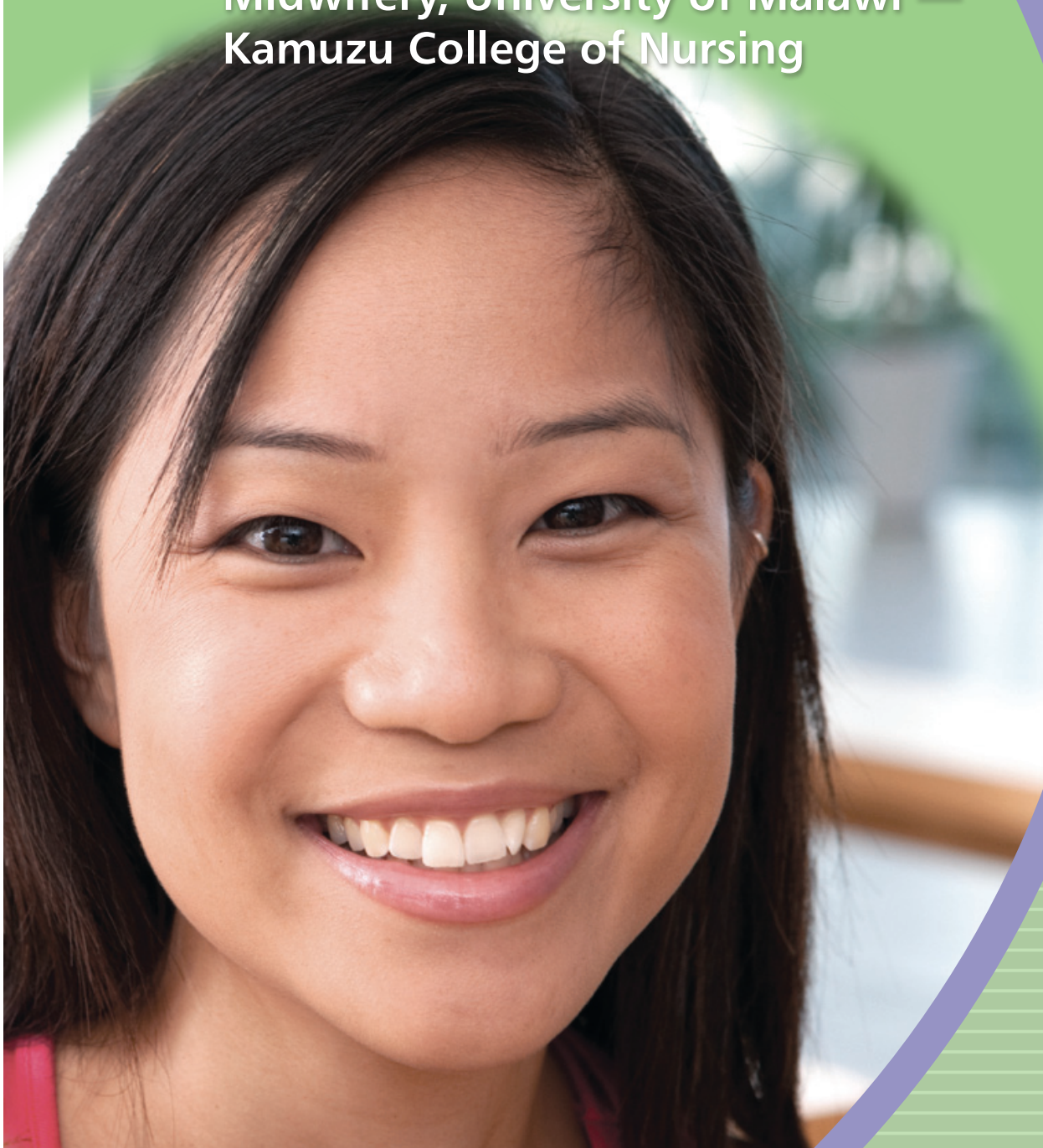


Case Study:

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OER Basic Competencies in Midwifery, University of Malawi — Kamuzu College of Nursing





OER Basic Competencies in Midwifery, University of Malawi – 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 but is traced back from 1965 when it was called a National School of Nursing 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, consultancy and service provision to promote the health of the people of Malawi, Africa and beyond.

The OER pilot project, facilitated by the International Association for Digital Publications, OER Africa and KCN was planned in August, 2008, and commenced in January 2009. It had three goals;

1. Increase understanding of OER and issues common across OER,
2. Capacity build college OER champions that would advocate OER and share lessons of the pilot project in order to determine need in the creation of OER materials by departments.
3. Develop digital materials from OER that would support the teaching of a Certificate Course on Midwifery using a Problem Based Methodology

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

Findings: The major findings of the pilot project were that OER are significant in higher education as they benefit both Faculty as well as students in many ways like faculty preparation time is reduced, produced materials are of high quality and faculty learn and share from others. It shed new knowledge on methods for accessing academic information, creation and production of such materials; teaching and learning; publishing as well as sharing. Faculty felt they can become more confident when they know that their work is of high quality. Additionally, faculty appreciated the concept of OER that states that the teacher is not the custodian of information or the only person who has information. Meaning that humans learn from others including students. The importance of using window of opportunities to properly sensitize, stakeholders and incorporating their needs (users, partners, and sponsors) into new projects was noted to be of significance for successful adaptation of new ideas and programs in a higher institution of learning. However, understanding of the significance of OER by faculty, students and managements and the financial support was paramount for OER activities to be on time and for sustaining the project e.g for the team to be given time for OER activities. The pilot also found that sustainability of any project/program is depended on the institution understanding its benefits, institutional support, commitment and willingness of the team. Although the team had challenges during the creation and production of the resource results indicated willingness of the team to continue creating and producing more OERs that are relevant to Malawi and to share these with the wider community within and globally evidenced by a bigger team coming up with proposals for the next projects after orientation of the pilot resource.

Conclusion: The pilot project has shown that the key to success is to understand what is unique about the project/program and draw upon that adapt and localize lessons from the project and activities and build on. It also has demonstrated that new projects are hard to be accepted by both staff unless benefits are noted.

Furthermore, in light of the participatory methodology used to conduct the pilot project, it has revealed the importance of building capacity, ongoing assessments and sharing the results both internally and externally.

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 is traced back from 1965 when it was called a National School of Nursing and has two campuses in Lilongwe (LL) the main campus and Blantyre (BT). The campuses are separated by a distance of about 300 kilometres; Programmes are offered at Diploma, Degree and Masters levels in the fields of Nursing and Midwifery

To date, KCN is the largest national producer and major trainer of high quality professionals in nursing and midwifery for Government, private and mission hospitals, as well as training institution for almost all nursing and midwifery instructors in CHAM private colleges., This leaves KCN with a major responsibility and role to play in ensuring 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, consultancy and service provision to promote the health of the people of Malawi, Africa and beyond and that both theoretical and practical approaches are necessary to promote critical thinking, decision making and change management” On the other hand faculty believes and appreciates that learning is a life long dynamic process which is participative and transformative; 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

Pressure to increase intake for all its programmes before logistics are in place e.g. infrastructures, teaching staff and clinical sites. The increased intakes have therefore come with challenges including increased work-load on faculty, increased operational costs for transport of students and faculty between campuses and clinical sites for practical experience, increased demand for teaching materials and library resources. Since these challenges require proper consideration on the mode of teaching and learning KCN as the leading institution in nursing education is taking the leading role in facilitating quality and innovative projects to facilitate quality teaching and students learning to ensure that all its graduates have basic competencies to effectively serve the Malawi nation at different levels in accordance to the changing world.

b) Clinical teaching and supervision

Having fewer registered nurses and midwives in the clinical areas poses a major challenge for students to acquire basic competencies during training. This is evidenced by Malawi having a nurse midwife dense capacity of 0.59 per 1000 people compared to the recommended dense capacity of 25 per 1000 people (WHO, 2009).

Thus skilled birth attendant is low and yet a skilled health worker (midwife, doctor) is critical to reducing maternal deaths. Secondly, the faculty has less contact hours with students in the clinical areas due to large groups of students, college responsibilities and, distance of clinical sites from campuses. In response KCN is coming up with various plans to enhance the quality of student learning in the clinical

area by providing students with innovative, intensive, and active learning experiences both in skills laboratory and clinical areas. Among these is a series of interventions that target improving student competencies like OER clinical competency resource for student midwives.

c) Teaching and Learning in the Digital Age

University education today is supposed to focus on 'providing stimulating learning environments' rather than didactic teaching and is moving to student centered and resource based learning. This means students are taking responsibility for own learning with contextualized, scenario-based, and problem-centered being popular methods of teaching and learning. Additionally, today's students are digital 'natives' from a very early age and are more aware of getting value for money resulting in having high expectations from their faculty. Inadequate resources for student's learning like lack of computer hardware disadvantage students and lower their morale well as standards of learning. . On the part of faculty, this becomes a challenge when faculty lack skills and knowledge in IT and or have limitation of resources like computers to search and be conversant with technology and other cannot vary teaching methods if necessary resources for teaching are not available,.

E-Learning and OER at KCN

KCN is in its infancy in understanding and adopting the concept of e-learning and OER but circumstances are enhancing the college to act faster due to:

- demand to increase its intake for nurses and midwives
- change of environment – Expectations of the nation is that KCN is a role model and leader in all nursing and midwifery activities but lack resources both human, equipment and infrastructures
- need for transition from teacher centered to learner centered education
- type of students- more aware of getting value for money and therefore have high expectations from faculty both in skills laboratory and clinical areas

OER Project

The OER pilot project that commenced in August 2008 was for 12 months had three goals; increase understanding of OER and issues common across OER, capacity build college OER champions that would advocate OER share lessons of the pilot project in order to determine need in the creation of OER materials by departments The pilot project model was based upon a participatory methodology by Fetterman's empowerment model. The model is designed to empower and help organizations to assess and improve their practices by establishing mechanisms that allow them to align their action i.e. what they think they should be doing to improve their practices and what they are actually doing. This enhances collaboration that can be used to reinforce, test and modify internal knowledge. The 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 results in insights and experiences important to the organizational members

being emphasized over those of the facilitator. The outcome was the cultivation of knowledge that will inform practices and continue improvement within the organization (Institute for the Study of Knowledge Management in Education (ISKME), 2008).

It is anticipated that KCN will coordinate all OER in nursing and midwifery as well as other health related fields. The setting up of ten faculty and two (2) technical staff team was easy, but many lost interest and only five (5) continued to the end. This raised questions of faculty knowledge and benefits of OERs and their commitment.

Perceived Project Needs & Design

There was need to develop a pilot course that would reinforce the clinical experience of Midwifery students in a different way. The material had to be $\frac{1}{3}$ theory and $\frac{2}{3}$ practical skills. Another reason for such a course was to test the objectivity of lecturers when evaluating students in the clinical area i.e. to assess practical skills or to determine proficiencies (Design specifications Appendix 1). In addition to the above needs, the OER pilot project also trained staff in preparation for the changes in teaching methodologies to adopt problem based learning in addition, to production of teaching materials. The impact of the project is likely to affect all nursing colleges because KCN as the trainer of nurse educators in all nursing training institutions will have to capacity build tutors in all the nursing colleges about OER. Major challenges include:

- Lack of proper infrastructure for conducive teaching and learning environment e.g. teaching and learning materials including LCD projectors, TV's, video conferencing and recording equipment, makes the faculty not to vary teaching methods
- High mobility of faculty members and students between campuses and teaching sites including district hospitals in Malawi means time wastage
- Lack of teaching classrooms and equipment in clinical sites for practical training results in faculty's inability to reinforce clinical teaching

The International Association for Digital Publications (IADP) with support from OER Africa provided support to build capacity amongst the KCN staff to develop an electronic version of OER materials with some multimedia components to support both students and staff using Problem Based Learning (PBL) as the method of instruction (Appendix 2). It was agreed to develop a CD ROM containing the materials with an accompanying Facilitator's Guide section that would help staff assess student proficiencies and also access local case studies. The whole course was to be organized according to a 'Problem Solving' approach to midwifery education. The focus of the pilot materials was to be on 'Antenatal, Labour and Delivery' and 'Postpartum'. It was also suggested that IADP should look into both sourcing and development of video material when searching OER repositories. KCN also wanted to create their own videos to supplement the materials sourced where possible and necessary. 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 during sourcing, creating and production of the CD ROM by the team.

Pilot Implementation & Processes

Prior to training faculty IADP sourced relevant OER materials for the team to check on their suitability that came from OER private institutions rather than the public online repositories. Most of the materials

came from Michigan State University (MSU) that was, contacted by IADP/OER Africa and kindly provided a set of useful materials for adaptation. These materials formed the core of an OER workshop that was held between 30th March & 1st April 2009 in Lilongwe for a selection of KCN faculty and course designers.

During the 1st workshop the participants were introduced to the OER movement, Problem Based Learning (PBL) methodologies, (Appendix2) and start a process of adaptation on the materials to make them fit the PBL teaching methodology and the Malawian context.

The next workshop was planned to assess progress and introduce quality assurance issues. However, it was noted that the team needed more help in developing the materials. It was also at this workshop that the concept of releasing the materials integrated as a PBL learning pathway on a CD ROM was finalized. The structure of the course and its various components was mapped. After the 2nd workshop support by the IADP was via 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 resource can be accessed from www.ajmoore.co.za/kcn which was the working web site. The final meeting was to finalize the course and finish the creation and adaptation of the resources; additional materials were also developed during this workshop, as well as 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.

Pilot Products & Outcomes

The main outcome of the pilot was to provide staff with capacity to create PBL courses using OER. KCN has faculty, who are excited by the opportunities PBL and OER can bring to the institution. With this pilot project staff capacity in course design is no longer a problem but the challenge for the team is lack of technical skills such as HTML for expansion.

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. Its effectiveness, however, was to be tested early 2010 which has not completely occurred as planned as there is need to change some clinical experience policies about assignments and mode of teaching and learning as well as evaluation. The course's interesting mix of PBL methodology, e-learning delivery and use of OER's might prove a lot for new students to master however, feedback and adjustments might be necessary. The students and faculty have been oriented to the material and everyone is excited to use it. The courseware has been offered back to the OER Community from the OER Africa platform and is licensed as, **CC: BY-NC-SA**.

The exposure of developing the OER material gave KCN team to be integrated into the wider OER community. A representative attended the Health OER Conference in Cape Town organized by OER Africa and University of Michigan in July 2009 and had an opportunity to present the KCN Midwifery pilot to OER practitioners from around Africa and the US and also to see what other initiatives were happening.

Lesson Learned

The KCN team supports the use of OER in tertiary education evidenced by comment like “while OERs have a considerable role to play there is need to sensitize faculty, management and students to their significance” (**Appendix 1: Table2**).

In terms of suitability the team affirmed the quality of the resources they adapted were not purely OER because an initial search had found nothing of use in the public repositories and the materials used had been identified by MSU staff from materials not yet released as OER.

The team believed that the materials were cost effective because they could be accessed for free and there were no hidden costs associated with searching or adapting OER apart from the internet failure’ that often made access difficult.

KCN team believe that technology and e-learning can play a role in enhancing courses designed for students in future especially knowing the demand by government for nurses and midwives that is making the college to possibly have parallel programs in the near future although this will call for demand for and increased use of technology both by faculty and students.

The use of CD-ROM is welcome because with bigger groups and fewer resources students can still use these resources post graduation as learning materials .The group was not confident in implementing problem based learning evidenced by the team members struggling to ‘let go’ of the old methodologies and fully embrace 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, access to the internet.

Since the college is implementing a new curriculum the method of teaching is also changing, (e-Learning, PBL and OER), The 1st and 3rd are to be adapted but the PBL will need more time before it is completely adapted at KCN. It should also be noted that initially it was difficult to let Faculty understand about OER until the CD-ROM was finalized and actually in operation, that faculty appreciated the benefit and showed interest. This therefore created problems during the production process as it was unclear of what to include and what to leave. Logistics was a challenge with half the team in Blantyre and the other half in Lilongwe while the facilitator was in Johannesburg (Appendix 1: Table 1). Now, however, that we better understand the complexities, it will be easier to mobilize support and offer guidance in the future.

The project proved to be time consuming especially to search and identify appropriate resources which are OER. This was especially true when groups were 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 would be used. In future teams would have to be clear on this from the start to save on wasted time.

Time allocations for project work often had to be outside normal working hours. This was especially true when it came to modifying the resources and was a serious challenge. In future such project work must be part of normal working hours if KCN is to move forward with production of OER materials.

The creation of the multimedia components was hampered by lack of the right equipment (e.g. digital camera, digital video camera, software etc.) as well as use of available resources like phones, power interruptions and intermittent internet connectivity. In future capital items need to be incorporated in the project budget. Besides the hardware and software there is need to focus on providing human capacity for creating the multimedia objects because of the challenges expressed above.

The project didn't have a proper funding as it was assumed it would fall under a specific department. This was reinforced by lack of knowledge of faculty and management of the differences between OER and e-learning a project that many have fair knowledge of and the college is supporting to begin. 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 and the projects may not be sustainable over time. The project then needs to explore ways to support its activities in future to keep the team intact. Finally the team must not be too large as it becomes difficult to control and manage and each member must have a specific responsibility.

Feedback

Although the materials have not yet been piloted, it is generating a lot of interest amongst faculty members; some have 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!

As a consequence of this feedback KCN is asking OSISA/IADP/OER Africa to consider new OER projects like production of a DVD for common competencies and procedures which include both video and audio lecture material so that students can learn without having to attend lectures resulting in; students having shorter audience with the lecturer at a set time for clarifications. This would be of assistance since the college is seriously thinking to have parallel programs especially for undergraduate programs using the existing resources. Included would be additional materials that would show common competencies, procedures and how these are done in both ideal situation and in areas where resources are not adequate but without compromising quality.

KCN OER team, noted the 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 during the orientation of faculty and students to OER. Faculty have appreciated improvement in the time and quality of preparation and teaching methods. Digital OER materials have shown interest in student to actively participate in their learning and take a leading role evidenced from the excitement of students during orientation. OER and digital materials shall help reduce the faculty time for preparation, delivery of lectures and assessment.



Scenes from the 2nd Workshop June 2009

Appendix 1: Design specifications

1. Lobbying with college leadership to support and facilitate the success of OER
2. Holding 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 developing educational materials as OER and deploying them in 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.
7. Producing an evidence-based long-term logic model for college OER based on a vision that multiple stakeholders will own, in which funders will invest, and which institutions are committed to sustaining. This consensus-driven model will be the basis of a Global Health OER follow-on proposal (adapted from UM¹. The above design is based on the following quote from UM (2009)

“... there are fewer more urgent tasks than to design social infrastructures that foster learning. the whole human world is itself fast becoming one large organization, which is the object of design and which must support the learning we need in order to ensure there is to be a tomorrow. Those who can understand the informal yet structured, experiential yet social, character of learning – and can translate their insight into designs in the service of learning – will be the architects of tomorrow.”

(Wenger, E. 2003. *Communities of practice: Learning, meaning and identity*. Cambridge University Press. Cambridge: p. 225).

¹ Source: University of Michigan Medical School-OER Africa Health OER Inter-Institutional Project 2009 Formative Evaluation of Health OER Design Phase

Appendix 1: Table 1: OER KCN Team Challenges

Understanding OER	The team was ‘starting from ground zero in terms of understanding as well as production of OER. Support from IADP,SAIDE and KCN management as well as commitment of the team was therefore of paramount for the project to take off
Power supply	Unstable power supply slowed the progress of information search as well as communication with partners. The college is processing to purchase a generator as back up of power
Information communication Technology dept.	The lot started when the college had no local technical support in place but the librarian was very supportive in many ways especially with information search. At the moment 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 as management had to stretch its budget to support the team. This has showed that good support from management but there is need to source funding for future projects
Attitude	Attitude of UNIMA management, other stallholders, college faculty and government towards tertiary education need to change if progress is to be noted especially when the nation need more nurses and midwives who are competent. In response UNIMA formulated UNIMA Wide and college E-learning task force and KCN has additionally formed an OER champions: to sensitize UNIMA central and college management, faculty and other colleges on significance of OER at tertiary level and role of UNIMA, college, faculty and staff

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 college 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 /programs in terms of interest and commitment of the team and financial flow
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

A learning pack for students in the Midwifery Certificate Programme Kamuzu College of Nursing, Malawi

What is problem based learning?

As the word suggests, it's learning that starts with a problem situation which 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 when the teacher or lecturer starts by giving new information, describing challenges and problems and showing 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

So in problem based learning, the lecturer describes a problem situation, and students investigate the problem and find out what they need to know and how they can apply new and existing knowledge to respond to practical situations such as the one presented. 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. Students are told that 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 who helps to keep group members on track and who identifies resources that are helpful. 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 options 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 also noted by faculty that although many people prefer to learn from practical examples to build their knowledge and skill while others like to start with theory it was observed that there are many ways to approach learning. 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. But it is not as easy as it seems. Problem based learning can be a successful learning experience if both students and facilitators know how to go about it. Initially lecturers may feel that students are not learning enough depth. Students may feel that it takes too long to reach an understanding of the concepts because they have to find the information, engage with it and try to understand it by discussing it in their teams with some support from their facilitators. Added concerns are that many students are not necessarily good at problem solving and they may not feel confident enough 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 any student who needs 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:

Overview of the PBL process	
Step 1 <i>What is the problem?</i>	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 <i>What do we know already?</i>	Teams reflect on their experience and establish what they know.
Step 3 <i>What are the learning issues?</i>	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 <i>What are my learning goals?</i>	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: <ul style="list-style-type: none"> • 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 <i>What are we learning?</i>	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 <i>What conclusions do we reach?</i>	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 <i>What have we learned about learning?</i>	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?

Why compile a portfolio and what will be included?

Assessment criteria TableA

Self-assessment and the rating scale see table

Guidelines

Facilitator assessment

Table

What will be include in a portfolio
<ol style="list-style-type: none">1. Curriculum Vitae2. Evidence required for the various portfolio tasks: documents you prepare to complete your assessment activities, e.g. interview schedules, and other planning documents3. Feedback on your performance from your facilitator, sister at the clinic4. Any other item you think demonstrates your proficiency as a midwife5. Self-reflection. Structured reflection on your learning journey

Table

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: <ul style="list-style-type: none">• 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 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 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.	All the criteria have been met. The portfolio is indicative of a midwife who has engaged fully and critically with the programme and has been able to demonstrate some depth and breadth of understanding linked to practical application.	All the criteria have been met. The portfolio is indicative of a midwife who has engaged meaningfully with the programme and has been able to link the learning to practical application.	Not all the criteria have been met. Small changes need to be effected and the portfolio re-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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Appendix 4: References:

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