**OER-based eLearning Module: A Report**

**Prepared and submitted by**

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**Project:** **OER-based eLearning Module**

This is the final report on all activities of this project. It should be read with Progress Reports 1 and 2, as well as the Final Report on all activities prepared by Dr. G. Mythili. These earlier progress reports and Mythili’s final report on the project provide details on the modules in the course, workshop schedules and activities, the participants in the capacity building program and data on their evaluation of the pilot implementation of the program.

The focus of this report is on the pedagogical framework used to develop the five modules in this professional development program, and more importantly, future directions for how these open education resources can be further utilized.

**Programme Structure**

The developed program comprises the following five modules:

**Module 1: Concept and Practices of OER**

**Module 2: Designing Learning Experiences for OER-based e-Learning**

**Module 3: Search and Evaluation of OER Materials**

**Module 4: Licensing and Copyright**

**Module 5: Integrating OER in e-learning**

**Course Development Challenges**

This project began with an MOU between CEMCA and WOU for the development of this program. From the get-go, there were two kinds of innovations taking place as part of this work. Foremost, a curriculum for OER-Based eLearning would be developed, including the content and the allocation of that content into suitable modules. Secondly, this content had to be sourced and developed as an online (elearning) course. Thirdly, instead of getting experts in the field to develop these courses, the project sponsors decided to use the course development process as a capacity building effort on its own. This meant that the course teams developing the individual modules had very limited knowledge about the content as well as its development in the form of an online e-learning course. However, a great deal of effort has been expended by all over the past year and a half on the development of the FIVE modules which form this OER-Based eLearning course, especially given its bold approach to use novice staff, both on OERs and online course design and development.

**Pedagogical Foundations and Approach to Course Development**

The design of the program is grounded in the predominant belief that learning is most effective and efficient when learners are engaged in *learning by doing (problem solving* and *reflecting* upon their actions) in authentic learning contexts. The problems, scenarios and cases used in these learning contexts serve to situate and anchor all learning activities and help in the understanding and retention of facts, principles and procedures.

This is a *constructivist* view of learning which is a process of developing understanding through problem-solving, critical reflection and negotiation of meaning with one’s own prior learning experiences, and those of others including expert practitioners.

It is a model of cognitive apprenticeship which ccomprises the development of cognitive skills with the *guidance of an expert practitioner*, and where learning and development of understanding is a social process which comes about as a result of learners acting upon authentic problem situations *collaboratively* through *dialogue*, *discussion* and *debate*. Fundamentally, it is about c*horeographing* this learning experience for learners.

A potent way of implementing these pedagogical perspectives is through the use of **Scenario-Based Learning (SBL).** SBL mirrors professional practice, and uses a scenario to situate all learning and teaching activities. Scenarios in this case can be real or contrived. Their value lies in the opportunity they present for situating and contextualizing all learning and teaching activities.

**The key attributes of Scenario-Based Learning are:**

* A scenario that affords learning in the subject matter.
* Problem-solving within authentic and realistic settings.
* *Learning-centered* activities which emphasize the centrality of the *learning activities* in the learning and teaching process with the support of learning resources*.*
* Authentic assessment tasks that closely reflect reality.

In SBL teachers are NOT merely “guides on the side”. Instead they are engaged architects and choreographers of the learners’ learning experience. There is strong instructional guidance and direction in the designed learning experience**.**

**Developing SBL: The steps in the process**

Figure 1 steps us through the design and development process of *scenario-based learning*.



*Figure 1: Developing Scenario-Based Learning*

**Designing the learning experience**

At the core of this process is the design of the learning experience. The learning resources and the subject matter content which are in the form of open education resources provide the *essential fuel* that drives the *learning engine* that orchestrates this learning experience. The careful integration of the content in the learning process is going to be crucial to the development of the competencies and skills and the assessment of the learning outcomes. Some of this is a creative process but much of it has to do with careful selection of each learning resource to serve the designed activities in the scenario. What happens in the scenario, determines what learning resource is required and what learners will need to do with those resources. There are therefore various levels of integration in the model. These include integration of learning resources with the learning activities in the scenario, and also integration of resources themselves. Without this kind of integration, the learning experience will lack integrity and coherence. The careful integration of learning resources will ensure a powerful learning experience on the whole.

The steps in the process are as follows:

1. *Step 1: Identification of the key competencies for practitioners.* This first step in the process involves identifying the key competencies the practitioner in the profession needs to possess. If, for instance, the integration of OER in tertiary teaching is the targeted area of professional practice, then we need to identify what are those things that tertiary teachers should be good at in relation to the use of OER. What are their core competencies?What should they be able to do with ease, almost automatically? Sometimes, these key competencies may be too many. In which case similar sorts of competencies will need to be clustered so they can be adequately and meaningfully addressed.
2. *Step 2: Articulation of the learning outcomes for the learners.* These clusters of key competencies once they have been identified will need to be validated in order to ensure that there is agreement on them as a true representation of the skills set of practitioners.

These validated competencies will form the basis for the development of the *learning* *outcomes* for your learners. Let us assume, for instance, that a cluster of key competencies for tertiary teachers is about being a reflective practitioner. What would be the appropriate learning outcomes for your students for this set of competencies, given that learning outcomes for your students are desirable activities and demonstrable behaviours in the context of their training to be an effective reflective practitioner in tertiary teaching? An appropriate learning outcome would be something like this, “demonstrate ability to integrate continuous quality improvement strategies in your teaching”.

1. *Step 3: Identification of key events in the life of a person who has accomplished these outcomes.* The next step in the process is to identify events in the life of the practitioner who demonstrates competency in these skills. What are those things that this professional will do as part of their routines?

Knowing what such professionals can do in relation to these competencies is critical; as these are the events that will help you develop a suitable scenario. The scenarios that you choose or develop need to comprise many of these sorts of events in order to make the learning and teaching process relevant, authentic and meaningful. The scenario is the training ground for your learners and they need to reflect professional practice as adequately as possible.

As an example, in this instance, a tertiary teacher will be involved in events which are aimed at getting them to integrate open educational resources in their teaching and reflect on their teaching. These events may include developing a survey tool to gather feedback, or keeping a portfolio of their reflections on their teaching. The scenario you develop or use for your teaching will need to comprise these events.

1. *Step 4: Identification of the main steps or processes that practitioners would take to work through these events.* The aim here is to break down the events in the life of an accomplished or expert practitioner, in the form of the processes that they would adopt. This is critical because your goal is to emulate best practice. You want to teach your students how to do something most efficiently and effectively. This is why you need to get a very clear idea of what expert practitioners do so that you can model that process and teach it to your novices.

So how does an expert reflective practitioner go about building a portfolio? What comprises that process and what are the steps in that process?

1. *Step 5: Development of a scenario with the variety that will offer scope for learners to learn the steps and/or processes outlined in Steps 3 and 4.* Now you are ready to develop a scenario that you know will afford the best opportunity for your learners to acquire those same sorts of competencies that you identified for your expert practitioner.

The development of a suitable scenario is still not going to be entirely plain sailing even after you have followed the above steps precisely. The development of a great scenario is a creative process and it will only come about with hard work and a great deal of perseverance.

Still, do not aim to develop a masterpiece every time you sit down to develop a scenario for your teaching. Once developed, a scenario is open to review and revision based on how you and your students thought about it during your teaching.

1. *Step 6: Development of the learning tasks and assessment activities that learners will be required to complete within the context of this scenario.* Your learning scenario is not complete until it has embedded in it a clear role or goal for your students. What are your learners required to do in this scenario?

Depending on how you may have developed your scenario, you might have prescribed a mentoring role for your students which require them to scaffold the learning experiences of others in the scenario in order to demonstrate to you their competency in reflective practice. So what does that mentoring role include? It may include developing a framework for a portfolio.

Some of these activities could be considered as part of the formal assessment requirements for your students, and which would attract marks like that which an assignment would attract. Except that, in this case, notice how relevant and meaningful this assessment task can be for the students. It is not something rather meaningless that they are required to do in order to fulfil the assessment requirements in their course. It is actually something that they would be able to use themselves, in their workplace or when they enter the workforce. However, not all of these learning activities need to be formally assessed. Some of them may be designed to only attract feedback from teachers, tutors and peers.

**This is a *Recursive Model*** in the sense that it is iterative (embedded system). It has variety (requisite variety). And it is a complex system (Just like real-life challenges and problems). Furthermore it is a **Viable System *(Beer, 1985)****.* The VSM provides a framework for the design and development of the learning and teaching transaction. It locates the purpose of learning resources and their use in solving real-life challenges and problems (see <http://en.wikipedia.org/wiki/Viable_system_model>; <http://www.cybsoc.org/contacts/people-Beer.htm>)

It drives learning and teaching. As such it is the *Engine* for Education (<http://www.engines4ed.org/>) (Schank & Cleary, 1995). The learning resources (OERs) are the essential fuel for the Learning Engine.

**Way Forward Proposals for further development**

This OER-Based e-learning course comprises a robust set of modules that can be used for the professional development of staff around the integration of OER in teaching and learning. The modules can be used individually, as a set or in combination with something else as a supplement.

**Institutional Capacity Building in OER-based eLearning**

Proposals for the adoption and use of these open educational resources could include the following:

1. It is suggested that Wawasan Open University and The Open Univesity of Sri Lanka (as well as other organizations) run this program that has been developed on their own servers on a fees paying basis. It is strongly recommended that this should happen only after a thorough Review and Revision of the FIVE Modules have been undertaken, and based on the feedback received on the pilot implementation. Adjustments should be made to the modules, their e-learning activities and assessment tasks prior to implementation in nay educational setting.
2. The review of the FIVE modules will need to focus especially on the following:
	1. *Workload for both, the students and the moderators.* There is a sense that the current workload is too heavy for a short course (of say 2-3 weeks). Perhaps a range of options might be made available, so that each module can be run as a short course over say two weeks as well as for a longer period, say a full thirteen week semester or term. If this were to be the case, then the assessment activities should be adjusted appropriately.
	2. *Assessment requirements.* These are related to workload and will need to be addressed along with appropriate credit.
	3. *Learning activities.* These will have to be considered as part of the workload requirements for each module.

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