps:

Table 1: Overview of the PBL process	
Step 1 *What is the problem?*	Teams receive a written problem scenario and clarify the text of the scenario. Students define the problem. They use brainstorming to identify explanations for what is observed in the problem scenario.
Step 2 *What do we know already?*	Teams reflect on their experience and establish what they know.
Step 3 *What are the learning issues?*	Teams reach interim conclusions about the problem. They identify what new knowledge and skills they have to learn in order to respond appropriately to the scenario. They compile a learning plan that gives detailed descriptions of the learning issues. A learning issue is a question that cannot be answered with the existing knowledge of the group.
Step 4 *What are my learning goals?*	Students work independently with the core learning resources and use the questions to guide their interactions with these resources. The teams decide on the self-study approach: • all students focus on all the learning issues, or • students focus on specific learning issues. All students are expected to engage with and understand all the learning issues. Students work independently on their portfolio tasks.
Step 5 *What are we learning?*	Teams meet to share their insights and knowledge is built cooperatively. Student teams meet as often as needed to check progress on completing the portfolio tasks and achieving the specified learning goals.
Step 6 *What conclusions do we reach?*	Teams reflect critically on their understanding of the concepts. They apply their new knowledge and insights to the original scenario and describe what this means for other situations.
Step 7 *What have we learned about learning?*	Team reflect on their group and individual learning experiences. They identify what worked well and where and how they could improve in future.

Guidelines on how to develop a portfolio

Other areas to be included in the portfolio

The role of the student in problem based learning

The role of the facilitator in problem based learning

How students will be assessed and types of assessment in the programme.

What is a portfolio? Table 2

Why compile a portfolio and what will be included?

Assessment criteria Table 3

Self-assessment and the rating scale see table 4

Facilitator assessment

Table 2: What will be include in a portfolio

1. Curriculum Vitae
2. Evidence required for the various portfolio tasks: documents you prepare to complete your assessment activities, e.g. interview schedules, and other planning documents
3. Feedback on your performance from your facilitator, sister at the clinic
4. Any other item you think demonstrates your proficiency as a midwife
5. Self-reflection. Structured reflection on your learning journey

Table 3: Criteria for assessing the portfolio

Criteria	Mark allocation
1. Completeness. The portfolio comprises items from the prescribed categories	25%
2. Reflection on items included in the portfolio. 2.1 Description of evidence **2.2 Explanation:** • Why was the evidence included? • What does the evidence demonstrate about the development of pertinent knowledge and skills? **2.3 Description of how you will use what you have learned in practice?**	50%
3. Presentation **3.1 Logically ordered** **3.2** Easily accessible. Use is made of contents page, headings and simple numbering system that make it easy to navigate a way through.	25%

Table 4: Assessment rating scale

Exemplary	Good	Competent	Not yet competent
100% - 75%	74% - 60%	59% - 50%	49% - 40%
All the criteria have been met and surpassed. The portfolio is indicative of a	All the criteria have been met. The portfolio is indicative of a midwife who has	All the criteria have been met. The portfolio is indicative of a midwife who has	Not all the criteria have been met. Small changes need to be effected and the portfolio re-

| midwife who has engaged fully and critically with the programme and has been able to demonstrate both depth and breadth of understanding but also innovation in practical application.	engaged fully and critically with the programme and has been able to demonstrate some depth and breadth of understanding linked to practical application.	engaged meaningfully with the programme and has been able to link the learning to practical application.	submitted.

The facilitator also evaluates the completed portfolio and will take into consideration students assessment before deciding on a final mark.

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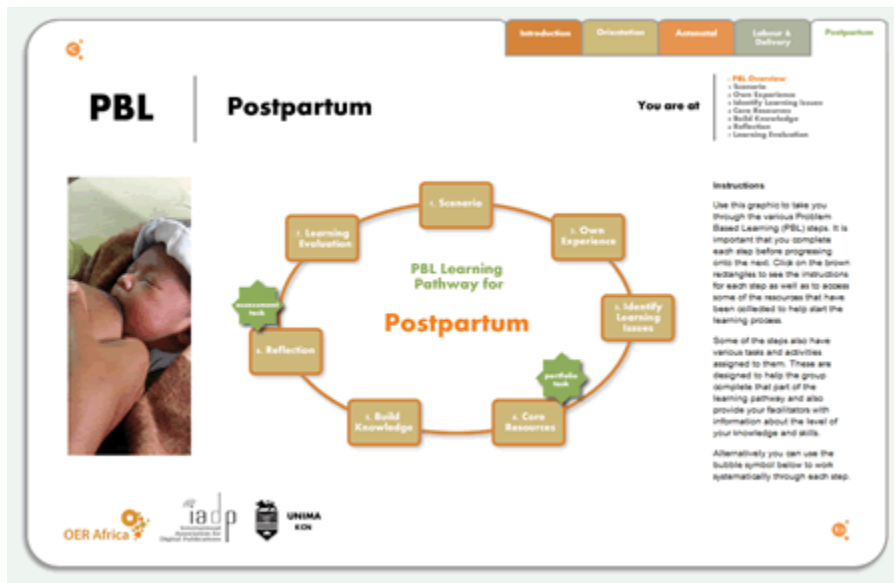
Screen from the University Certificate in Midwifery CD ROM showing the PBL learning

APPENDIX 3: Story board of KCN Midwifery Open Education Resource CD ROM Interface

Step 1: Scenario Screen

Introduction	Orientation	Prenatal	Labour & Delivery	Postpartum

Labour & Delivery

Scenario 1 | Scenario 2 | Scenario 3

4. Core Resources

Portfolio Tasks start

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Featured Video

Welcome Video

OER_UNIMA 09   14

pathway

Core Resources Screen

Introduction	Orientation	Prenatal	Labour & Delivery	Postpartum

Labour & Delivery

Scenario 1 | Scenario 2 | Scenario 3

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Portfolio Task

#	Activity	Criteria
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2		
3		
4		

Task: Text Goes Here. Text Goes Here. Text Goes Here. Text Goes Here. Text Goes Here. Text Goes Here. Text Goes Here.

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Appendix 4: References:

1. Fetterman, D. (2005), A Window into the Heart and Soul of Empowerment Evaluation: Looking Through the Lens of Empowerment Evaluation Principles. In Empowerment Evaluation Principles in Practice. Ed. David M Fetterman and Abraham Wandersman. New York: The Gilford Press
2. Institute for the Study of Knowledge Management in Education (ISKME), September (2008), Creating, Doing, and Sustaining OER: Lessons from Six Open Educational Resource Projects
3. Toure K; Diarra M L;Karsenti K; and Tchaméni Ngamo (2008) Reflections on Cultural Imperialism and PedagogicalPossibilities Emerging from Youth Encounters with Internet in Africa
4. Stephen Downes (2007) Toward a Future Knowledge Society presented at a VENUS Seminars
5. USAID (2007) Private Health Sector Quality Improvement Package
6. World health organization (2006) Making pregnancy safer/promoting effective perinatal care, kyrgyzstan : Activities Report 2001-2005