Integrating OER in Educational Practice: Practitioner Stories

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Faculty of Education
The Open University of Sri Lanka
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Foreword

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Open Education has been enabled and inspired by the Internet and the Open Educational Resource (OER) movement. The primary objective of OER is to address the provision of access to learning opportunities to those who would not otherwise be able to obtain them. Much of the OER debate centers on defining the meaning of ‘Open’, which is predominantly about removal of restrictions involved in accessing learning resources, from copyright regulations to financial constraints.

This concept emerged in the late 20th century with the development of Open and Distance Learning amidst a culture of open knowledge, open source, free sharing and peer collaboration. OER play a vital role today in achieving the goal of ‘Education for All’ empowering the underprivileged in particular. High quality OER can save time and efforts of the teacher significantly on resource development and advance student learning inside and outside the classroom. OER initiatives aspire to provide open access to high quality education resources on a global scale. From large institution-based initiatives to numerous small scale activities, the number of OER-related programmes and projects has been growing rapidly within the past few years.

To achieve the main objective of Open and Distance Learning (ODL) it is essential to establish an online learning environment to match with the ODL delivery mechanism. In general, the Internet availability and computer literacy are preconditions for the successful operation of the ODL in a society to provide educational opportunities for all. The Ministry of Higher Education (MoHE) has taken a number of steps to develop online education environment. The National Online Distance Education Service (NODES) implemented under the MoHE is one of the initiatives, which is now being operated by the Open University of Sri Lanka (OUSL). It constitutes 26 Nodes Access Centres (NACs) all over the island.

What are the benefits to students, teachers and the general public? It is obvious that the OER movement is at the initial stage in Sri Lanka and inevitably problems such as traditional mindset, poor infrastructure for online leaning,
poor IT knowledge, lack of trained staff in OER, negative thinking of academics, lack of material resources and inadequate government support etc. have come to the surface.

The OUSL is the first and the only educational institute to declare its intention to adapt OER as a policy and has taken steps to implement it.

The OUSL initiated developing open courseware consequent to a project implemented for building the capacity of the academic staff of the Faculty of Education in 2013 with a view to integrating Information and Communication Technology (ICT) and OER in its teacher education programmes. The entire process of capacity building comprised workshops on OER and ICT, curricula review and course redesign workshops, design and development of online courses with OER mixing, implementation of the pilot courses and evaluating the impact of ICT and OER combination in teacher education programmes. This was a unique opportunity for the academic staff to enhance their own professional development as teacher educators.

The strategy of the university to start with conversion of its Foundation Level Courses into OER format were premeditated. Firstly, the course developers are to be exposed to hands-on training to the transformation process. Secondly, introducing suitable changes to make presentations more reader-friendly. Thirdly, updating and revision may be less demanding and hence transformation of this material into OER format is not as difficult as in the case of more advanced study programmes. More than anything else, it is easy to convince the new and young staff to change than the seniors. Thus, the OUSL has pushed the foundation courses to the fore front of this transformation process.

While the OUSL has taken positive initiatives and laid most of the groundwork necessary for the utilization of OER, much more needs to be done to ensure its successful and effective deployment. Timely procurement of required services, developing the necessary skilled personnel by ongoing training and timely implementation of necessary infrastructure, procedures etc. are matters that need to be attended to without delay. The OER has made higher education borderless and other institutions are posing a threat to its survival by making optimum use of its benefits. This is a serious challenge for the OUSL. As it stands now, the OUSL’s own initiatives are below the required levels and are yet to bear fruit enabling effective penetration of the market. The speed of growth
and momentum are well below the levels necessary to remain competitive in the Higher Education market-place which is changing at a phenomenal pace. The time has come for OUSL to reconsider its level of commitment to OER initiatives. More dynamic action will have to be taken by the OUSL following a well-considered decision to remain fully committed to the ODL methodology.

This publication is based on the process and experiences gained by the members of the academic staff in the course of completing the project on developing OER and ICT in teacher education programs. The book emphasizes the importance of changing attitudes and mindsets of the educators in the process of transforming traditional teaching and learning practices into modern IT-based and student-centered learning and readiness of the educators and learners for a radical change. Thus, this would be useful for stakeholders of the OER and ICT in learning, teaching and research. Though the transformation of existing educational materials into the OER is an arduous task at the beginning, the OER, once developed, can be effectively managed by incorporating it into existing strategies and policies of the OUSL to signal that OER release. It could be used as an integral part of existing activities as an approach that supports ongoing sustainability and embedded into practice.

I take this opportunity to thank Dr. Shironica Karunanayaka, the Dean of the Faculty of Education for her enthusiasm in the OER project and helping to make this publication a reality. I also thank all the contributors to the publication, academic and support staff of the Faculty of Education for extending their cooperation to release this publication within a short period of time.
Preface

A Decade-long Partnership between COL and the OUSL in Teacher Education

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The Commonwealth of Learning (COL) since its inception in the late nineteen eighties has been supporting universities and teacher education institutions to develop sound instructional designs and training materials for pre-service and in-service teacher education programmes. It worked with experts from Commonwealth countries to create collaboratively, training materials which could be used by the participating countries (e.g., STAMP 2000+, 2000), or partnered with selected institutions and universities in developing innovative learning designs and materials through long engagements. The model of longer and sustained engagements with institutions for effective capacity building in those institutions was considered as a good model by COL’s evaluators.

I was the Education Specialist for Teacher Education in COL from 2001 to 2008 and it was during this period that two very successful projects in teacher education of COL were initiated. These were the Green Teacher Project with the Centre of Environment Education in India and MA Teacher Education – International with the Faculty of Education, Open University of Sri Lanka. Both these engagements had two major objectives. One was, to develop a curriculum design and suitable learning/training materials for in-service training through distance education, and two to build capacity among the teacher educators in the process to sustain this effort as well as extend it to other programmes.

The cooperation between COL and the Faculty of Education, Open University of Sri Lanka started when OUSL through the Ministry of Education, Sri Lanka approached COL for upgrading OUSL’s then existing MA Teacher Education Programme to provide in-service professional development of teacher educators in the country through distance mode. COL promptly responded to this request which led to the initiation of this project in early 2003.
COL and OUSL jointly organised an experts meeting in March 2003 to discuss how the existing MATE programme could be redesigned in order to make it an effective professional development programme. The initial brain storming in the workshop raised several issues and also a consensus on adopting a constructivist paradigm for the revised MATE curriculum transaction. However, it could not arrive at a definite instructional design model suitable for implementing a constructivist approach.

The workshop although was a good beginning for identifying the issues and the need for a changed paradigm did not provide much clarity with regard to how to proceed further in the project.

**Situated learning design-based professional development of educators**

Traditionally most teacher education curricula tend to adopt a theory-oriented approach with the assumption that an understanding of the foundational and pedagogical theory and their applications in a few school or class situations will equip the teachers to deal with the complexities of the real situation. They may initially formulate the curriculum objectives based on the roles of teachers and the competencies required in the real school/classroom situations but when it comes to curriculum framework and transaction, they would take a theoretical discipline-based approach. Unfortunately the same approach is largely followed in teacher education courses by distance mode too. Hence, even the so called “good” courses of teacher education by ODL in many countries remained highly theoretical derived from a theory-based curriculum development process.

Is it possible to adopt a field and situation-based curricular organization and transaction instead of a theory-based approach? Can the training interventions take into account and utilize such episodes and experiences for discussion and reflection? Can case studies and simulations be developed based on these experiences? According to the constructivist approach to learning, individuals develop their own understanding of the nature of the world, from their own perceptions and experiences of it. This view is grounded in the idea that “people learn by actively constructing new knowledge, rather than having information poured into their heads”. Many argue (see Bates, 1999; Jonassen, 2000) that learning within the constructivist environment promotes meaningful learner engagement and critical, creative and complex thinking by learners. Hence, it is
important that opportunities for such meaningful learner-engagement are provided in any effective instructional or training context.

Based on the processes involved in collaborative reflective practice it is possible to conceptualize a professional development curriculum for an ODL-based programme or course. The reading materials, including media-based materials, resource materials, interactive sessions including face-to-face contact classes and technology based interaction, assignments and projects could play appropriate roles in facilitating the trainee going through the processes of *experiencing, reflecting, applying* and *conceptualizing*. The core reading and other media materials would consist of cases, stories, critical incidents, scenarios, simulations and problems derived from the classroom, school and community situations based on the roles the teacher has to play and the competencies he/she has to develop to function in these situations.

The cases, problems etc. will be designed and developed in such a way that the trainee or learner while going through them will, at appropriate points have to take a decision, perform an activity, experience real situations and/or listen to an audio-video episode, recall prior experiences, read a relevant theoretical writing or factual information and/or reflect on the issue either individually or collaboratively in face-to-face or technology-mediated human interaction. Such a transactional process is expected to develop more effectively the competencies required for performing the pre-specified roles (Menon, 2008).

**Towards Integrating OER, ICT and situated learning designs**

The Commonwealth of Learning (COL) which was responsible for identifying a suitable international consultant to provide expert support to OUSL in the project scouted around the Commonwealth and finally decided to entrust this responsibility to Dr. Som Naidu (then at the University of Melbourne), who had an excellent research and scholarly background in the development of situated learning designs and especially scenario-based learning for professional development of teachers and teacher educators. In the initial discussions with Dr. Naidu in Vancouver in the middle of 2003, I could visualize that this was the person who could show us the light and successfully steer us through the project, and subsequent events showed that we had made the right decision. The work reported in this book is a concrete example of the impact of his work on individuals, whole groups, organizations, as well as educational processes.
The cooperation between COL and OUSL in redesigning the MATE programme is reported in Karunanayaka, Lekamge, Gunawardena, Naidu, & Menon (2005). Recognizing the need to improve the quality of the programme the existing MATE programme was substantially revised and transformed into a unique practitioner-oriented programme, with the assistance of the COL. The programme adopted an instructional design approach where learning experiences are situated in authentic learning activities that are meaningful for the students. The focus of such a learning design is on improving the quality of the student learning. A scenario-based learning (SBL) design suited for practice-based disciplines such as education was adopted for as learning and teaching in these areas have to be closely aligned to practice (see Naidu, Menon, Gunawardena, Lekamge & Karunanayaka, 2007).

The Open Educational Resources (OER) movement which has been steadily picking up momentum in the last decade has opened up innovative possibilities for course development and learner support in Open and Distance Learning. OER include a variety of learning content, tools and practices that are available mostly digitized on the web with an open access and relaxed copyright and licensing framework, enabling free use of such resources. OER integration provides easy access to latest digital content of known quality drawn from a variety of global sources with the freedom to reuse and repurpose these resources to suit the context and learning needs of users. It facilitates each user or institution to have locally designed study programme and learner support relevant to the local context and local learner needs while basing on globally created OER content for providing for theory related to the disciple as well as cases and experiences from other contexts.

This publication reports the story of integrating suitable OER in creating course materials for a number of courses in different Programmes in the Faculty of Education, Open University of Sri Lanka. In this Project of OUSL supported by the Commonwealth of Learning suitable OER materials have been searched from the web and meticulously integrated with a variety of activities within a situated learning design pedagogy.

This project is an extension of an earlier project where the MA Teacher Education (MATE-International) Programme was developed and launched using a scenario-based learning design. The initial project focused on how SBL design could be used in developing course materials in a professional development
programme. The learning experiences in each module was developed and organized within a learning scenario providing opportunity for learners to conduct a variety of activities and undergo reflective practice. The background content related to the module was created and given as a resource pack. The learner is directed to study the content in the resource pack while experiencing the activities given in the Scenario.

The main objective of the initial project was to develop learning materials with a SBL design and through this process of development build capacity among the participants in developing such materials. The present project which attempts to underscore the process of OER integration in a situated learning design is clearly a logical extension of the initial project. Both projects used a resource-based learning model but the initial MATE-I project did not use OER and thus could not exploit the freedom of reusing and repurposing the resource materials. In only one Module of the Initial MATE project, an existing resource material (the PREST materials developed by COL but not declared as OER then) was used. All other learning resources were newly created content specially developed for the Resource Pack of the programme.

The common goal of both projects was to build capacity among participants through hands-on experience of engaging in the course development process. The first project was confined to one programme and hence could be considered as a pilot project. The present project included one course each from five different programmes and thus extending the capacity building process to other Faculty members too. OER integrated situated learning materials developed for one course in each of these five programmes could be later extended to other courses of these programme.

Through this work the Faculty of Education has paved the pathway for other Faculties at OUSL to start using OER materials in developing and renewing their curriculum. With a new OER policy being developed at OUSL, and on the back of this very productive and a long term COL-Faculty of Education collaboration, the scene is set for OUSL to show some leadership in the integration of OER and ICT in promoting and supporting innovative and situated learning designs in their course curricula.
References


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Shironica Karunanayaka and Som Naidu (Editors)
PART I

Introduction and Overview
Engines of Education: Integrating OER in Learning and Teaching

*Som Naidu and Shironica Karunanayaka*

**Open educational practices**

There is growing interest at all levels of education in the adoption of open educational practices. This is especially the case in developing educational contexts where the costs of educational resources are hitting the hardest. Students, teachers and educational organizations in developing educational contexts cannot afford access to the best and most current learning resources, most of which are usually produced and distributed from the developed world in the West. Even when these resources are affordable, the most current and appropriate educational resources are often inaccessible where they are most needed. The availability of open educational resources and access to them offers much needed reprieve to students, educators and educational organizations.

Open educational resources (OER) are “teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions” (UNESCO, 2012). These are educational resources that are released with an open license such as that provided by the Creative Commons License Framework (CC). This licensing framework allows users of learning resources the rights to *reuse, revise, remix* and *redistribute* the resources at no cost and no need to formally seek permission to do so. Under this kind of a license, creators of OER are able to retain ownership of their work while allowing others to *copy, distribute*, and *make use* of their work, to the extent of ‘openness’ granted (Wiley, 2007).

Access to OER is one step in the right direction towards achieving the goals of “education for all”, and empowering of the underprivileged. For education, as Nobel Laureates Amartya Sen and Joseph Stiglitz have argued is a human right, the path to real freedom and emancipation, and justice and equality, especially...
for the less privileged, for without it, and without money, the less privileged have little to no hope of competing equitably with the rest (Sen, 1999; Siglitz, 2012).

However, access to OER in itself is not enough. To be able to bring about this kind of transformational change, in fact, a lot more than access to OER is required. It will require a shift of mindsets towards the adoption of more open educational practices (OEP) which includes notions of open access, open source and open scholarship. Open access is about opening up access to the source codes, and open licencing is about allowing the right to reuse the content unaltered, revise, modify, remix, redistribute and share content with others without cost but with appropriate acknowledgement of course. Open scholarship has to do with sharing of one’s scholarship and its sources openly with others. Classic examples of open scholarship are MOOCs (Massive Open Online Courses), and cloud-based learning opportunities that can offer students a wide range and variety of possibilities for learning and personal improvement.

**Challenges to open educational practices**

While these are laudable aspirations, moving on to and adopting open educational practices may not be enough. If it is not, then what more is required for desirable learning to take place? Is more or less structure and guidance necessary for effective, efficient and engaging learning? Getting the mixture right on these questions is the key. Just as we all do in picking out the best breakfast cereal from a wide range on our supermarket shelves, or choosing the best medicine for our ailment in our local pharmacy, students need help with locating learning resources, evaluating the good ones from the bad and understanding and applying these learning resources to the solution of real life challenges and problems. Learning how to learn, especially in an online and technology-rich educational environment is crucial. That indeed, is what great teaching is all about.

At the most general level teaching comprises the acts of defining the expected learning outcomes for students, selecting what is to be taught and orchestrating the learning experiences efficiently and effectively so that students are able to develop those expected competencies. However, teaching practices differ according to the level of study, nature of the subject matter, the characteristics of learners, and the teaching philosophies and beliefs of the teachers and the educational organization.
We can improve this practice with the design of a more effective, efficient and engaging teaching and learning experience as well as with the help of information and communications technologies (ICT). This kind of teaching takes place when a teacher carefully choreographs the learning experiences of students in close alignment with the expected learning outcomes for them, and with a fine balance of guidance and structure as well as support during the process to allow for independent thought and creativity to occur. When this is executed well, teaching is great, and these are the circumstances under which desirable learning has the greatest chances of occurring (see Naidu, 2010). In conventional classroom-based educational contexts, this is being popularized as flipping the classroom.

**What does “flipping the classroom” mean?**

Flipping the conventional classroom practice is essentially about reserving the face-to-face classroom time for activity and engagement among students and with the teachers, and leaving listening to recorded lectures and study of the subject matter content to private study time outside the classroom. When applied to distance education, this means adopting a less content-centric approach in favor of a more context and learning-centric approach to the design or learning materials.

While some may doubt the value of this approach to teaching, it is one that educators have spent a great deal of time thinking about. Their efforts in this regard have led to the development of many robust models of flipped classroom practices that have the potential to promote and engender best practices. Prominent among these models are design-based approaches such as scenario-based learning (SBL), and problem-based learning (PBL). These models of learning and teaching are based on the premise that learning is most effective, efficient and engaging when it is deeply grounded in the context and culture within which learners live and work. This is called situated learning. They require learners to be immersed in the culture of the subject matter, task or skill that is being taught, much like an apprentice would be immersed in real-world professional practice (see Naidu, 2010).

**Situated learning environments**

Situated learning requires a radical redefinition of learning, teaching and thinking and this involves a shift from a content acquisition model of learning to one of understanding and applying the subject matter content to real-world problems and situations in authentic learning contexts. From this perspective, knowledge is no longer something that is stored somewhere and which can be
recalled as and when necessary. It is the result of an active relationship between the learners and the learning context. To be effective, learning and teaching experiences in situated learning environments need to possess the *requisite variety* that exists in real life settings. The concept of requisite variety suggests that the best learning and teaching experiences are those that have the complexity and the variety which the professions present to their workers (see Beer, 1985). The richer the learning context, the better is the learning and cognition. When this is the case in the context of students’ learning experiences, students are deemed to be suitably prepared and as such there are no surprises for them when they enter the workforce. In this manner, learning and teaching is situated solidly within the context and culture of the profession for which the learners are being prepared.

A model of situated learning is *scenario-based learning*. This is a model of learning that has scenarios as the anchor for all learning and teaching activities. The best scenarios are those that are extracted from real-life settings as they are likely to contain the complexity that is needed to address the full range of skills and knowledge that needs to be covered. An effective learning scenario looks like a good story. The important thing about a good learning scenario is that it will have a precipitating event (which is a trigger for a chain of events), and a goal for the learner to pursue in order to address the problem or issue triggered by the precipitating event (see Naidu, 2010).

Rest assured, scenario-based learning is not about “passing on the buck” and transferring the responsibility of teaching onto the learners or turning the role of the teacher into some kind of a guide on the side, who is somewhat disengaged from the thick and thin of the learning and teaching process. In fact, and on the contrary, it is about turning the role of the teacher into that of a very much *engaged architect and choreographer of the learning experience*. This involves careful orchestration of the learning and teaching process where the learners can take control of their learning in the presence of strong instructional guidance and feedback from teachers and tutors (see Naidu, 2010).

Scenario-based learning resembles professional practice closely, and as such it has the potential to offer graduating students the requisite skills and competencies for entering the workforce. Employers want, and need graduates who are ready to confront the challenges of the workforce, and scenario-based learning offers the apprenticeship and experience that graduating students need before they enter the workforce (see Naidu, 2010).
Developing situated learning environments

Figure 1.1 steps us through the design and development process of \textit{scenario-based learning} as a model of situated learning. At the core of this process is the design of the students’ learning experience. However, be assured that the learning resources and the subject matter content found in books and other storage devices are no less important to learning and teaching than the learning experience itself. The subject matter content found in these storage devices is the \textit{essential fuel} that will drive the \textit{learning engine} which orchestrates the entire learning experience.

Careful integration of the subject matter content in the learning process is absolutely crucial to the development of the competencies and skills and the assessment of the learning outcomes. In face-to-face educational settings, the focus of this can be in the lectures. And in distance education settings, the content will need to be adequately explained in the study guides and books of readings.

How all of this is orchestrated 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 various levels of integration in the model. These include integration of learning resources with the learning activities in the scenario, and also integration in resources themselves. Careful integration of learning the resources with the learning activities will ensure a powerful learning experience (see Naidu, 2010). Without this kind of integration, the learning experience will lack integrity and coherence.
The FIVE steps in the process are as follows:

**Step 1: Commitments:** These are your commitments to your learners. What do you promise to offer them as part of the learning experience that you have designed for them? Some of these promises might be determined by the nature and history of the organization and its belief systems about learning, teaching and education in general. Be sure that these are clearly articulated, as they will form the basis of the contract (however informal it may be) between the learners, you and your organization.

**Step 2: Learning outcomes:** These are the more specific outcomes you expect that learners will be able to achieve if they meet your expectations for them, and they fulfil the requirements of the learning experience that you will have designed for them.
Step 3: Learning context: This is where learning and teaching will take place, and, in this day and age, it can be anywhere and include the campus, the community, the workplace, and the residence of the learners.

Step 4: Learning scenarios: These are the situations within which learning and teaching will take place. And they can be real ones, or contrived to reflect real life. If contrived, they will need to be authentic so that they closely mirror the situations that learners will confront in real life and in their workplace. They provide the training ground for the apprenticeship of the learner.

Step 5: Learning resources: These are the essential tools, the fodder, and the fuel that learners will need to be able to carry out the requirements of the scenarios. Understanding of this subject matter is going to be crucial for demonstrating competency in the learning activities in the scenario.

Developing learning scenarios

The development of learning scenarios to provide the best opportunities for the cultivation of the desired skills and competencies is a complex and difficult task. Good learning scenarios will offer the best scaffolds for the achievement of the expected learning outcomes. Here is a suggestion of steps in the process for developing effective, efficient and engaging learning scenarios:

Step 1: Identify key competencies. Begin with identifying, the type and level of skills and competencies you expect your learners will be able to develop in them. What will they know, and be able to do, when they have successfully completed all their learning activities and assessment tasks?

Step 2: Identify key events in the life of an expert who has accomplished these outcomes and developed these competencies. Then think of the kinds of routine activities, problems, and issues a practitioner will confront in their workplace and on a regular basis. These might be things like attending meetings, problem solving, project management, teaching, treating the sick etc. For this, you may actually like to visit a relevant workplace and carefully observe what accomplished practitioners do and how they go about their business on regular basis.

Step 3: Identify the main steps or processes that expert practitioners take to work through these events. When you have identified a good representation of tasks and activities that practitioners face on a regular basis in their workplace, then proceed to identify more specifically the key steps in the process that experts would follow in addressing those various types of tasks. Take for
instance common activities that a legal counsel, an accountant or a chef would carry out. Describe how an accomplished practitioner would go about carrying out those tasks routinely, because you want to prepare your novice learners to cope with and manage those same kinds of tasks and activities, with the same level of skill of that of an accomplished practitioner, as they too will face them when they enter the workplace.

**Step 4: Develop scenarios with the variety that will offer scope for learners to learn the steps and/or processes outlined in Steps 3 and 4.** Then it is a matter of picking out the most interesting and challenging events that practitioners face in their workplace, and using them as a training ground for your novice learners. The outline of these events will be the same, but the activities for your learners, and the tools and resources they would need to address the challenges would be different.

**Step 5: Develop the learning tasks and assessment activities that learners will be required to complete within the context of this scenario.** Some of these learning activities could be formative and attract formative feedback, while others will be summative and will serve as summative assessment tasks.

**Implementation strategies**

The remainder of this chapter describes the educational context in the Faculty of Education in the Open University of Sri Lanka within which these design principles were applied. It comprises a description of relevant teaching programs in the Faculty, and its goals and aspirations in relation to the capacity building of its staff on the integration of ICT and OER in their teaching. Approaches to the evaluation of the impacts of this initiative on individual faculty members, course teams and the Faculty as a whole is also described. Results of these impacts are also reported in other chapters in this book. These chapters tell the stories of the course teams as they journeyed through this process. They describe not only what happened to the five redesigned courses and how they were transformed, but more importantly, what happened to course teams and individuals in the course teams in terms of their own capacity building and professional development as teachers and teacher educators, and especially in relation to the integration of OER in their learning and teaching programs.

**The educational context and its needs**

The Faculty of Education of the Open University of Sri Lanka (OUSL) is its youngest Faculty. It was established in 2003 and currently it offers a wide
variety of programs, catering to the professional development needs of different categories of personnel in the field of Education, through its three Departments – Department of Secondary and Tertiary Education, Department of Early Childhood and Primary Education and Department of Special Needs Education. Each year, a large number of students including preschool, primary and secondary teachers, principals and teacher educators follow these programs, leading to the award of Certificates, Diplomas and Degrees up to the Masters levels.

In keeping abreast with global trends, the Faculty has been keen to introduce innovative strategies in its study programs and courses. As soon as it became a Faculty in 2003, it engaged in a major project in partnership with the Commonwealth of Learning (COL), where a novel practitioner-oriented professional development program for teacher educators – the MA in Teacher Education (International) program, was designed and developed. This is a unique program which adopted a scenario-based approach to pedagogical design. Periodic curriculum renewal, by reviewing, updating and upgrading the existing curricula and course materials is a requirement for all the study programs at the OUSL. Another innovation has been the integration of Open Educational Resources in its programs, during 2013.

This project was about building the capacity of the Faculty academic staff in integrating Information and Communications Technology (ICT) and Open Educational Resources (OER) in its teacher education programs. The project was sponsored by the COL and had the following goals:

a) Build the capacity of the academic staff in the Faculty of Education on integrating ICT and OER into its teacher education programs

b) Develop five online courses with OER integration from selected teacher education programs:

c) Pilot test the online courses with OER integration in the selected teacher education programs

d) Evaluate the impact of ICT and OER integration in teacher education programs

This work involved a series of activities comprising capacity building workshops on OER and ICT integration, curricula review and course re-design workshops, design and development of online courses with OER integration, implementation of the pilot courses and evaluating the impact of ICT and OER
integration in teacher education programs. The entire academic staff of the Faculty of Education took part in this venture in five course teams. This provided an inspiring opportunity and an interesting experience for the staff to enhance their own professional development as teacher educators.

**Capacity building process**

The first workshop on capacity building of teacher educators at the Faculty of Education on adopting, adapting and using ICT and OER for teacher education programs was held from 2\textsuperscript{nd} to 4\textsuperscript{th} January, 2013, in Colombo. The key objectives of this workshop were as follows:

- Introduce the concept of OER and related concepts, and their implications for designing learning and teaching;
- Review the curricula of the five teacher education programs and select courses for ICT and OER integration;
- Design learning experiences for the selected courses; and
- Identify areas for ICT and OER integration.

Thirty members of academic staff of the three Departments in the Faculty of Education, including Professors, Senior Lecturers and Lecturers, actively participated in the workshop. Five course teams were formed according to the five main teacher education programs offered by the Faculty, and from each Program, one course was selected for redesign and development using ICT and OER. These were:

a. Teacher Educator as an Educational Technologist (in MATE-I);

b. Psychological Foundations in Education (in MEd);

c. Educational Technology Foundations (in PGDE);

d. Emerging Trends in Education (in PGDSNE); and

e. Child Development (in BEdECPE).

The five teams worked intensely on reviewing the existing curricula of the selected course in each program, with a view to redesigning the student learning experience with ICT and OER integration. During this initial course design process, the teams were mainly engaged in developing learning
outcomes, developing scenarios/cases and designing learning activities and assessment tasks, with the integration of ICT and OER. The significance of adopting a “learning-centered” approach in the course design, (Scenario-based Learning-SBL) was highlighted, and pursued by the teams. The key focus was on designing the learning experiences in order to effectively integrate OER to support student learning.

Following the first capacity building workshop, a series of Faculty-level curricula review and course design workshops were held from January-March 2013. During these workshops, the five course teams continued with their course design work, according to a general work schedule and guidelines prepared by the project leaders, with constant monitoring and feedback provided. The following specific activities were completed during these workshops:

- Finalizing the learning outcomes;
- Finalizing development of learning scenarios/ cases;
- Designing learning experiences and developing learning activities and assessment tasks; and
- Identifying and evaluating OER to be integrated.

A second workshop on capacity building of teacher educators at the Faculty of Education on adopting, adapting and using ICT and OER for teacher education programs was held, from 7th to 11th April 2013, in Colombo.

The key objectives of this workshop were;

- Reporting progress of course design and development;
- Presentation of draft courses designed and developed for peer feedback;
- Reviewing/revising/improving courses based on feedback received; and
- Finalizing the course design.
Subsequently, another series of Faculty-level curricula review and course design workshops were held from April-June 2013, during which the five teams continued with their course design and development including:

- Refining the learning outcomes and learning scenarios;
- Refining learning experiences and developing learning activities – online/offline;
- Refining assessment tasks – online/offline, and developing assessment rubrics;
- Identifying, evaluating and integrating OER;
- Developing a study schedule and a Study Guide incorporating all the above components;
- Planning to develop the course as an online course in Moodle learning management system (LMS).

By the end of Phase-1 of the project, the five selected courses from the teacher education programs had been redesigned. Each of these courses consisted of learning experiences designed in relation to the specified learning outcomes including learning scenarios, learning activities and assessment tasks for integration of OER. Phase II of the Project was implemented from September 2013 to June 2014.

The first task in Phase II of the process was to get the draft courses reviewed and edited by three local experts in the field of Education, identified by the Faculty of Education. Once this was completed, each one of the courses was designed and developed as an online course (as supplemental, blended or online-plus courses) in the Moodle LMS. This included the following sub-activities:

a) Designing the five online courses – The Format, Components, Structure, Sequence, Organization, Presentation...etc.

b) Designing and developing online activities – Quizzes, Puzzles, Discussion Forum, Blogs, Reflective Journal...etc.

c) Designing and developing multimedia components to be integrated – Graphics, Animations, Audio and Video Clips etc.
d) Designing OER integration into the online course – Searching, identifying and selecting appropriate OER to be integrated at relevant instances of each course to support the learning process, as well as designing the online learning experiences in order to effectively integrate OER to support learning.

e) Developing the online courses – Creating the courses in Moodle LMS, and uploading content, online activities, multimedia, OER, other resources etc., with the support of Project Assistants.

f) Getting the developed online courses reviewed by local experts in the Centre for Educational Technology & Media at OUSL.

Once all these activities were completed, a final evaluation workshop was conducted in June 2014. Throughout their engagement with the project the team members functioned as reflective practitioners, continuously reflecting on their practices through a progressive concept mapping exercise combined with individual narratives. This approach throughout the two phases of the project enhanced the research capacity of the academic staff as well.

**Evaluation of impacts**

A key focus of this work has been capacity building of Faculty members in the integration of ICT and OER in the course design and development process. To evaluate both its short and long-term impacts, an action research methodology was adopted. Action research is as a form of self-reflective enquiry undertaken by participants in social situations to improve their practices, and the situations in which these practices are carried out (Carr & Kemmis, 1986). The action research methodology is basically about designing and implementing change, reflecting upon it, and learning from the experience. It is an iterative process that comprises the acts of planning, acting, observing and reflecting (See Fig. 1.2).
The project was planned with interventions as part of two key phases:

a) Capacity building of teacher educators on adopting, adapting and integrating OER in their courses; and

b) Capacity building of teacher educators on integrating ICT in the OER-integrated courses.

A comprehensive approach to the gathering of data was undertaken throughout the process, via multiple methods. These comprised concept mapping combined with individual narratives, self-reflections, semi-structured interviews, focus group discussions, and study of artifacts including learning designs, teaching resources, and learning and assessment activities of participants. Continuous descriptive analysis of data provided the necessary understandings that paved the way to planning and implementing the consecutive steps of the project (see Figure 1.3).
Fig. 1.3: A diagrammatic view of the interventions at two phases of the project

Framework

Interpretative Phenomenological Analysis (IPA) was used as the methodological construct to provide an organizing framework for the collection and analysis of data during this process. IPA is an approach commonly used in phenomenological psychology to offer insights into how a person in a given context makes sense of a given phenomenon. It is a
methodology for exploring in great detail how individuals are perceiving the particular situations they are facing and making sense of their personal and social world (Smith & Osborne, 2003). This approach helps to discover the meaning of the experience of each individual through participants’ and researchers’ interpretations, through examining their ‘lived experiences’ (Reid, Flowers & Larkin, 2005).

The collection of data commenced simultaneously with Phase I. Participants’ background information and their current knowledge and perceptions of OER was collected with a preliminary survey. Furthermore, a concept mapping exercise was carried out to elicit participants’ current understanding of OER and related concepts. A guideline to develop concept maps was provided to all team members (see Appendix. 1).

Participants were required to continue with the concept mapping exercise throughout the project to reflect on the development of their understanding of OER and related concepts. These mapping activities were to be accompanied with individual narratives which were designed to enable participants to explain their concept maps. In addition, participants were asked to keep a reflective journal during the process. Focus questions to guide their self-reflections were also provided (see Appendix. 2).

Once the five courses that were designed during Phase I were developed as online courses to be offered in Moodle learning management system (LMS), these courses were then piloted with small groups of students. Orientation workshops for the selected groups of students for the five OER-integrated online courses were conducted. At least two members from each team engaged as online moderators facilitating the students once the courses were implemented online.

A generic evaluation plan was developed by the project leaders, and shared with all teams to adopt in the evaluation process (see Appendix. 3). It focused on three key aspects: the concept of OER; the SBL pedagogical approach; and the online learning environment (OLE).

The following were identified as criteria under which each aspect was evaluated:

1. Nature of adoption and integration (How SBL/OER/OLE are applied in each course);

2. Usability (Nature of student use, Duration, Extent of use etc.); and
3. Effectiveness of impact (What types and in which ways...etc)

The pilot test of each course with selected student groups adopted the following strategies for data gathering (sample data collection instruments were prepared by the project leaders and shared with all teams to adapt as required):

1. Pre-survey - Questionnaire (Print/Online)
   - Focusing on participants' background information and their initial perceptions on pedagogical approaches, use of teaching-learning resources and online learning

2. Reflective Journal (Offline/Online) – To be maintained by learners throughout the process
   - Guidelines provided to focus participants' reflections on the three aspects (SBL; OER; OLE)

3. Analysis of online participation using a Checklist
   - Engagement in learning activities, use of resources, online discussions, interactions etc.

4. Analysis of assignments and learning activities completed by participants

5. Post-survey - Questionnaire (Print/Online)
   - Focusing on participants' perceptions on SBL, OER & OLE and related criteria, at the end of the process

   - To gather further data from selected sub-groups of participants.

Data analysis comprised content analysis and coding/categorizing, supplemented with basic quantitative data analysis. All members of each team engaged in collecting and analyzing data using the strategies identified above, according to a distributed work plan with specified time frames.
**Procedure**

An evaluation workshop was held in June 2014 to pull together all of these activities on the integration of ICT and OER in teacher education courses of the Faculty of Education, with a specific focus on the following:

a) Development of academic staff capacity in course design and development;

b) Integration of OER and ICT in course design and development; teaching and supporting learning online;

c) Achievement of intended learning outcomes by students, student motivation and student reflections on their learning experience by regions/gender/age groups etc.; and

d) Enhancement of the quality of teacher education programmes through integration of OER and ICT.

The aim of the project was to build the capacity of academic staff at the Faculty of Education, OUSL, in integrating ICT and OER into its teacher education programs and evaluate its impacts. Data gathered revealed that this novel experience on ICT and OER integration into teacher education courses was very effective in building capacity of teacher educators, and in motivating them to progress with the future activities in relation to this project. There was evidence of a great deal of confidence in staff on applying their new knowledge and skills and attitude building on developing a “sharing culture” and promoting “Open Educational Practices” (OEP) among the team members.

A major objective of this evaluation workshop was to get participants to compile their reflections to a story of their experiences, hence the workshop was billed as, “Becoming a Reflective Practitioner: Tell Me Your Story”. The key objectives of the evaluation workshop were as follows:

- Critically reflect on the experiences of the participants throughout the process;
- Organizing and reflecting on the collected and analyzed data during the process; and
- Compiling the reflections and writing “Stories” of the five teams.
The workshop activities were planned to enable the participants to critically reflect on their experiences, with the support of data collected and analyzed, and writing their stories as teams. This publication is the outcome of that collective effort among a group of motivated academics who were involved in the common pursuit of designing and developing teacher education courses with ICT and OER integration.

Our goal in taking this line of action was to achieve multiple targets. The first was to ascertain capacity and capability building among staff. In order to get a good handle of that, we believed that getting them to tell us the stories of their development would be the most efficient way of ascertaining capacity building. Second, while we were doing that, we would turn the products of their reflections into a book chapter authored by each course team. We believed that this was one way of promoting and developing a culture of scholarship in learning and teaching in the Faculty. We also thought that these stories compiled in a book such as this and published as an OER would be of interest and benefit to others in other Faculties at OUSL, in Sri Lanka, and elsewhere in the Commonwealth. These are the stories of the five teams of academics with insights into different aspects of the challenges they faced and their experiences over a period of 18 months. Enjoy!

References


PART II
Practitioner Stories
Let’s Change Our Minds

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Facing Challenges

One of the major challenges facing course development in an ODL system is the scarcity of subject matter expertise to develop good quality course materials. Most university academics are unable to find the time to update the course materials. Developing good quality study materials is another difficulty we faced. Even though we realized the need to include real life situations in study materials, the only solution we had to overcome this issue was to provide videos of authentic situations (especially relevant to young children). However, most of the academics are not in a position to produce videos due to time constraints and their limited skill with video production.

In the process of producing printed study materials, there are many other requirements such as language and content editing, revising, proof reading and printing. Therefore, for this process we need to depend on subject specialists, language specialists, and many other individuals. Finally, the total cost of producing print materials becomes considerably high. In addition, during the printing process delays and printing errors may occur. Once the printing job is over, dispatch of print materials to the centers all over the country is required.

Challenges/issues faced during the teaching-learning process

The teaching-learning process at the OUSL is mainly through self-study materials, supported with a limited number of contact sessions/day-schools. Different resource persons trained by the academics of the Department are engaged in this task at several centers all over the country. However, inconsistency may occur in this process. For instance, the content of the course ‘Child Development’ consists of lot of information that is rapidly changing with emerging new knowledge, but it is doubtful whether all resource persons are updating their knowledge and delivering new knowledge during day-schools.
Similarly, if a student misses a day school due to any reason, they will not get another opportunity to engage in the discussions and group work which are the major learning experiences. Also, it is doubtful whether all resource persons are equally capable of accommodating the diverse needs of student groups who have different learning styles and many other individual differences. Since there is a large number of external resource persons engaged in this task it is very difficult to monitor their teaching process, for consistency.

Continuous assessment through assignments is another major technique that is practiced in the teaching-learning process in ODL mode. The comments made by the assignment marking examiners help students to get feedback on improving their learning. However, assignment marking process is a long and arduous process. Even though many external marking examiners who are engaged in this activity all over the country, all students may not be getting good quality or equal feedback to improve themselves.

**Challenges/issues faced when meeting the expectations of the learners and the course**

It is not practically possible to monitor whether the students are achieving the intended learning outcomes during the process, due to limited interactions with them during the limited number of day-schools. Further, since the day-schools are not compulsory, most students are not so keen on attending day-schools regularly, but attend them in an ad-hoc manner due to their time constraints. Therefore, resource persons hardly get the time to identify individual needs and expectations of students and any barriers to reach their expectations. As mentioned earlier when students missed a day school, they have no second chance to experience the missed day school. This is another barrier to meet their personal expectations as well as course expectations.

The ultimate expectation of the Course ESD1230 (which was the focus of our group) is to develop the students’ understanding on behavior of young children, theoretical base for their behaviors and to deal with young children in helping them for their optimal development. Even though some assignments are linked to activities which are designed to give experiences of authentic situation of young children, it is doubtful whether the students really engage in those activities before completing the assignments. If this is not happening there is an uncertainty in meeting the expectations of the course, through the achievement of learning outcomes.
Student related challenges/problems

The majority of students that follow the course/programme are married females. They face a lot of family-related problems during their study period. Because of this situation their regular attendance to day-schools are very poor. Distance to the regional or study centre is another main problem for them to participate in day-schools, since they have to spend a lot of time in traveling. Because of their personal roles as a mother, daughter or a sister, they have a lot of other commitments too during the weekends and find it difficult to attend day-schools. High traveling cost is another reason for the non-attendance at day-schools. Further, since attendance is not compulsory, they are not so motivated to participate in day-schools.

Due to institutional constraints and issues related to assignment marking, the students may not get timely feedback to improve themselves. Due to their personal engagements they cannot find time to use the libraries either. Therefore, they have to merely depend on knowledge imparted by print materials to complete the assignments. The final result of above issues would be dropping out from the system, or taking a long time to complete the programme successfully.

Meeting Challenges

Incorporating rapidly changing knowledge to students enrolled in the programmes of an ODL system is a big challenge for our course team as well other course teams of the Faculty. Faced with such challenges and issues, we felt that a need for a ‘change’ was essential in our course design and course delivery. The Project on ICT and OER integration provided us with the opportunity to re-think our approaches to meeting these challenges. As a team, we engaged in the various activities organized during various stages of this project.

Meeting challenges in producing course materials

Open Educational Resources (OER)

During the first workshop of the Project on ICT and OER integration, academics who are course designers and teachers at Faculty of Education were exposed to the concept of OER which was a novel concept for most of us. During this experience, we recognized that “Open Educational Resources (OER) are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits free use
and re-purposing by others” and that OER may include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.

It was recognized that the OER, digitized materials once downloaded one can store them in her/his personal computer or other storage devices so that the students do not need to bear cost on downloading several times and printing. Thus, we understood that OER breaks the traditional barriers and challenges to education as it shares educational materials among unlimited students, free of charge. The educational institutions can identify and make use of OER materials that are relevant for the programmes they conduct. The provision of free reading materials, audio-visuals and several other teaching aids are very important when education faces the challenges of becoming a marketable product.

Once we had a proper understanding of OER, we identified that integration of OER in the ODL system is the easiest mode to meet the challenges/issues such as updating and reprinting of existing printed modules, as a strategy to expose the students for latest information for them to construct new knowledge. OER not only provide many extra readings, but also provides videos on real situations from which students can get experience similar to real life situations. In addition, there are lot of quizzes and self-assessments as OER materials to make students engage in extra activities to get more experiences, assess whether they have achieved the learning outcomes, and clear the doubts on knowledge and skills they have experienced. Subsequently, we recognized that OER would help us to meet our challenges in developing course materials.

At the beginning, when we were introduced to the concept of ‘OER’, we thought that OER could be used as we wished since they are freely available. However, by the end of the workshop we understood that there are different categories of OER symbolized by different labels, and the labels indicate limitations of using particular OER materials. The six different categories of licenses we identified are CC BY, CC BY-SA, CC BY-ND, CC BY-NC, CC BY-NC-SA, CC BY-NC-ND. We also understood that we can add our own materials as OER under any of the above license so that others can use the materials appropriately.

**OER and Open scholarship**

In addition to freely available OER materials, we were exposed to another concept within OER: “**Open scholarship**”. The concept “Open scholarship” encompasses open access, open source, open educational resources, and all
other forms of “openness” in the scholarly and research environment that provide access to many available research data, information, readings and other materials through the web; it is something like having access to all the libraries of the universities in the world.

Today it is difficult to carry out quality academic research without financial scholarships. A better university equipped with good libraries, access to journals and other research materials only can provide scholars with a better space for research. Therefore, the promotion of open scholarship through OER is seen as a democratizing the access and opportunities for research. The creation of new knowledge is possible only through research, and open scholarship through OER is a pathway to such research. It is useful not only for research purposes, but also for students to update their knowledge and skills in the academic fields they are interested in, who may get access to open scholarships and study the research data very quickly and easily.

The incremental development of this understanding of open educational practices among the course team members was captured through iterative rounds of concept mapping. Figures 2.1 and 2.2 represent two concept maps drawn by two team members of our group after the first workshop.

![Initial concept map of Team member 1](image-url)  
**Fig. 2.1 Initial concept map of Team member 1**
At the beginning I thought,
It's an educational resource on the web which can be accessed by anyone.

During the workshop understood

OER are
- Educational resources for teaching & learning. (Digital or any other)
  - Freely available
  - Can adapt
  - Can share
  - Can redistribute
  - Open licensed
  - limited restrictions

Should be open licensed & labeled as
CC BY/ CC BY-SA/ CC BY-ND/ CC BY- NC/ CC BY-NC-SA/ CC BY-NC-ND

Fig. 2.2: Initial concept map of Team member 6
Meeting challenges in the teaching-learning process

*Integrating Information & Communication Technology (ICT) and OER*

In addition, through a series of workshops, we gained skills on how to integrate ICT and OER in online courses. We were aware that ICT can bridge the gaps and overcome distance and help meet most of the challenges in developing and delivering our education programmes. Even though the use of ICT for provision of education in Sri Lanka is still in its inception, their great potential to educate the under-privileged in society was identified. It was realized that the ICT-OER combination is a great strategy to be used to offer courses/programmes online instead of offering them through print materials and day-schools. Since ICT could be used to create online forums we understood that such forums could be very effective to facilitate students, by creating opportunities for student-student and tutor-student interactions. We realized that the interactive nature of web-based ICT enable online comments/feedback to motivate students, solve many of our problems, and offer guidance to students through online instructions and announcements.

It was realized that ICT and OER could help us meet the challenges in course material development as well as meet most of the challenges mentioned above. For example, challenges faced during day-schools to give equal opportunities for students to learn from resource persons who have equal knowledge, skills and exposure could be met through online delivery of the courses/programmes that enable online interactions too. Not only that, online delivery could help meeting many other student related challenges such as time and financial problems in traveling long distance, and inability to attend day-schools regularly due to personal problems.

Further, it was identified that not getting opportunities to follow the missed day-schools by the students are one of the challenges/issues faced when meeting the expectations of the learners. This problem also could be met through delivering the courses online so that students can access the courses at any time they wish to. In addition, we realized that ICT- OER integrated online course delivery could easily meet the challenges of course expectations such as engaging the students in learning activities realistically by monitoring the progress of their activities through online discussion forums and inviting them to share their experiences gain through learning activities. Also we were able to find that the exact approach to meet the challenge of giving real life experiences relevant to child development, is to provide OER videos on authentic situations.
**ICT-OER integration and teaching – learning methodology: Scenario Based Learning**

While we were identifying the advantages of ICT-OER integration to meet our challenges in offering the courses and issues faced during the teaching-learning process, we experienced another issue. That is, while the ICT-OER combination motivated us to offer courses online, we found the inappropriateness of conducting face to face day school sessions for online learning. During face to face sessions we meet the students and guide, motivate, monitor and give opportunities to share knowledge and skills and also any other assistance also given. During these sessions, PowerPoint presentations, group discussions, group activities are being used as teaching-learning methodologies and techniques to communicate knowledge, skills and attitudes related to the courses. While we were in a confused situation on how to integrate such active learning during online learning, the ‘Scenario-Based Learning’ (SBL) approach was introduced to us as a novel teaching-learning method.

The team understood the importance of Scenario-Based Learning (SBL) as an effective approach that could provide an excellent framework for active learning. It was identified as a method similar to case-based instruction. In SBL, an authentic context in which the problems are presented in a certain sequence, enable the learners to reach learning outcomes at different times. This is a constructivist approach, and a form of experiential learning. Further, in the SBL context, a scenario is a realistic situation and a sequence of events are presented, where the learners are able to internalize the situation and work as they are facing challenges in these situations. Learning occurs when the students proceed through the scenario, while they are guided to discover principles and develop various competencies. Information and reference articles or modules are presented as resources online or as printed materials as required to guide them and to gain knowledge. Finally, step by step by engaging in activities directed by the scenarios, students achieve the expected learning outcomes. In brief, team members detected SBL as a “journey for learners to achieve the learning competencies”.

**Need for a Change in Course Design**

Compared to other courses in the Diploma in ECPE programme, the selected course, ESD1230, has been designed to provide an understanding and the application of key principles of Child Psychology. Therefore, it is apparent, that the course develops a thorough foundation on the theories and its implication on child’s development. It is also evident that the pool of the knowledge on the child psychology is steadily increasing by constant updating of relevant
knowledge and skills. Simultaneously, the learners’ knowledge and skills on child development should be upgraded to deal with young children, since the early childhood and primary stages are the most crucial stages in life of an individual, as it is the stage that lay the foundation to the entire life of a person. Therefore, any person who is involved in the field of early childhood and primary education should be alert with new updates on knowledge and skills.

Currently, the main mode of delivery of this course is via print self-study materials, besides a few face-to-face contact sessions (day-schools) arranged to facilitate learners to get a better understanding and discuss subject matter related issues. The client profile of this course is adult learners who are employed, holding various responsibilities in their families and work places. There is a high demand for the Diploma in ECPE programme and the student number is increasing every year, spreading it out more to the regional and study centers all over the country. The Department is facing a problem of appointing qualified resource persons to conduct day-schools. Thus, we identified a need for a change in the delivery of the courses in this programme, in order to cater to the high demand as well as to offer rapidly changing knowledge and skills in the field of child development to our clients.

The insight gained through ICT-OER workshop directed us to look at redesigning of existing courses from a new perspective. Thus, we looked forward to restructure our courses in an innovative way in which we can provide maximum benefits to the students. All the teams worked together to restructure some of the courses as online courses integrating ICT and OER and using Scenario-based Learning approach to direct the student to accomplish the expected learning outcomes.

About the course

Among the three departments in the Faculty of Education at the Open University of Sri Lanka (OUSL), the Department of Early Childhood and Primary Education (ECPE) serves the country by enhancing the professional development of teachers and care givers in early childhood and primary education fields. The Department of ECPE currently offers three Programmes of Study – Certificate in ECPE, Advanced Certificate in ECPE, and Diploma in ECPE. In keeping with the open and distance learning (ODL) principles adhered by the OUSL, these study programmes, that lead from one to another, offer a ‘ladder of opportunities’ for students who wish to pursue their studies in the field of ECPE.
The selected course *ESD1230 - ‘Child Development’* is one of the important courses in the Diploma in Early Childhood and Primary Education programme, leading to a Bachelor of Education Degree programme. This Diploma programme has two levels: Level 3 and Level 4. The duration of this programme is two years, comprising 72 credits and 1800 study hours. This Programme is available in both Sinhala and English media.

The goal of the Diploma in ECPE programme is to improve the quality of Early Childhood and Primary Education in Sri Lanka, through enabling the participants to perform effectively as teachers/caregivers in the field of ECPE by enhancing their understandings, knowledge, skills and attitudes related to child development and to be familiarized with accepted theories and practices in Early Childhood and Primary Education. Target groups of the programme are teachers, caregivers and parents of children in early childhood and primary school levels.

The specific objectives of the programme are as follows:

- Develop positive attitudes in working with children.
- Developing skills needed through practical work.
- Sensitization to the current issues related to the specific need of institutions and groups placed in special circumstances.
- Strengthening the knowledge and skills related to select academic disciplines.
- Enhance organizational and management capabilities.
- Strengthening the capability in interacting with parents and communication.

*ESD1230 - Child Development* is a six credit course in the Diploma in ECPE Programme- Level 03 in which the students are required to devote 150 study hours. This is one of the most important courses in the Diploma Programme which focuses to enrich the learners with theoretical background on child development and its practical application in the reality. Thus, any learner who successfully completes this course will be able to achieve the following learning outcomes at the end;

- Describe child development & factors affecting child development
- Explain brain development, its functions and factors affecting the development of the brain.
- Identify the process of cognitive development, stages of cognitive
development in children & facilitating cognitive development in children

- Describe social and emotional development & supporting children to develop socially and emotionally in all stages of child development.
- Describe the process of moral development, and factors influencing moral development
- Explain the developmental differences and disorders

In order to support learners achieving the above learning outcomes, the course is designed with ten sessions covering a significant area of child development according to the academic level of the learners.

- The introductory session discusses the concept of child development, different domains of development and the importance of development of all the domains, while the second session, discusses the stages of child development from conception to the end of primary education stage.
- The third session focuses on the factors affecting child development during the process of development covering the theories related to the aspects of total development.
- The Fourth session discusses brain development. The fifth session discusses cognitive development of children and how to facilitate it.
- The next three sessions present different aspects of total development such as language, social and emotional, moral development and factors affecting them.
- The final session focuses on parenting styles and impact of parenting on child development as well as how individual differences affect child development and how to manage and support the children with problem behaviors.

Thus, this course provides learners with a comprehensive knowledge on theoretical aspects of child development and practical implications of it.

A change in course design

To meet the challenges of the course we decided to redesign the course integrating ICT-OER using Scenario-based learning. The very first step of designing a course was to identify the key competencies that were the target for students. The course team of course ESD1230 came to an agreement that the ‘key competency’ should be, “Creating a classroom environment which
facilitates Total Development of Young Children” which ultimately should be developed by the students after following the whole course. It was not very simple to identify the final output at the very beginning. We had to change the wording of the statement on key competency several times to make it more meaningful and feasible.

Our next task was to formulate learning outcomes for the whole course, during which we had to face a lot of challenges. We had to change it several times until we came up with appropriate learning outcomes. The most challenging task was forming the learning outcomes in behavioral terms. We had to think of the feasibility, effectiveness and measurability of the learning outcomes. However after several attempts five learning outcomes were formed successfully.

Then we finalized the specific learning outcomes of the sessions. The whole Course consisted of ten sessions. According to the content, four to five specific learning outcomes were identified for each session. For most sessions the existing specific learning outcomes were considered. Thus, the whole course had four learning outcomes and each session had its own specific learning outcomes too. The number of learning outcomes and sessions varied in different courses. The new learning outcomes were finalized as follows:

• Describe the concept of child development and factors affecting it.

• Analyze the characteristics of children at different stages of child development.

• Use the understanding of child development to design and develop appropriate learning activities.

• Implement learning activities and evaluate their impact on child development

The scenario-based learning approach which we experienced with excitement during the workshop was identified as exciting, innovative teaching methodology that can direct students for an active learning process. The team members had to create scenarios for each session in order to provide an interactive learning environment for learners to achieve the learning outcomes. It was very difficult for the team to first understand what are learning scenarios? How to create them and how to link it with the learning experiences? We made several attempts initially, however we failed. The course team of ESD1230 faced difficulty in creating a common scenario that
will flow through all the sessions. Nevertheless, the course team was able to create scenarios for few sessions during the workshop, but later was able to develop scenarios for remaining sessions too. Attempts were made to have a common scenario, but ultimately only the first two sessions had a common scenario. Finally, the course consisted of three different scenarios that linked with all ten sessions.

The scenarios were designed to direct students to OER as well as many other reliable web resources and essential readings (essential readings are the sessions of existing printed materials), additional reading materials, videos, quizzes, online activities. Even so, it was not that easy to find relevant OER for the sessions. In order to find OER, the team members had to familiarize with the creative common licenses. At the beginning it was a lengthy process. With the awareness raised and knowledge gained at the workshops, the members of the team worked together in identifying OER relevant to the sessions, such as, reading materials, videos, books and quizzes.

The next big task was to develop learning activities based on scenarios. The task of identifying and developing appropriate learning activities for each session was divided among the team members according to their fields of expertise. It was very challenging to design learning activities to match with the learning outcome and scenarios. The team members individually as well as collectively had to face the challenges. However, finally the team was able to come up with suitable learning activities. The learning activities were designed to engage the students actively in the learning process and to get hands-on experiences by themselves.

After individual work was completed, the team looked at all the learning activities and identified the strengths and limitations of the learning activities and did the needed amendments.

When it reached this point, the whole learning experience was designed and completed. It was not that much easy to get the approval for the developed course by the workshop facilitator. After completing the development of the course, the process of proof reading and editing by the expertise were carried out. After several editing rounds, the final output was ready to offer. However, this was not the ending of this whole redesigning process. More work had to be done.

By the end of the process, the team members became familiar with almost all the concepts related with ICT, OER and Scenario-based learning. By looking at the final concept maps when compared with the first concept maps, the
Integrating OER in Educational Practice: Practitioner Stories

BEDECE Group

What is OER?
- Characteristics
  - Transportable,
  - reusable,
  - interoperable,
- Types
  - Factual,
  - Procedural,
  - Principal-based,
  - Conceptual
- Examples
- Where is it stored?
  - In learning object repositories
- How to identify?
  - Should be open licensed and labeled
- Records of achievements
  - Pools, Ponds, Splash, MERLOT, CAREO

Open Badges

Sharing our work

MOOCS

Online course development

ICT

LEARNING OUTCOMES

EVALUATION

INTEGRATED

ACTIVITIES

INTEGRATED

SCENARIO BASE LEARNING

COURSE on ESD1230 - Child Development

Fig. 2.3 Final concept map of Team member 1

changes that occurred during the workshops are apparent, (final concept maps of Team member 6 and Team member 1 are presented in figures 2.3 and 2.4.)
The Open University of Sri Lanka

Creative commons

Open learning (Openness in Learning)

Removing all barriers to Learning

Open Access

Facilitates by providing certificates

Support by providing guidance on how to use resources

Support by providing due recognition

Support by providing scholarly resources

Open Scholarships

Open Badges

Creative commons

Open Educational Resources

Book Chapters, Research articles, Online Quizzes, Self Assessments, Videos, Audios, wikipedia

Massive Open Online Course

Provide opportunities for unlimited number of participants to register for online learning

Self assessments

Learning Experiences

Several learning outcomes

Scenario based learning

Development of Online Course ESD1230

Online forums

Learning Activities

Quizzes

Face to face sessions

Essential Readings

Online Classroom

Fig. 2.4 Final concept map of Team member 6

Barriers to Learning

Access to Institutes Learning-teaching community peers, tutors Learning content

Social barriers Age Sex Race Economic strata

Online learning help to minimize

Facilitates

Provide free access to

Facilitate

Designed to achieve

Pedagogy

Achieved through

Open educational resources help to minimize
Once developed, the whole course had to be uploaded onto Moodle LMS which was the major part of the ICT integration into our course. Again the team members were facing a challenge, because this was a new task for most of them. At this point, the previous knowledge gained by some members on online course development using Moodle very helpful. The team members who were more competent with using the LMS took the responsibility of uploading the whole course into the Moodle system.

Ultimately the final output of the redesigned, ICT and OER integrated and scenario-based ESD1230 Child Development Online Course was ready for offer. The duration of the Course ESD1230 was twelve weeks. In this newly designed course each and every week slot contained a learning scenario, one to two sessions, learning activities, OER, and online discussion forums. The students were expected to read scenarios and reading materials (OER materials and Essential readings), engage in the learning activities, upload their activities and participate in the discussion forums and finally get feedback from the teacher. The whole process was designed to offer online with very limited number (two) of face to face contact sessions. Thus, the final redesigned course was intended to provide an exciting, innovative, new pathway for students to engage in their learning.

Reflections: A new beam of light

Along this course redesigning journey team members passed two major stages:

- Stage 1: Exposing to concepts OER and related concepts, ICT and Scenario-based learning,

- Stage 2: Redesigning the course integrating OER, ICT and Scenario-based learning.

Exposing to concept of OER and related concepts, ICT and Scenario-based learning

During the workshops for redesigning the course ESD1230 by integrating OER & ICT, team members were exposed not only to the new concept of OER and how to integrate OER into existing course materials, and develop scenario based course materials, but also to illustrate the progress of their understanding of and application of the new concepts they perceived during the workshops in redesigning the course through ‘Concept Maps’ and ‘Self Reflective’ statements. Highly motivated team members engaged in this task enthusiastically as it was a novel experience for most of them. Careful observation of concepts maps (indicated earlier in this session) and reflective statements that presented by
the members at the beginning, during the process and at the end of the process, indicated the progress of their understanding and application on the three concepts: OER, ICT and Scenario-based learning.

At the beginning most of them did not have even a basic understanding of these three main concepts and many other related concepts. The concept maps drawn by team members showed their gradual progress of understanding the different concepts and on concept mapping. At the very beginning concept maps of many of the team members indicated very few concepts, and links/cross links were not included. In many of them even though there were links, the links were not labeled. (See figures 2.5 and 2.6 illustrating initial concept maps of Team member 2 and Team member 5.)

![Diagram of Integration of ICT and OER]

Fig. 2.5 Initial concept map of Team member 2
Open Education resources

Fig. 2.6 Initial concept map of Team member 5

There was a gradual progress in concept mapping as well as in adding more and more concepts with labeled links and cross links. Their 1st concept maps and reflective statements revealed that they were able to perceive the concept OER and the related concepts during the 1st workshop, and later concepts maps and reflective statements exposed how their further understanding on these concepts expanded step by step during the workshops. (Final concept maps of Team member 2 and Team member 5 are indicated in figures 2.7 and 2.8.)
Fig. 2.7 Final concept map of Team member 2
Fig. 2.8 Final concept map of Team member 5
Further, the reflective statements indicated not only their thorough understanding of the concepts OER, ICT and their inter-relationships but also the knowledge and skills they gained in scenario based learning to redesign the course including essential aspects that fit with in the context of the Open Distance Learning (ODL) mode.

Following are some of the quotes by the team members revealing how their understanding on ICT, OER and scenario-based learning improved gradually.

“At the beginning my understanding was-“OER is online resources that are freely available” After the workshop I understood that OER are teaching, learning & research materials in any medium, digital or any other mode that exist in a public domain, that could be accessed, used ,& redistributed by anybody with limited or no restrictions & no cost. It was found that most of the resources in the websites/as well as in the text books are not OER material. Only materials that possesses CC label are OER.”

Following member describes his views on the workshop and how it was helpful to him to expand his understanding on the concepts.

“I listened to Prof. Som Naidu. He explained about Open Learning, Open Educational Resources and Open Scholarship. During session 2, he discussed how to promote open learning and open scholarship. Finally he has explained about integrating open educational resources in learning and teaching”.

They further described that features like hands on (practical) experiences, excellent facilitation, guidance and support, motivation and satisfaction gained through activities in the workshops facilitated their thinking process. They had limited prior experience, technological skills, limited facilities (technology) and limited time that would affect the procedures when integrating these new concepts.

The reflections of team members also revealed how their understanding of the key concepts and their application to the development of course materials were used to widen the knowledge of students throughout the workshops. It was evident through following quotations of several team members:

“According to my perception, the concepts (OER) and ICT help to promote self-learning, creative thinking, peer assessment and evaluation and competency of learning to learn...”
“I believe, if we can apply this knowledge for our OUSL context the students and teachers can get more benefits.”

“OER could be used in my Teaching & Learning process very easily rather than spending time on writing lessons”.

“Learners can access OER materials at any time. This is very convenient for distance learners instead of carrying out bulk printed materials”

The following quotation of one of the team members shows how she valued the experience gained through this activity.

“Developing scenario based learning materials was an interesting innovating activity that gives me kind of motivation to heading towards the future education. This project gave me a lot of knowledge and very good experiences”.

The following quotation of the team leader shows the great interest shown by the members of the team.

“Developing scenario based lesson materials (incorporating OER) was a new experience for my junior colleagues in the group. Young lecturers engaged in the task with great interest. Even though we were not able to finish the task, at the end of the day I was very satisfied with interest shown by the junior colleagues.”

Furthermore, some of the team members illustrated the progress of their understanding on scenarios in their concept maps.

Thus, when reflecting back on the whole process, the lecturers appreciated the enormous experiences and exposure received through the whole process. Not only that, we believed that the knowledge and skills gained through this activity laid a strong foundation for us to look forward to engage in the design and re-design of the course materials in a novel way, incorporating more recent and updated information.

Finally, this is all about the New Beam of Light shed on them to think in a novel way on course designing process.

The team while acknowledging the support gained through the process suggests that this kind of work should include more workshop activities to complete the whole process more effectively within a shorter period of time.
Opening our world to Scenarios, OER and ICT

G.D. Lekamge, S. Kugamoorthy, K.D.R.L.J. Perera, S. Wanasinghe, C. Kandangama and A.I. Irugalbandara

The Context

This story is based on redesigning of a course in the Master of Education (MEd) Degree programme offered by the Faculty of Education, at the Open University of Sri Lanka. The MEd Programme consists of both course work and research and is supported by handouts, reading lists and several other learning resources. The course work comprises three compulsory courses and one optional course. ESP2311- Psychological Foundations of Education which is the focus of this story is a compulsory nine credit course, requiring the completion of minimum of 150 study hours by students.

The conduct of this programme is limited to the Colombo regional centre, registering nearly 100 students from all around the country for all three modes in one academic year. It encourages self-study with a limited number of face-to-face sessions to guide the students. As a result, students have to travel a very long distance to attend face-to-face sessions conducted consecutively for three days at the beginning of each month. During the past years, it was observed that students’ participation had been very low for some face-to-face sessions due to a variety of reasons and students were requesting the Faculty to come to their door steps to facilitate their learning. The only cost effective and efficient way to bridge the distance between students and the Faculty is to use online learning approaches to offer the programme.

With a large number of junior staff to design, develop and run the programmes in the Faculty, capacity building of staff members was also an urgent need during the last few years. In addition, the University policy has been the integration of ICT for 20% of its programmes in each year. Therefore, the course team was convinced in selecting this course for redesigning with a view to
improving the quality of learning opportunities given to students and bridge the
distance by integrating OER and ICT, under a project initiated by the Faculty.

Road map of our journey

In this journey we were trying to find answers to two main issues:

- How do we re-design and develop a course by incorporating Scenarios,
  OER and online interaction for M. Ed students while improving the
capacity of staff in those areas? and,

- How far the re-designed course would enable us to develop new
  knowledge, professional skills and attitudes in those students in line
  with a pilot study in order for them to perform their professional
  activities in a satisfactory manner.

Further, our intention was to examine the effectiveness of SBL approach in
facilitating the achievement of the objectives of the programme, suitability of
the OERs identified by the course team to further student learning in the
selected themes of the course and the impact of on-line learning activities in
increasing student participation in the selected themes.

Six members in the course team and M.Ed students who had been following the
existing programme had to work cooperatively and collaboratively to achieve
these goals. All the course team members were actively involved in the design,
development and implementation of the course while hoping that a reasonable
number of students would collaborate with the staff members in the piloting
process.

Outline of our journey

After taking decisions about the course that we were going to redesign, the
team had a number of meetings to plan the project and we had to be prepared
for the first workshop planned by the Faculty. The long term and short term
steps indicated in Table 4.1 have been identified as helpful for the course team
to actively participate throughout the process.

It was expected that in order to complete the whole cycle - planning,
interventions, observation and reflection, would take more than one academic
year.
<table>
<thead>
<tr>
<th>Where we were</th>
<th>Our goals and aspirations</th>
<th>Our interventions</th>
<th>Where we want to be</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems of students in presenting themselves physically in face-to-face sessions</td>
<td>To reduce the physical distance between students and teachers by using ODL methods</td>
<td>Incorporate ODL methodologies to facilitate student learning</td>
<td>Students geared towards ODL, working at their own place and pace</td>
</tr>
<tr>
<td>Out-dated hand outs and reference lists developed nearly seven years ago using traditional methods</td>
<td>To redesign the course using scenario – based learning approach, activities and assignments to make it more viable for students</td>
<td>Design, develop and integrate Scenarios, activities, assignments, essential readings and additional reading material to the selected course</td>
<td>Quality material developed incorporating scenario based-learning approach</td>
</tr>
<tr>
<td>Junior staff members with limited experience in developing ODL courses</td>
<td>To expand opportunities to junior staff for capacity building on developing scenarios, integration of OERs and ICT</td>
<td>Course teams work cooperatively and collaboratively in the design, development with piloting and integration of scenarios and other components</td>
<td>Capacity building Cooperation and collaboration Team work Attitudinal changes</td>
</tr>
</tbody>
</table>

(Contd.)
<table>
<thead>
<tr>
<th>Issue</th>
<th>Desired Outcome</th>
<th>Action</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>No integration of OERs as learning material for courses</td>
<td>To identify and integrate suitable OERs as a learning resource in the course</td>
<td>Training workshops on identifying and integrating OER</td>
<td>Active participation in workshops and identification of relevant OERs by staff members</td>
</tr>
<tr>
<td>Limited interaction between institution and students through on-line</td>
<td>To facilitate interaction between staff and students through on-line methods</td>
<td>Training workshops on ICT integration</td>
<td>Application of ICT methods for effectively interacting with students</td>
</tr>
<tr>
<td>Poor performance of students in examinations, research and practical work</td>
<td>To create a positive change in the knowledge, skills and attitudes of students in relation to the selected subject</td>
<td>Use different procedures systematically which will create a positive change in students</td>
<td>High quality graduates produced through the course</td>
</tr>
<tr>
<td>Limited experience of staff and students in conducting research</td>
<td>To provide opportunities for active participation in the action research conducted by the Faculty</td>
<td>Plan, implement and reflect on the action research project</td>
<td>Research culture developed among staff members</td>
</tr>
</tbody>
</table>
We are using different colors to describe our journey. OUSL has started her journey 34 years before. In our journey, we realized some shortage of learning resources. This flow chart shows the outcome of the innovative strategies what we brought in the year 2013, to reach the goal of our journey.

Fig. 3.1 Flow Chart
Identifying and re-assuring our directions

Designing and integrating scenario-based learning

The course team had only the breakdowns of the lessons and reference lists to start with the re-designing of the course during the first capacity building workshop, where Scenario-based learning (SBL) approach was introduced by the expert resource person. One senior member who had the experience in designing, developing and integrating scenario–based learning (SBL) approach to teacher education programmes provided the necessary guidance for the course team to be on the right track. Further, the first workshop conducted by the resource person provided valuable insights to drive us into the correct path. Our first step was to identify the main themes that will be included in the course in a sequence to cover the whole syllabus. The team was able to identify the following themes as essential components of the course after several discussions.

- Child development
- Cognitive processes
- Learning
- Children with special needs

According to our experience, developing scenarios and linking them with practical activities and assignments had been a very challenging, time consuming and strenuous task though the friendly atmosphere developed within the course team facilitated this process. It was a novel and exciting experience for most of the junior staff members. The team was able to adopt one case study and three scenarios to represent the content of the selected course and several essential and additional learning materials were found from OERs.

Learning scenario is the starting point of student learning. Students have to engage in the learning activities and assessment task based on the key role which they need to assume from the scenario. This course was developed as a blended online course with integration of Open Educational Resources (OER) to support student learning.
The learning outcomes of the course are;

1. Apply strategies to facilitate total development of children
2. Design classroom teaching learning process to facilitate cognitive processes of children
3. Evaluate different factors affecting students’ learning
4. Create a suitable classroom environment for effective learning
5. Apply suitable strategies in schools to promote inclusive education

The team members felt that day to day work of the Faculty acted as a hindering factor for making a steady progress in the development of scenarios. Discussions and arguments between different course teams also improved the scenarios up to a certain extent. Finally a senior academic had reviewed the scenarios, activities and assignments developed by the team and given her constructive criticisms which were very helpful for the team to revise the above mentioned components.

**Team members’ reflections on designing and integrating scenario-based learning**

Staff members had mixed feelings about developing scenarios for a postgraduate programme geared towards transferring new knowledge and developing attitudes and skills at the same time. It took a longer time than expected though the team members were happy with the final outcomes and also they honored the experience gained through capacity building workshop and interacting with team members. They have future plans to incorporate this new innovative approach into some other programmes though they felt that a more peaceful environment with no distraction would facilitate the process. The following quotations reveal the feelings, process, progress, impacts and overall reflections of team members.

**Feelings of course team members**

"Innovative OER workshop helped me to develop a new look in my profession. I gain some new experiences like- identifying and using OER, designing scenario based curriculum, changing the curriculum according to the online mode etc."

“Before I was engaged in OER capacity building workshops I was not aware of scenario based learning and Open Educational Resources. But at the first
day of the workshop I realized that both concepts are very important for an academic in an open educational institution”

“It was a new opportunity to work with senior academics to share ideas. So it was a good chance to stay without frustrations”

“Before I participated in the first OER work shop, I had some idea about scenarios. Because I worked for MATE International programme. But I have gained more experience during the workshop. I feel this work shop is more useful for developing our capacity building”.

“However, I still have a feeling that Scenarios can do very little to support learning of postgraduate students. Even though scenarios can make student learning lively, in order to fill the gap in this course, a number of essential and additional learning material should be included and they should be linked with the activities and assignments”.

Through the feelings of team members, it could be concluded that SBL approach was new to many members though some had been involved in developing scenarios previously. The feelings of those who had learned about SBL for the first time were different from those who had obtained some experience with SBL earlier.

**Process of developing scenarios**

As illustrated by the following quotations, the junior members felt that developing scenarios was a challenging experience for them, the team approach was beneficial and they have gained a lot by working with seniors. Further, they were satisfied with their contributions for the development of scenarios.

“According to my understanding when we developed scenarios for our course I have contributed well. And also I have gained a lot of experience working with seniors”

“it was a big challenge to make a new course, but as a group work our sharing’s always gave a big strength.”

“We created a new scenario for our course. This exercise will help me to develop new scenarios for other courses too.”

“I think I contributed well for the development of material.”
However, some senior members in the team were concerned about the time and the number of revisions they had to complete to produce meaningful scenarios. They thought that the heavy workload of the Department was a distraction for working as a team to develop scenarios.

“We had to change our Scenarios several times to make them more lively and relevant to the themes we selected”

“The early experience in developing scenarios facilitated my present work”.  

“With the heavy workload, it was very difficult to have a peaceful mind for developing scenarios.”

“Developing scenarios and identifying suitable problematic roles to suit with learning activities and assessment activities take much time”

**Progress of the development of scenarios**

All team members were positive and very happy about the progress they have made in line with the development of scenarios.

”We have made a tremendous progress with regard to development of Scenarios even though it took longer time than expected”.  

“I think as a whole, we have developed good scenarios. And also we have formed suitable learning and assessment activities in relation to them”

“I have shared my ideas when our team was developing scenarios”.

Their reflections further revealed that the collaboration and cooperation that existed among team members helped them to achieve set targets. The harmonious relationship which existed among the members facilitated the interaction among team members.

“Collaboration and cooperation among staff members had improved through this process”

“Under the guidance of our team leader we have developed three scenarios and found one case study as OER. This experience has helped me to develop my higher order thinking skills”

**Impact on the team members**

Several members had focused on the professional skills they had gained through development of scenarios.
“Further, the discussion on scenario based learning helps me to develop new scenarios for our programmes”

“After participating in the workshop series I was able to write scenarios and form learning activities and assessment activities too”

“This is a good experience to develop mindsets to work individually and collaboratively”

“After this project I have learned to write scenarios for other courses too. We have worked as a team and managed to complete. From this workshop I have learned that team spirit is a more powerful energy for our successful professional life”.

However, several members were worried about the limited contributions of some members which may have acted as a barrier for development of the expected skills.

“Limited participation of some members reduced the opportunities for interaction among staff members and learning from seniors. Thus opportunities for capacity building of some staff members were limited”.

“It is not sure whether the understanding of some staff members on the material development process had been improved or necessary skills had been acquired by them in the process”.

**Overall reflections of team members about the development of Scenarios**

Having completed half-way through the journey with development of scenarios, the following reflections revealed that the team members were satisfied with what they have achieved. They have referred to the knowledge and capacities gained, logical and creative approach followed, collaborative and cooperative efforts made and also future activities they have planned in line with scenarios.

“On the whole, the knowledge I gained through these sessions are very useful for me and the institution”

“As a whole I was able to develop my capacities in developing scenarios, getting experts’ ideas and also developing team work abilities”.

“Collaboration and corporation among staff members had been improved as the teams worked together to achieve targets. It is good to know whether they are aware of the underlying principles in developing scenarios, activities and assignments and on-line interaction”
“This experience should be directed to develop new courses with current demands of the country. As well it will be a great opportunity for all academics to do new research on current needs of the country”

“It was a more logical process which required a very creative and innovative approach”.

The following quotations were related to some limitations of scenarios which may have to be resolved by introducing alternative approaches along with scenarios.

“During the piloting process I have observed that students’ participation gradually goes down. Therefore I think in future our faculty has to adopt some strategies to keep the students in the online track”.

“There is a limit for including activities and assignments in line with one scenario”

“Development of Scenarios is not that easy. It is very time consuming and sometimes I felt that they did not have the expected standard.”

“They should be developed by more experienced staff”

So it could be concluded that the development of scenarios was a very satisfying experience for all the members and they were happy with the scenarios, activities and assignments developed in line with the selected course. In order to overcome the limitations experienced by the team members, the integration of OER and ICT was identified as one solution.

**Integrating OER and ICT**

In our journey, the first workshop conducted by our resource person, was a landmark where all the members had explored Open Educational Resources (OER) and related concepts such as Open Scholarships, Creative Commons, MOOCs...etc which were very new to us, and additional attempts had to be made to get the complete understanding of them. The first step was to explore OER which are in different forms in the web such as word documents, research articles, PowerPoint presentations, and video clips. It was an interesting experience to explore OER through search engines to collect rich sources from the collections of OER.
Next step of this journey was integrating ICT. we scheduled our course according to weeks and different components such as learning outcomes, scenario, learning activities, assessment activities, class discussion forums, reflective journal and announcement were organized.

**Team members’ reflections on identifying and integrating OER**

Identifying and integrating OER was novel and interesting experience for all team members and they have positive feelings about the impact of OER on student learning. It was encouraging to find that the team members were very ambitious about incorporating OER into their future programmes.

The following quotations show some reflections of the team members.

“Before the workshop, I understood that OER was a resource which we can download from the web freely. After the Session 1, I realized that OER is a broader concept. Now I understand OER are learning resources which we could use for our own purposes with changes or without changes and, reuse and redistribute”

“I feel that the integration of OERs will facilitate student learning. But finding appropriate OER is a major problem. In my experience choosing appropriate OER takes much time. Our team has spent more time to decide the most relevant OER. Some OER are completely not matching with our cultural context. Therefore, I like to suggest we have to pick the best possible OER which suit our educational, cultural, religious and social context and value”

“I feel OER will help to minimize our problems. We can use OER as additional learning resources. This will increase self-learning abilities among the students and help to develop self-regulated learning practices in their learning journey”.

“When we work to identify the OER to integrate with our course, we find very attractive, useful educational resources which are relevant to our lessons. But using those OER as it is for our educational, social, economic and cultural contexts, gives the impression to me that some OER make some kind of mismatches in our contexts”.

“I realized that I can do any changes to cope with our social, cultural, religious values. This understanding encourages me to integrate OER into our curriculum developmental process. I have identified different type of OER such as course materials, modules, textbooks, videos, tests, software, and techniques etc. which are available to access enough knowledge in a particular topic”. 
“I know that developing learning materials is a very difficult task for us and at the same time finding the suitable resource persons for this purpose also very difficult. We can use OER as additional learning resources. This will increase self-learning abilities among the students and help to develop self-regulated learning practices in their learning journey.”

“The different types of OER will help to keep students’ attraction in learning. Therefore, I feel our faculty need to organize an OER workshop for students also. This will help our students to find the suitable OER for their lifelong learning. Especially research students should have the knowledge of OER. Because using OER students can develop their knowledge further. Moreover, teachers also can develop their skills in teaching, forming activities and assessment activities etc”.

Almost all members in our team have accepted that OER is a novel and essential concept in the existing open and distance learning system.

Team members’ reflections on ICT integration

ICT integration was a good experience for the team members. However, the application of those experiences was directly possible as we are working with mature students. A majority were concerned about the limited access of students due to unavailability of a mechanism to motivate students and also the inability of team members to interact with the students due to heavy work load in the Department.

Following are some reflections of the team members on ICT integration:

“I felt that ICT integration is playing a vital role for ODL courses. So, as academics at OUSL we should have practices to integrate ICT for our courses. Otherwise, it is the current trend in the world. Therefore, we should work more towards that”.

“Incorporation of ICT was an interesting experience where we had to think in line with adult learning theories”.

“I felt managing the time is a very big problem to maintain good interaction to motivate to keep them online”.

“Sometimes we as well as students were unable to login to the internet. Some students did not have internet facilities at their home and also as academics we are very busy with our work schedules. Therefore, we do not have enough time to engage in online activities properly. Otherwise there were some problems in doing team work. But we were able to solve those problems to some extent”.

“If the students are given the technological backup and access to on-line facilities there would be a strong interaction between the two stakeholders.
There should be a mechanism to motivate students to complete the activities online”.

“The series of capacity building workshops help me to develop my self-confidence as a teacher educator in the ODL teaching-learning environment. As a whole, I felt that integration of ICT is very important for OUSL courses. But there were some limitations also. If we overcome from those problems we will be able to keep the standards of online courses. For that we should adhere to the advice given by subject experts as well as technical experts. Further, we should be aware of the facilities available and also we should facilitate the students as much as we can”.

“Actually I did not have an experience in relation to giving feedback online to students. But because of this course I was able to do that with the help of some of my team members. It is a novel experience to me. But I felt that we have to be very keen when we give feedback through online. Because we do not meet students face to face. Otherwise, we should devote our time to give feedback, if not it will not be successful”.

“This workshop has made an impact on me to develop online courses. According to the ODL system we should encourage our students to use online materials. Problem is the faculty as well as our students do not have enough facilities”

Our concept maps

The first and last concept maps produced by the team members revealed how they have progressed in their journey with the new concepts and skills (see Figures 4.2 – 4.11). First concept maps produced at the starting point of the journey were limited to OER related concepts though the last ones had clearly shown how their horizons have been broadened at the end of the journey. The final concept maps had been more comprehensive illustrating their insights about the integration of scenarios, learning activities, assessments, OERs and ICT in the teaching-learning process. These concept maps provide concrete evidence about the capacity building of our team members.
Fig. 3.2: Concept Map - Initial version of member 6

Fig. 3.3: Concept Map - Final version of member 6
Integration of ICT and OER into Teacher Education programmes and Capacity Building of Teacher Educators at the Open University of Sri Lanka

A brief narrative about the concept map:

Open educational resources is linked with some other related concepts such as open licence, creative commons licenses, open scholarship, open badges and open online courses. The functions of these concepts could help to the public to learn and upgrade their competencies in lifelong and at the same time link with ICT and OER could help to develop ODL institutions as mega universities.

Fig. 3.4: Concept Map - Initial version of member 2
Concept Map Version 3- Integration of ICT and OER

A brief narrative about the concept map:
This concept map shows some benefits and challenges when we plan to organize a teaching-learning process using scenario based teaching and learning in online mode with integrating Open Educational Resources (OER).

Fig. 3.5: Concept Map - Final version of member 2
Integrating OER in Educational Practice: Practitioner Stories

Fig. 3.6: Concept Map - Initial version of member 3

Fig. 3.7: Concept Map - Final version of member 3
Integrating OER in Educational Practice: Practitioner Stories

Fig. 3.9: Concept Map - Final version of member 4

Fig. 3.10: Concept Map - Initial version of member 5
How unesco support for OER
1. UNESCO OER platform
2. UNESCO OER community
3. UNESCO OER resources
4. Open Training platform 2013-2014
5. Open educational Quality initiative
6. OER Asia training tool kit

What Education faculty can do with OER?
* Introducing OER based Short online courses for current needs of teachers, doing research for Using OER for teaching & learning, OER based conferences in the faculty level.

Open scholarship
* Open access,
* Open data,
* Open educational resources

OER licence conditions and copy rights
* Attribution by
* Share Alike sa
* Non Commercial nc * No Derivative

Why do I care for OER?
* Limited text books,
* Lacking teacher training programmes * Join with learning communities, creation, sharing, review, and use

OER text books/journals
* Flatworldknowledge.dge.com,
* College open text books
* CC consortium for OER,
* Directory of Access journals
* Project Gutenberg
* Google Books

Audio
BBC archives,
Librivox- free audio books, iTunes University, open

Video:
You Tube Edu
You Tube
Ted talks

Conferecnes
1. Open Education 2011 Utah, USA
2. OER 11, Manchester UK

Resources communities
1 College open text book community,
2. OpenCourse library

5 Rs frame work
* Retain, *Remix
* Reuse, *revise
* Redistribute

Content aggregate
* Merlot,* connections, * OER commons,* World lecture hall,* world lecture project,* search by creative commons,* internet archive

Articles /resources
* OER Handbook
* 7 things you should know about open text books publishing from EDUCAUSE,
* $2B for OER

Images
* Flicker, digital
* gallery, US
* government photos & images,* Morgue file,* freeimages.com,
* everystockphoto

Fig. 3.11: Concept Map - Final version of member 5
Interventions, observations and reflections

This part will focus on how the course team and students had proceeded with their journey through developed scenarios and related components, OERs and ICT. In order to capture student observations and reflection with regard to different aspects of the course, the team had used a multi-method approach. The first approach was to conduct two orientation programmes to explain about the course and to give hands on experience with regard to on-line platform.

The first orientation workshop was conducted by the course team to explain the following aspects.

- Course structure
- Course design
- Scenario based learning
- Online learning environment
- Using Open Educational Resources
- Learning activities
- Assessment activities
- Reflective writing
- Reflective journal
- Importance of using OER and online participation.

Only twelve (12) students had participated in the first orientation workshop. Information related to online learning was presented by the registered students of the existing course to their peers. Therefore the next day eight (08) more students had expressed their willingness to join in the course. The expectation of the course team was to have at least 20 students for the second workshop. But only thirteen (13) students participated in the second workshop.

The second orientation workshop was conducted by the OER project leader. The following aspects related to online learning and OER were explained in this workshop with the hands on experiences.

- Introduction to the online learning environment
- How to identify and use the online resources (OER)
- How to engage in the different online activities
- How to upload the assignments
- How to interact through the online learning environment
Surveys were used to get students’ views on the use of SBL, OER and on-line environment at the beginning and after completing the course. 13 students responded to the pre-questionnaire. However, due to time constraints the post questionnaire was uploaded to the Moodle and students were sent a massage asking to respond to it.

**Student reflections on orientation sessions I and II**

The team members had organized the orientation sessions on Friday and Saturday from 3.00-5.00 pm to suit the requirements of the students. Students regarded the orientation session as a new experience. From the seven reflective entries available, three students have mentioned as follows:

“I got new experience on how to access an online course at OUSL... This helped me to access online courses from anywhere”.

“I think this is new experience for me. This is the first time I have engaged with an online course. I'll try to do my best”.

“This is a good experience that I got through this online study program”.

According to these reflections orientation session was a new experience to students.

**What is revealed by pre-and post questionnaires?**

It was clear from the pre-survey that majority of the participant students had been using their own computers for their learning. It indicated that a majority of them knew how to use ICT for their study purposes. It was further revealed that a considerable number of students had enough online experiences. They had been interacting with their tutors on-line and participating in on-line discussion forums. Many students prefer to use 05 to 10 hours time for online participation.

The pre-questionnaire had revealed some of the problems faced by the students in the online learning environment and they could be sequenced according to the priority as follows:

1. Spend more time/Time allocation/Time management
2. No adequate knowledge about online learning
3. No internet connection at home/slow internet connection/Coverage problem
Integrating OER in Educational Practice: Practitioner Stories

4. Login problems
5. Deadline problems
6. Power cuts

Students needed further support on the following aspects:

1. Online experiences
2. Communication facilities
3. Encouragement
4. Good guidance
5. More comments and feedback
6. Facilities for peer interaction

Significant milestones

Redesigning a course using SBL, OER has been a significant milestone for the junior staff members of our course team. Pursuing new knowledge is an essential thing to a course team for developing a new course. OER is an innovative and essential concept in the open and distance learning system. Participation at the resourceful workshops and all facilities and guidance provided enhanced mindsets and fulfilled capacity building of the course team members.

Integrating ICT has been another milestone in our journey. Through this exercise the team could experiment with the theories of motivation and learning which has been the core of this course for improving student participation. Student discussion forums, quizzes and games were some of the strategies planned through this exercises.

For students, this process had provided new opportunities to learn online. This was a new experience to link technology with the learning community. Students might share these experiences with their colleagues in their schools and this might help them to motivate their friends also to learn online. This will connect new students with the ODL system. However, students have appreciated online experience as a facility that helps them to learn from anywhere.
Lessons learned and concluding remarks

Our journey was facilitated and expedited due to the following reasons:

1. Team spirit among course team members had helped in overcoming many challenges faced throughout our journey. There was always a mutual understanding and a close relationship among members and the majority was very committed and dedicated to achieve success in our journey.
2. There were very fruitful discussions among course team members to find the correct path for our journey and the decisions were taken by considering the view of the majority. All the members had a clear understanding about the targets and always supported each other when one ran into difficulties.
3. Setting short term goals and reviewing progress continuously were two strategies that helped the members to progress smoothly towards the required targets.
4. Reflections made by course team members at different points of our journey helped in reviewing the procedures set and also improving them further to suit the requirements.
5. We should always provide opportunities for our students to express their views on different aspects of the course and change the procedures as much as possible to suit the student requirements.
6. The team must find strategies to motivate students as well as teachers and maintain their motivation throughout the process.

The team had the following negative experiences also which could have been avoided to make our journey steady:

1. The main problem faced by the course team in the development of scenarios, identification and integration of OERs was that all members could not turn up on the same day due to certain departmental responsibilities as well as personal problems. The productivity of the journey would have been improved if the members had been released at least for one working day for their project work and provided opportunities to work in a conducive environment.
2. The team should closely work with students and monitor their progress over time. This closeness can be maintained by several means which are applicable to students. For example, when the students are provided with the opportunities for online interaction, team members also should have time and enthusiasm to log on to the facility and encourage the students.
3. There were several technical barriers faced by the course team members as well as students which should have been avoided to smoothen the progress.
our journey. For example, the OUSL web site had not been working at several occasions which limited student interactions with the staff members.

4. Incorporation of OER and online interactions would not be successful if the technical problems related with the Moodle system is not solved by the University. Incorporation of AV material as OER take more space and to view them also a high bandwidth is needed. The team could not incorporate some OER found by them after spending their valuable time due to limited facilities provided in the system. Further, this acted as a barrier for maintaining online interactions with students.

5. It was further noted that students preferred taking printouts of the material and reading them without using them online which was an unexpected issue emerged through this exercise. The course teams have to find more innovative ways to keep them online and continue their learning using online interactions. Further, it was not clear whether some students had viewed relevant OER at least once to support their learning in the selected themes.

6. The computer skills of some members were not up to the expected level which may have hindered the steady progress of this activity.

**Concluding remarks**

This whole process has supported in developing the capacities of course team members in relation to designing and developing scenario-based learning (SBL) and integration of OER and ICT to ODL programmes. Further, the experience gained through this exercise as designers, researchers, writers and evaluators has led to improving the motivation, enthusiasm, collaboration, co-operation and commitment of team members which in turn have improved the quality of their work.

It is worth mentioning, that the team has come to a crucial point in the journey where an innovative course has been developed using SBL, OER and ICT, piloted and is ready to offer on a large scale. However, the developed course should be thoroughly reviewed to be incorporated to the existing programme. This should be considered as a starting point to move to the world of scenarios, OER and ICT and successful strategies should be applied to other courses as well in the future.
Thinking beyond ... 

It is necessary to improve the computer skills and competency in English of some staff members which might facilitate the steady progress of this activity.

There should be a mechanism within the Faculty to review each others’ work and improve the quality of the final product. This is more important than monitoring of the work of each team. Even though the staff members had been using self-reflections with regard to different components of their courses, this process has not been applied to improve the quality of the final products.

There should be a mechanism incorporated to the project to motivate students who were participating in the pilot programme. Some students had been involved in the programme for nearly 08 weeks simply because of their genuine interest to know what was happening in the programme.

Collaboration and corporation among staff members should be improved as the teams worked together to achieve targets. It is good to know whether they are aware fully of the underline principles in developing scenarios, activities and assignments and online interaction.

Course teams should explore good quality open educational resources and scenarios. They should develop skills for further development of scenarios, for revising, for remixing methods according to course aims. All scenarios should be piloted with students, curriculum experts and course team members. Furthermore, both parties should be familiar with aims and objectives of scenario based learning and aware of the aims and objectives of open and distance learning.

When integrating ICT, course teams should be empowered to use ICT for developing study skills of students. As well, before starting the online course student should have to be involved with all steps of the Moodle activities. Commitment of the University to provide a sophisticated facility with a high bandwidth is a must to operate the courses online without technical problems.
Silver Lines in Special Needs Education

T.D.T.L. Dhanapala, K.A.C. Alwis, B.G.H. Anuruddhika and K. Ketheeswaran

A ‘difference’

A child is like a butterfly in the wind
Some can fly better than others
But
Each one flies the best it can
Why compare one against the other
Each one is different
Each one is special and
Each one is beautiful
Therefore
Let’s make a world
To give a space for the difference

This space can be created in mainstream education and teachers are who can make the difference.

Educating students with special needs in the general classroom is becoming an integral part of regular education. This means more and more children with special needs will be placed in the regular classroom. In order to provide effective inclusive education for all students, teachers need to develop a different set of skills and attitudes than those traditionally required by the profession. Baker and Zigmond (1995) observed that increasing the number of children with special needs in regular classrooms is dramatically changing, and that it has also changed the way that special needs education services are provided in schools. Therefore, it is important to change the traditional
methodologies used in ways of teaching in regular classrooms to cater to children with special education needs.

In recognition of the importance of facilitating such practices, OUSL established a new Department to develop the professional knowledge, attitudes and skills of teachers which would deal comprehensively with all aspects of special needs education. The Department of Special Needs Education (SNE), of the Open University of Sri Lanka at present conducts one Postgraduate Diploma in Special Needs Education Programme for teachers.

This programme is open for all graduate teachers in Sri Lankan schools and any other officers in educational institutes, possessing a first degree from any recognized university. There are nine courses and a teaching practice component in the programme, all of which are compulsory. Even within the Open and distance framework we were able to offer these courses being more practical-oriented.

When integrating ICT and OER into these courses it seems to be a challenge for us because there was a question in our mind ‘how could we integrate the practical component in to the online courses’. This was a big challenge for us. Another challenge was offering the course online for students of whom a majority are with fewer competencies in English and ICT skills. Furthermore, most of our students are studying while working and they face difficulties in managing their time in accessing the internet facilities, due to connectivity problems.

Anyhow, as a result of the Project on Integration of ICT and OER into Teacher Education programmes, the Department of Special Needs Education embarked on designing its online courses with OER integration. The Department decided first to select one compulsory course of the Postgraduate Diploma in Special Needs Education programme, that is ESP2136 – “Emerging Trends in Education”, to re-design it as an OER-integrated online course.

The course Emerging Trends in Education provides a holistic view of trends which are emerging in education and development of educational philosophy, psychology and technology, and focuses on the knowledge on the well-being of our society. Therefore the team decided to select this course for redesigning. As one member of the team stated, ‘This course is the driving
force of the programme’. Another member said, ‘This course provides an overview of the whole programme’.

We started our journey by intensively studying the course contents from the existing module for this course. We found, that the content consisted of “the concept of education as a human right, education for individual and social development, perspectives in education, emerging trends in inclusive education, Sri Lankan initiatives for education for all (including children with special needs), rights of children with special needs and children placed in special circumstances.

There were six objectives in the current module of the selected course as follows;

1. **Identify the important global instruments that attempt to focus attention on human rights of people, role of education as a right, especially of children, contributing to the assurance of other identified rights.**

2. **Comprehend that the perspectives of education are multifaceted, and understand the systems of education.**

3. **Explain the concept of Special Needs Education**

4. **Explain the principles of Inclusion and concept of Inclusive Education**

5. **Identify barriers to achieve Education for All in Sri Lanka**

6. **Explain briefly their rights as set out in the CRC and appreciate the current status of achieving these goals; globally and in Sri Lanka**

‘Education as a Human Right’ is the key focus of this course.

Since this is a distance education programme, as in all other programmes at OUSL, the Department only provides self-study modules to the students. A few day schools are also conducted on the base of these modules. In addition each module has a list of references for students to get additional information.

However, organizationally, universities must open up to new target groups. Primarily, this has to do with greater flexibility and differentiation of access to higher education, study programme structures, degrees and certifications. Therefore all universities should be updating and restructuring their study programmes introducing various methods of learning with the objective of increasing the number of students.
Currently, there are a number of emerging new modes of teaching and learning. One most popular and a dominant mode is *online learning*, increasingly with the integration of Open Educational Resources (OER). After attending a series of workshops on ICT and OER conducted by the Faculty with the collaboration of Commonwealth of Learning, we realized that there are so many avenues open to explore the knowledge in the field of special needs education through OER. This is a good opportunity for us as well as students to access quality, valuable, up-dated materials as well as sharing our expertise with the scholars in the field of special needs Education. Moreover, this is a very good opportunity to students with busy work schedules because they can access the online course from anywhere, anytime, at their own pace. On the other hand, students from different parts of the country can interact with the tutors and peers without having face to face contact. These opportunities are more economical rather than coming to the main campus to meet tutors and peers in contact sessions as the way of the current delivery system.

Therefore we decided to redesign the course with a new approach. The experiences gained from the capacity building workshops under the OER Project, motivated us to include scenario-based learning approaches into the redesigning of courses with ICT and OER integration.

**Value of the journey**

We thought it is necessary to improve our delivery modes of every programme in future with the expectation of extending our target groups. Therefore all academics need to be well-equipped with different strategies to facilitate our learners. Through re-designing one selected course, we could enhance our human and new technological capabilities to contribute to open course design and development in a globalised competitive context. In addition we can develop the skills of adaptation of OER to suit the local requirements considering the students and their culture sensitivities. Also, our skills can be developed to address the question of language in the multi-lingual contexts to integrate the processes and outcomes of open courses. This work will also help the Department to identify strategies to improve the quality of online courses in special needs education. Therefore we decided to redesign the course with a new approach.
How we redesigned the course

The knowledge and the skills gained from the capacity building workshops conducted by the Faculty motivated us to apply the new approaches. The team was divided into small groups and first, we started developing scenarios for each session. The scenarios were built around a series of progressively complex school-based situations. It was hard to design a scenario that will place the learner in the role of a problem-solver. It was a challenge at the beginning but later on it became more joyful work.

Simultaneously we started to develop learning activities and assignments. Creating activities that orient students to the course and developing quizzes were also challenging tasks. Selecting assessment tasks was a complex process. We tried hard to select assessment tasks that align well with the intended learning outcomes. At the end team members managed to tie together, the scenarios, learning activities, assignments, and learning outcomes.

Our next task was developing rubrics for assessments. A rubric makes explicit a range of assessment criteria and expected performance standards. We realized the importance of developing rubrics. It allows the instructor to clarify his/her criteria in specific terms and clearly shows the student how his/her work will be evaluated and what is expected.

In each session, weblinks to different OER, and other online resources were provided for further information. We came to know that OER include full courses, course materials, modules, textbooks, videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge. We were highly motivated to search OER resources related to special needs education. At that time we realized searching for OER is not an easy task as we needed to devote more time to find suitable materials and reproduce it according to our needs.

At the very early stages all team members had very limited knowledge about OER, and therefore we were confused about OER with other web resources. However, later, during the workshops, we realized the real meaning of OER. Then we tried to search for most suitable OER related to our course, and it was very difficult. Sometimes it was very disappointing, but the team members encouraged each other to continue with the process.
Finally we managed to find some OER related to our course content, and realized that those are very useful for students, because they were of high quality, well written, organized, and including new information. We realized that instead of spending a lot of time developing resources on our own, this is more time saving and economical.

The team also revised the existing content of the course and decided to remove the following sessions:

- *Education for individual & social development*
- *Perspective in education*

The reason for removing the above mentioned sessions was because of repetition in content with some other sessions. As part of the review process two new sessions to the course as follows;

- *Special Needs Education in Sri Lanka*
- *Special Needs Education in some selected countries (India, Japan and USA)*

We were involved in searching for more and more OER in Special Needs Education in India, Japan, USA and Sri Lanka. We found interesting and useful resources but not related to Sri Lanka. It helped us to enhance our knowledge by comparing special education in different countries. But at the same time we felt as professionals in this field that we have a great responsibility. Some team members were motivated to develop videos and others articles as OER. Some proposed to release our course modules as OER. At the end we kept those ideas aside as future tasks, and concentrated on the task in hand.

Then the redesigned course materials were sent to a subject expert for content editing. Then we reset the assignments, and then converted the redesigned course into online mode adding the necessary features of the online delivery system. First, the team decided to divide the course content into seven dialog boxes. One dialog box for course information and other related information, and the rest of the boxes for six sessions of the course with *assignment* drop box, *reflective journals* drop box, *online interactive learning activities*, and *discussion forum*.

Finally the Department forwarded the edited and developed new online course to the Educational Technology division of the OUSL for further improvement.
and technical approval. They appreciated our hard work stating that; ‘This is a very good job, any major changes are not needed.....’ They approved it with some improvements and uploaded the course to Moodle LMS in the OUSL Server, in order to pilot this course.

It was a green light when the team realised that all the work we have completed so far is effective and followed a clear instructional procedure.

**Beginning of a new journey**

The team decided to begin our new journey with the aim of identifying the impact of Integrating of ICT and OER into teacher education programmes on academic community and students. The team invited 20 participants of the past students of the Postgraduate Diploma in Special Needs Education Programme for piloting. Only 14 participants joined us for the journey. Four (4) academics also traveled with them. However only five students completed the journey. First, the team conducted an orientation programme for the whole group. The orientation programme consisted of the following topics.

- Introduction to online course
- Introduction of how to access the course
- Introduction to scenario-based learning (SBL)
- Introduction to OER & ICT
- Introducing how to complete their reflective journals, assessment, assignment and also to engage in discussion forums.

During the orientation programme the team explained to them, what OER meant. In the afternoon of the orientation, all participants had an opportunity to access their own account of online, and to solve technical and academic problems if any, before they left. The majority of the participants mentioned that ‘this is a new experience for us’.

Using the computers in our lab, participants found and evaluated at least one Open Educational Resource related to this pilot course content and discussed ways for integrating it into their courses. Participants also discussed how to share their educational resources with a wider community of lecturers and other colleagues in their programme. One week after the orientation session, participants started their online learning.
Pathways of the journey

There are two directions to our journey:

- First, is to view the academic’s thoughts and feelings.
- Secondly, to view the student’s thoughts and feelings.

In our journey we collected information through;

1. Questionnaires
2. Interviews
3. Concepts Maps
4. Online Usages
5. Reflections

Scrutiny

This section consists of two parts of inquiries; impact on academics and impact on students. While it is time-consuming and often expensive for Faculty and academics to create educational resources for their students, OER are growing exponentially. OER are free resources that can supplement teaching and learning needs and may include lesson plans, learning modules, videos, interactive multimedia, etc. that are easily searchable by subject matter, education level, or media format. These freely available content and instructional materials are available to every academic to view, share, and adapt for their own courses.

Incorporating these educational resources into their course is an excellent strategy in a distance education environment, or just to provide supplemental materials to their students. There are OER in nearly every field, and so everyone who teaches, in any discipline, can benefit from this workshop. In this hands-on pilot programme, our academic staff will share how to find, evaluate and integrate OER in their courses in the future too. Our awareness, engagement and support for ongoing involvement are essential to the success of integrating OER. Staff development, reward and recognition and maintaining communities of practice, are all important for sustainability of our future development.
Part I- Impacts for Academics

Concept Maps

The five (5) team members engaged in iterative rounds of concept mapping to capture their growth and development through this process. At the very beginning we all were in the same position. However, as we progressed, the concept maps (CMs) became more varied, because we all had different ideas. OER was the key concept in the first and second rounds on mapping for all team members. For the related concepts in CM2, the majority were in the same position as CM1. Key features of concept maps of all were also almost similar. However, there were some changes in concepts according to the members. A majority was focused on expanding from OER to course designing aspect. When examining CM1 and CM2 there is a considerable change of the thinking process of all members towards integration of ICT and OER in to course designing. In the 3rd CM all members of the team had still indicated OER as their key concept, and all stood in the same position as in their 1st and 2nd CMs. It seems that there were no changes among the views regarding key concepts. There were a lot of sub concepts in the CM3.

CM4 indicated that there were significant changes in the key concepts of members, with their views ranging from OER to course designing process with new approaches. The related concepts are connected with offering the course through the online mode, relationships with OER resources. At the end, the CM has become more complex, as suggested in the following remark:

“In my final version of concept map key/focal concept changed from open educational resources to course designing and course development. The main focus changed to developed and offers the course online with OER and other resources. I have gained knowledge and skills of on line course development. I enjoyed the new way of learning. Through this process I have developed positive attitudes towards online course delivery. I changed my traditional way of thinking and my teachers’ role changed as facilitator with friendly manner. The most important thing that I realized is that education is OPEN. We can share it“. 
Fig. 4.1: First Concept Map of team member 2
Fig. 4.2: Final Concept Map of Team member 2
Reflections

Course team members expressed their enjoyment, motivations, frustrations, concerns of the course development process. The members were very much concerned about language barriers of students. Some members also considered about the problems in online accessibility. These reflections highlighted that all staff members had to face different challenges during this process.

There were many obstacles in the process. The main obstacle is managing the time as agreed by all members. All staff members were thinking that it was difficult to manage the time with the other work and responsibilities. Even though there were so many problems and issues, the team experienced some progress in the process. There was a huge impact of the course development process as capacity building of the team members, as evident by their reflections:

“...The impact of this process was so positive because I was able to improve my writing skills, thinking skills, research skills as well as the skills for developing online activities which have constructive alignments...”

“...Can offer a broader range of subjects and topics to choose from and allow for more flexibility in choosing material for teaching and learning (i.e. content that can be easily modified and integrated in course material)...”

“...Developed my knowledge and skills to teach my students...got new attitudes, knowledge, skills and experience...we could build our capacity well, develop knowledge skills also regarding OER...”

“...This workshop helped the development of knowledge/skills/attitudes towards online course development ...New knowledge (OER, open learning, open scholarship, open badges)..New skills-(Search OER, develop scenarios, integrate ICT&OER)...and new thinking...”

“...Institutional development ...and new skills. New trends... New thinking....”

“...Save time and effort through reusing resources... New skills...New competencies...”

The following narration of a member gives further evidence of the above:

“...Scenario based learning, mind mapping are totally new concepts for me. But it was so interesting and practically we engaged in developing the scenarios, learning and assessment activities as well as mind mapping. The prior knowledge about developing online courses helped me immensely in developing our course as well...The workshops helped me to develop my
capacity in different aspects such as writer, researcher, online tutor so on and so forth. To me, it was a valuable opportunity to improve as a junior academic...."

All members agreed that they have gained new knowledge and skills for developing OER-integrated courses to offer online.

**Summary of the reflections**

In the course development process there were many milestones such as enjoyments, challenges, concerns, strengths and issues. Some members felt that students have language problems, and technical problems in accessing the online course. Members have appreciated the process as a team approach. According to the reflections, there were many challenges due to the heavy work load of academics. Meanwhile members have accepted that benefits for course development for future work in the Department. They also needed continuous monitoring and encouragement to overcome different barriers. All have accepted that the main impact was capacity building. They have clearly explained how their knowledge and skills have been developed, and how it became a job-oriented fact leading to institutional development.

**Part II- Impacts for students**

This part captures students’ experiences, feelings, and opinions with the piloted online course.

**Scenario-based learning approach**

Students had positive ideas about the Scenario-based learning (SBL) approach which can be proved by interviews and reflections. At the interviews students highlighted that scenarios helped them lot, to achieve the intended learning outcomes of the course. Moreover, all students mentioned that SBL helped them to understand the subject content of the course easily. Students also accepted that SBL supported them to learn the content easily because the language was simple, easily understandable and it was like a reading a story.

Reflections of students also expressed the same thoughts in line with the interviews. The majority have stated that ‘language is so simple and easy to understand”, in the scenarios. At the same time they stated that language in OER and web resources were complex. All students mentioned that this approach motivated them to engage in the learning activities in the course. All
students who participated further mentioned that this approach will be very attractive for adult learning. According to the responses given by the students to the statement from the post survey, ‘scenario based learning provided proper information’, 60% of students have strongly agreed and another 40% have agreed. That means 100% of students agreed that SBL approach is effective.

**Integration of Open Educational Resources**

Open Educational Resources (OER) were introduced to students as ‘freely accessible, openly licensed documents and media that are useful for teaching, learning, and assessing as well as for research purposes’. Students suggested that OER help them achieve the learning outcomes of the course. They also explained the advantages of OER to complete the assignments and activities of the course. Hence it can be concluded that OER have been useful for student to complete the evaluation tasks of the course. Students accepted that including OER in the course was very important because it encouraged them to participate in the learning process.

They also reflected that OER and other web resources helped participants to get knowledge regarding different themes in the course. The page numbers and relevant sections which were specified in the OER resources were so helpful for respondents to refer the resources. Students requested to include some more attractive OER such as videos. This would suggest students’ appreciation of OER. According to the pre survey 57% of students answered that they needed more online resources. According to the post survey, 100% students agreed with the statement that OER and other resources provided more information regarding the course.

**Online learning environment as the mode of delivery**

This was a new experience for most of the participant students. At the beginning some students who participated in the course were not confident because of their lack of knowledge of computer literacy. “I was scared”, one student responded. The responses of the pre survey also proved above response. 50 of students were at average level and 21 of students claimed ‘poor’ in their proficiency in use of computer for academic purposes. Some faced difficulties due to poor English knowledge:

“*I always worry about my English writing. My writing is not so good*."

“All the materials are in English. Instructions are also in English. At least if you can give instruction in Sinhala we know what we ave to do”
“OER Materials are good but due to our poor English it is difficult to understand. If you can translate...”

“You have offered this course in English. We have to work hard and I got help from our English teacher to understand the materials, so it takes a lot of time”

“The attempts that I made to understand the required reading were a lot. I tried to translate the resources into Sinhala, but it was time consuming work and not easy as well...”

On the other hand student found difficulties in writing reflective entries, participation in the discussion forum and answering assignments.

“I was unable to express what is in my mind into written words and sentences in English because of my poor English. But I used transliteration to communicate the ideas. Anyhow now I’m happy”. But I want to improve my English then I can write well...”

It could be seen through the reflections of students, that the reason behind the low access into study materials and less participation in the learning and assessment activities in the online course, was due to less proficiency in English language. If students were competent in English they could have had actively participated in the online course. The results of the pre-survey also confirm the results of interview and reflections. Responses received to the question about their proficiency in using English language for academic purposes, indicates that around 30½ of students have claimed it as poor.

The above mentioned facts are confirmed with the analysis of online usage. The success of online learning system depends on how students’ access their online account which is necessary in online learning system. According to the data, majority of students have had accessed their account in the initial stage. However, it has decreased within the final 10 days. They felt that the tutor's interaction with the group was not enough and needed more orientation and guidance. It would be good if appropriate and regular professional development opportunities are made available to all teaching staff, particularly if tutors are to become effective e-tutors, that they can take full advantage of the opportunities available to support the student.

All students who participated in the course mentioned that learning activities are easy, enjoyable and attractive. From their reflections it can be seen that all the participants had enjoyed in answering online quiz which was available under
1st session. Most of the students strongly agreed with the view that the quizzes helped them to reflect on the session presented.

The availability of prompt feedback with marks and allowing several attempts are the reasons for the attraction for the online quizzes. All students felt that the assignments were too heavy. But the criteria of learning and assessment activities were helpful to help them think them with how to formulate their answers.

The most important thing that participants expressed was that they possessed the technical skills to participate in online courses effectively. This was proved by the reflections of some students. They reflected that this course had facilitated them in updating their computer skills. For instance, one student mentioned that, “it was a great opportunity to update my computer skills.”

Students are supposed to make a PowerPoint presentation to fulfil the need of learning activity, and following quotation proves the above mentioned point:

“It was so interesting. I was able to make a power point presentation with texts, images and all.....”

Improving the usage of English is also a positive impact of this course according to the reflections of the students. Some students had enrolled this course with poor background of English language. But they were able to manage their written English to some extent.

“Earlier I even didn’t think to follow a course in English, therefore I had a big doubt on how will I do it with my little English. But now I feel I could be able to improve my English because of this course...”

Except for one student, the rest were not familiar with online learning -- a totally new experience for them. This course had given the opportunity for students to become familiar with an online learning environment.

“Online learning is a totally new thing for me. First time I was so afraid to press a button even. But I became familiar with this environment day by day...”

As revealed at the interviews, the frustrating moments students experienced during this process was mainly the failure of the internet connection and too much time taken for logging.
“I feel frustrated when internet connection is slow”

“When system was down........I went mad”

“As teachers, we hardly find the time. At that time connection is not there it annoyed me’

“I took so many days to log”

Technical infrastructure deficiency is one of the factors that make the students highly frustrated. Some students said challenges can be as basic as lack of technology proficiency. All the students mentioned that “managing time was very difficult”. The following reflection of a student confirms this.

“These types of courses are more suitable for undergraduates who are free from domestic work and family commitments. We as adult learners find difficulties in finding time for our domestic work and work in relation to our career. I think this is more effective for bachelors”.

Some students have suggested having all programmes online and that materials should be in all three languages – English, Sinhala & Tamil.

**Concluding remarks**

The experiences gained from every workshop helped the team members develop their knowledge, attitudes, and skills towards integrating OER and ICT into teacher education programme. The workshops helped to develop the capacity of team members in different aspects such as writing, researching, online tutoring so on and so forth. Even with enjoyments, challenges, issues and frustrations there was a significant change within the team which was mirrored by the reflections, narrations and concept maps.

Not only the course team but students also benefited from the online learning environment, scenario-based learning and OER materials. This was a novel experience for most of the students who travelled with us even with the language barriers and technical issues. Moreover students suggested to offer all courses online and it shows students’ willingness to have an exposure to new global trends. Anyhow students were motivated to improve their English and computer skills in order to fulfill the demands of the course. On the other hand, according to the reflections of students, this course has also facilitated to enhance their knowledge and critical thinking on emerging issues and trends in special needs education.
We are looking forward to bridging the gap by stepping forward to offer all our programmes using this new approach. When teachers are equipped well, all the children in this world may have an access for a meaningful education.

Now we can draw

Silver lines

In the sky

We the teachers are

sent to light up our children’s world...

by celebrating the differences of children.

The Journey Continues....

It was extremely important to conduct various aspects of the research in the Faculty, during this process. The method adopted was piloted with one course, and that experience was interesting and valuable in understanding more about its strengths and weaknesses. It also brought together a group of staff and students willing to share knowledge. Getting involved with experts in this field proved its worth at three stages: Collecting new information; Feedback; and Finalizing.

When offering the online course/programmes in future, it is important to be open to changing aspects of the design in response to altered circumstances in more flexible ways. All our members are academically engaged in different matters and therefore it is very difficult to reserve time to redesigning programmes to offer online. The journey provided good evidence for us to understand that the need of changing the role of academics in the university. It is important to recognize the need to support learning of the students by removing technical barriers, promoting high expectations and a positive technological environment characterized by continuous improvements and maintenance. Dialogue, participation and collaboration of many stakeholders including relevant authorities are essentially needed in this regard.

References

Change through Technology: A Journey

Shironica Karunanayaka, Chandana Fernando, Samanthi Jayasinghe, Vajira de Silva and Chitrangani Hewapathirana

A journey of technology integration

“How can we make our learners active participants in a journey of technology integration?” This was the immediate query that arose among our team-The MATEs, when we were entrusted with the mission of designing and developing a professional development course for educators, with ICT and OER integration.

Our target group is teachers and teacher educators, who are mostly mature age learners, often observed to be reluctant in using new technologies and facing difficulties in the transition towards adoption of technology in teaching and learning. We thought hard, discussed, debated and agreed that a ‘change’ is needed.

We were determined to move forward, whatever the obstacles that may be encountered by us. Realizing the need for us to function as ‘change agents’, we thought of finding a way to activate our learners- teachers and teacher educators, to use technology, ‘the promising tool for change’, in their professional practice. So, we unanimously decided to set off in this endeavour, even though the beginning was a little blurred.

Initially we felt, that we too were still trapped within a cell of conventional thinking. So, the starting point definitely required repositioning ourselves as radical thinkers and open-minded professionals to break away from this situation. We understood the need to move in little steps with much effort, towards making a ‘big change’. Our driving forces were nothing else but confidence, determination and potential available within us. Without waiting for absolute comfort, we set ourselves for swimming in the mud water, believing in its eventual purification.

Ultimately, this whole experience turned out to be an exciting ‘technology journey’ for us – resulting in a ‘change’ in ourselves! This stimulating experience not only developed our capacity in the application of technology into practice
by designing and developing a technology-enhanced learning environment for our target group, but also effected in a significant shift in our own mindsets.

In this chapter we share with you our story, the technology journey that we went through redesigning and redeveloping the course ‘Teacher Educator as an Educational Technologist’, with integration of ICT and OER, and the challenges we faced during the process, as well as our achievements and triumphs.

**Commencing our journey**

Our journey commenced with the selection of the course ‘Teacher Educator as an Educational Technologist’, one of the courses in the Master of Arts in Teacher Education-International (MATE-I) programme, to be re-designed with ICT and OER integration. The five-member course team – the MATEs, went through this technology journey, during a period of 18 months, since January 2013.

MATE-I is a totally learner and learning-centered programme offered using ODL methods, to a target group who are mature age students and full-time employed professionals as teacher educators. The programme adopts a unique pedagogical design, namely – “Scenario-Based Learning” (SBL), which situates learners in authentic scenarios where they have to assume different roles and face challenges in the form of various learning tasks. This allows building up on teacher educators’ existing competencies already acquired through their prior professional development and experiences. The six courses in the programme are designed to develop competencies in six focal areas, aiming towards the making of a ‘reflective teacher educator’ (MATE-I Programme Handbook, 2004).

The course we selected, ‘Teacher Educator as an Educational Technologist’, aims at developing the competencies of teacher educators in the design, development, implementation and evaluation of appropriate educational technologies. It focuses on the critical role of a teacher educator, when functioning as an educational technologist in their professional setting. During their course of study, the learners are required to develop a rationale for using educational technology, design relevant learning experiences, select and use appropriate media to develop a technology-enhanced learning material and evaluate its effectiveness with their students (MATE-I Study Guide - ESP2242, 2004). These objectives are achieved through the SBL approach, where the learners are presented with an authentic learning scenario in which they are required to assume the role of an educational technologist, and engage in a series of challenging tasks. These lead to the completion of four major assignments that enable them to achieve the desired learning outcomes, within the duration of 24 weeks.
This course was the first stand-alone fully online course to be offered via the learning management system (LMS) Moodle, at OUSL (Karunanayaka, 2008a). The interactive online learning environment of the course was grounded within the SBL pedagogy, while strengths of an online learning environment such as access to adequate resources and ability to communicate and share with peers were utilized by adopting a structure of collaborative interactions through various strategies (Karunanayaka & Naidu, 2009; Karunanayaka, 2008b).

During the OER project that commenced in January, 2013, our intention was to re-design the existing course, and develop it afresh, laying more emphasis on ICT and OER integration within the SBL pedagogical approach with a focus on providing more effective learning experiences to the learners. Throughout their learning experience, learners are to be empowered in designing and developing their own knowledge representations on ‘Educational Technology’, with the support of ICT and OER. The key challenge that awaited us was, designing the course in such a manner that will enable teacher educators to learn the relevant subject matter by experiencing the same procedure, and becoming ‘learners as designers’ (Jonassen & Reeves, 1996).

**Facing the Challenge**

The five MATEs, as we called ourselves, were ready to face the numerous challenges that awaited us. Out of the seven courses of the MATE-I programme we decided to select this particular course, “Teacher Educator as an Educational Technologist” to re-design, as we thought it was the most appropriate course to integrate ICT and OER, due to its focus on educational technology. Also, as it was already developed as an online course, we thought it would be an added advantage, making it more convenient for us to revise and re-design with OER integration, within the specified time frame.

The entire process was planned to occur in three different stages as follows:

- Re-design the existing course in a manner that was suitable for ICT and OER integration;
- Select and integrate appropriate OER as learning resources in the course; and
- Develop it as an online course.
Accordingly, first we organized all required activities according to a time frame, and next distributed the workload among us with precise individual and shared responsibilities. We, the MATEs proceeded with our journey with a high sense of team spirit!

**Building capacity**

In order to successfully engage in the planned tasks capacity building was essential in several areas, as many of us were unaware about OER and how to integrate them into course design. During the first capacity building workshop that was held in January 2013, the novel concept of OER was introduced to us. This was the trigger event, which stimulated us to further our understandings on OER and other related concepts, and their inter-relationships, as well as their significance in course design.

The concept mapping exercise that we engaged in parallel with our course redesigning task helped us immensely to visualize how our understandings of key concepts developed over time, throughout the process. The first versions of the concept maps were drawn during the first capacity building workshop held in January, 2013. Since then, during the entire process, several versions of concept maps were drawn by us. The final version was drawn at the end of the project, in June, 2014. While some members have developed 4 to 5 versions of concept maps during this period, some were able to develop only 2 or 3 versions. The initial and final versions of the concept maps drawn by the five MATEs are illustrated in Figures 5.1 to 5.10.
A Mind Map reflecting my learning so far

- (Already knew to some extent)
- (New Thinking)

- Principles
  - Theory
  - Models
  - VSM as Engine for Education
  - OER as essential fuel for engine

OER

- teaching/learning/research materials
- freely available in public domain
- open licensed

What are they?

Why do we need them?

How do we identify them?

- free access
- time-saving
- variety
- adaptability
- less restrictions in use

How can we use them?

- Teaching
- Learning
- Research
4Rs – Reuse, Revise, Remix & Redistribute

Where to find them?

- OER Repositories
- Search Engines
- Learning Registry

How to integrate them into our teaching and learning?

CC license
(Types)
1. CC BY
2. CC-BY-SA
3. CC-BY-ND
4. CC-BY-NC
5. CC-BY-NC-SA
6. CC-BY-NC-ND

Fig. 5.1: Concept map V.1 - MATE 1
Integrating OER in Educational Practice: Practitioner Stories

Concept Map – Version 5

Open Educational Practices (OEP)

Open Access

Open Licensing

Open Scholarship

MOOCs

4Rs Framework

Reuse, Revise
Remix & Redistribute

Open Badges

Course Design

OER-based e-learning

Selection/ Evaluation/ Integration of Appropriate OER

A Sharing Culture

Conducting...!!!

Opportunities...

Challenges...

Concerns...

Fig. 5.2: Concept Map V.4 - MATE 1
Fig. 5.3: Concept Map V.1 - MATE 2

Fig. 5.4: Concept Map V.4 - MATE 2
Integrating OER in Educational Practice: Practitioner Stories

New Methods

ODL

Institution (Open Mega Universities)

OER Material

Research

Learning

ODT

ICT

Face-to-Face Sessions

Records of Achievement

Open Badges

Open Scholarship

Open Online Courses

Creative Commons Licenses

CC BY

CC BY-SA

CC BY-ND

CC BY-NC

CC BY-NC-SA

CC BY-NC-ND

Free of Charge

No cost

Can freely use

Can re-use, re-mix

Education for All

ODL

Traditional Method

Open License

Fig. 5.5: Concept Map V.1 - MATE 3
Integrating OER in Educational Practice: Practitioner Stories

Open Scholarships

Open Badges

Open Learning

Value principles

What is OER

OER

The Learning registry

Can freely use

Characters of OER

Have C.C license

Can be re-use, re-mix

CC Licensing categories

1. BY
2. SA
3. NC
4. ND

Issues around reuse, remixing, repurposing of OER

Benefits of the Learning Registry

Teaching, learning & research materials in any medium, digital or otherwise, that reside in the public domain.

Fig. 5.7: Concept Map V.1 - MATE 4
Open Scholarships

e-Learning and Education for All

MOOCs

Open Learning

OER Universities

Job opportunities

MOOCs

Open Badges of learner

Long life learning

OER-based Teaching

Course Design for OER-based Learning and teaching

Open Educational Practices

Value Principles

The learning registry

Benefits of the registry

Open Learning Practices

Can freely use

Characters of OER

Teaching, learning & research materials in any medium, digital or otherwise, that resides in the public domain

Can be re-use, re-mix

Issues around reuse, remixing, repurposing of OER

Eg:
Lessons / lesson plans
Multimedia
Audio/ video productions
Class room Activities
Extended activities
Assessments
Animations
Diagrams / Pictures
Evaluation rubrics
Scenarios
Games
Soft wares
Work shops

Facilitate Teaching & learning

Allow to share the knowledge

Fig. 5.8: Concept Map V.4 - MATE 4
Integrating OER in Educational Practice: Practitioner Stories

Fig. 5.9: Concept Map V.1 - MATE 5
Course offer ESP2242

Open License
Creative Commons Licenses

OER Materials

ICT
New Method

ODL Institution Open

Learning Outcome

Activity and assessment

Scenario based learning

Evaluation

Integrate
Integrate
Integrate
Integrate
Integrate

Online course Development

Traditional Method

Face to Face Session
No Cost

Can Freely Use
Can re-use, re-mix

CC BY
CC BY-ND
CC BY-NC
CC BY-NC-SA
CC BY-SA

Factual Learning Open Badges

Procedural Research Share the Knowledge

Discovery Integration Application

Rubrics Teaching

Teaching

Evaluation

Integrate
Integrate
Integrate
Integrate
Integrate

OER

New Method

Integrate
Integrate
Integrate
Integrate
Integrate

Fig. 5.10: Concept Map V.4 - MATE 5
Table 5.1 - A Comparison of the Different Versions of the Concept Maps

<table>
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<tbody>
<tr>
<td><strong>Key/Focal Concept</strong></td>
<td>Open Educational Resources (OER)</td>
<td>OER</td>
<td>Open Learning (OL)</td>
<td>Open Educational Practices (OEP)</td>
<td>OEP</td>
</tr>
<tr>
<td><strong>Key Features; Relationships between key concept and other concepts; Changes observed</strong></td>
<td>Focuses only on OER as a concept. What are they?; Why do we need?; How to identify?; Where to find?; How can we use?; How to integrate in t &amp; l?</td>
<td>Main focus is on OER, with other related concepts identified. OL is supported by OER; OL is possible through OLic; OL promotes OS; OS allows OB; OER highlights T/L and Course design</td>
<td>Main focus changed from OER to “Open Learning (OL)”, with other related concepts. OL is possible through OLic; OL promotes OS; OS allows OB; OER is supported by OER; Highlights T/L and Course design; which results in OEP; promoting a “Sharing Culture”; Concerns are present.</td>
<td>Main focus changed from OL to “Open Educational Practices (OEP)”, with other related concepts. OEP is supported by OER; OER enhances OEP; Possible through OLic; Promotes OS that allows OB; OER focus on technology and pedagogy; OER-based T/L and Course design; Guided by theory; Promote a change in pedagogical practices and beliefs towards a “sharing culture”; Challenges to overcome.</td>
<td>Main focus is on “Open Educational Practices (OEP)”, with other related concepts. “OER-based e-Learning” added. OEP is supported by OER; thro. 4Rs framework; OER enhances OEP; Possible through OLic; Promotes OS; such as MOOCs; that allows OB; OER has Digital Potential &amp; Pedagogical Potential; OER-based eLearning; requiring Course design; Guided by theory; towards a “Sharing Culture”; creating Opportunities; Challenges; Concerns</td>
</tr>
</tbody>
</table>

Analyzing the difference between the very first version of the concept map with final versions was an effective way to clearly visualize the changes in mindset of each of us. All of us were struggling with new concepts at the beginning and gradually became familiar with those over time. Initially most of us were unclear of the relationships and links among concepts and our first concept maps were a little bit unorganized as well as simple. Nevertheless, by the end of the journey, all of us have shifted to a new mindset, clearly converging towards a more complex view on OER-related concepts.

For instance, the comparisons of different versions of each MATE demonstrate that initially in most cases, the focal concept has been OER. Gradually, the expansion of thinking was clearly visible through the addition of a number of related concepts around OER such as ‘open learning’, ‘open access’, ‘open scholarship’, ‘open licensing’ and ‘open badges’, with the focus shifting more towards OER-integrated teaching and learning, OEP, and OER-based course design. Table 5.1 provides a comparison of different versions of concept maps of MATE-1 as an example, indicating the changes that had occurred in relation to the focal concept, related concepts, and relationships among concepts.

The concept mapping strategy served as a powerful tool for representation of our understandings of OER and related concepts and their relationships. It also helped us to reflect on the changes that occurred in our own mindsets over time, as is evident in the following selected quotes taken from the narratives that accompanied our concept maps.

“...Both teachers and learners are facilitated by having access to OER, by being enabled to select teaching-learning materials according to their needs, from among a wide variety of freely available, yet licensed resources, without having to worry about copyright issues...I have some concerns about finding relevant, appropriate, significant and quality OER, and contextualization and integration of them. However, I believe that through engaging in collaborative efforts with individuals/groups with similar interests, this can be addressed to a great extent... I am extremely motivated and enjoying the whole process...” (MATE-1)

“...The term ‘Open Learning’ gives the meaning that the learning is open, that is, unlike conventional learning, learning should be without restrictions. OER should be resources which facilitate for open learning. For the learning to be open, resources also should be available without restrictions...Are people ready to share all what they have produced? Their thinking? I feel this is a little bit extra-ordinary thing...” (MATE-2)
“...OER are educational resources that anybody can share freely in any country. It can be edited and used for educational purposes... I can use OER for gathering information and current data but I wonder how it will match our different courses in different level at OUSL... I am working in an institution which uses open distance mode for Education. Therefore, I think that OER will help not only the educators but also the learners for self-learning. If we use OER it has to be edited according the Sri Lankan context...” (MATE-3)

“...I’m willing to use OER in my teaching – learning process and I think by using OER I can provide many opportunities to learners for self learning. It will help me to plan my teaching learning process well. I think as a lecturer working in an Open distance learning environment I should think about integrating OER into teaching learning process because our learners need more resources and it will help them to minimize some problems arise due to limited numbers of contact sessions...” (MATE-4)

“...OER are freely accessible openly licensed document and media that are useful for formal teaching learning, educational assessment and research purposes... My experiences were expanded with the effort of developing course materials with the use of OER... For the teaching learning process we need resources and there are many types of resources available so that we can choose and use those... The use of OER is to be considered as collective effort in a resourceful environment. In such a context, there is no worry to implement that...” (MATE-5)

During this exercise, we all realized the value of having access to a variety of OER available as electronic materials that we can easily integrate into our online course.

**On track**

With the awareness raised on OER and related concepts and their relationships, we became more and more confident in the process. The most important and the key task facing us was re-designing of the existing course in a more learning-centred manner, with the aim of making it an OER-integrated online course. We had to start with re-visiting the broader goal of the course.

We identified the key competency expected from the learners as, ‘the ability to create a technology – enhanced learning material’. We gradually ended up with a refined set of five learning outcomes which cleared the milestones of our journey. Those were specific, task oriented and achievable, as indicated below:
1. Identify and analyze strategies for making teaching and learning an effective communication process.

2. Plan and design a technology-enhanced learning material on a selected topic and select appropriate media to enhance the planned learning experiences.

3. Create a storyboard for the planned learning materials.

4. Develop the learning material using appropriate software.

5. Implement and evaluate the learning material and critically reflect on the process of integrating technology in teaching and learning.

Next question was, how to make these learning outcomes, the objectives of our learners? We asked ourselves. The need for actualising those learning outcomes in a contextual scenario was the solution that we all agreed upon. A number of discussion sessions were carried out, with a lot of arguments and counter-arguments. The key stages of the scenario were set upon several times. And, finally we were able to finalise the learning experience, using the scenario-based pedagogical approach, in a quite successful manner.

Main characters in the scenario were entrusted with a number of tasks and our target was to make the learners take part and play the role of a selected character. While we developed the scenario, section by section, and designing the activities, in our minds we were also thinking about the nature of the resources that would be required to support the learners to perform these tasks. What we understood in the process was, the uniqueness of this journey required a unique way of moving. Unarguably our technical journey needed a technical way of moving. To suit our major slogan, the open and distance mode of learning, the process was set in the ICT paradigm.

Designing the course using the SBL approach was a very challenging task as it was a novel experience for all of the team members, except the team leader. Developing scenarios in a storyline to situate the learners in context turned out to be a very creative process, which required a great deal of effort. Constructive alignment of the learning outcomes, learning activities and assessment tasks was an essential need that had to be kept in mind throughout. Moreover, identifying relevant OER as learning resources and appropriately integrating them with the learning experiences was a complex process as well. The key focus was not only on identifying, selecting and adopting relevant OER, but also on designing the learning experiences in such a way, in order to effectively integrate OER to support learning, while keeping our learners activated throughout the process. We decided to develop both online and
offline learning activities as well as assessment tasks, integrating appropriate OER as supportive materials.

How to make our scenario a reality? How to guide the main characters to reach the objectives? What types of support can we give them? These were the points we pondered on constantly. The common agreement of all MATEs was to integrate quality and relevant resources as much as possible, on the learners’ way towards meeting the targets. Where are those resources? How can we find those? In the attempt of answering those questions, we were fortunate enough to get the consultancy of an experienced facilitator. Hours of working with him, and the capable crafter’s sudden thrust towards “OER”, triggered us to think of a promising solution. He showed us the path to relief. That was our capacity building. Our armouries were filled with enough capabilities. We were open to the path of ICT with a huge reservoir of learning resources, absolutely free! We were in the presence of the caretaker of a big chamber of treasures - Open Educational Resources (OER). Now we were ready to make our own way in this treasure hunt!

Since the concept of OER was new to us, identifying and finding relevant and appropriate OER to be integrated in the course was another significant challenge. What OER to be integrated, where to find them, how to integrate them, and to what extent were some of the hard questions that we had to find answers for. The capacity building workshops and the series of course design and development workshops that were held during different phases of the process helped us to face these challenges confidently. We engaged in these activities in a very co-operative and a collaborative manner. We mounted the process on re-designing the course for ICT integration, creamed with OER.

The workload was distributed among the five MATEs. The continuous discussions, debates and arguments helped us to share ideas and viewpoints and to engage in our task in a very constructive manner, while having an enjoyable time of teamwork. Searching OER online was one of the most interesting enjoyable events in our journey. In this process, we realized that we could adopt and even adapt OER making them more relevant to the Sri Lankan context, according to their different license types. During this journey we were amazed to find a wide range of relevant OER including text content as reading materials, multimedia learning materials, as well as activities, quizzes, tests, and even assessment rubrics as OER. Gradually we became very confident in identifying and integrating OER into our course. We could rely on ourselves. We were ready to demarcate our own role limits. With the new mind set, our perspective of the total picture was modified. We spent hours in search of possible resources, scanning the cyberspace. Some resources even guided us to change our thought process. We, in response to that, even shaped our learning
designs to get the maximum benefit of those OER. That was really an enjoyable work. What a nice two-way integration?

In this joyful endeavor, we always wanted to make sure that we were really on correct track. Being part of an innovative experience, we felt the need for some guidance that hauls us along the path of success. But, what kind of a guidance? That was our next question. At the same time, although all five MATEs were working together with a harmonized rhythm on compromised decisions, we were vigilant on our individual perspectives and interpretations as well. We turned to our facilitator. What else could guide you better than your own reflections? , was his reaction to our query. Hence we decided to call for our own souls to prompt us to move forward.

Our Reflections

We collectively planned for the self-reflecting process. After agreeing upon the aspects to be covered related to how and what to be reflected, the project leaders came out with a nicely written schedule of eight self-directed questions, on which we reflected on our experiences at different stages of the process. There, we reflected not only on our understanding and involvement in this process but also on our own professional development which remarkably enlightened us to take part in the process more effectively.

Going through our own reflections, we understood how our perceptions on OER-related concepts have changed over the process. We were able to look at these concepts and their interrelationships from a fresh view of mind while being exposed to new knowledge and skills. With this change of thinking, we all agreed with the fact that our attitudes, and hence the perceptions related to OER have been remarkably shaped with this first-hand experiences. Some of us were very clear about this improvement by giving comments such as;

“Earlier I knew only the term, OER”

“At the beginning it was a very complex situation”

“Now my knowledge has broadened”

“I am exposed to a new way of working, thinking of new ways”

With the change in initial perspectives, our members have perceived various factors that have facilitated as well as hindered their thinking process around those concepts. Hands-on experiences as a result of various activities done
during the workshops were the prime mental facilitator for all of us. Reflections confirm such perceptions of members.

“...I am happy to be a part of this workshop, because I feel it is successful in achieving our goals. I think that success is not only because of our commitment, but contribution of all that helped us to reach our objectives...I feel the satisfaction of our success because of all your contributions...” (MATE-2)

“...To me, the concept of OER is more on creating a “sharing culture” among teachers and learners. Most of the time we use resources created by someone else, or build upon existing resources, giving acknowledgement to original authors. This happens whenever we write a lesson, create a ppt presentation or develop any other learning material. Even an “original” creation is usually influenced by what we have studied/read/heard...before. Yet, we are very concerned and hesitant about letting others use ‘our’ materials, whilst we are using ‘their’ materials without any hesitation! Why? I feel, the OER concept shall have some impact on an attitudinal change...” (MATE-1)

Interestingly, the high expectations kept on us by the project leaders in this endeavor, far-sighted project objectives, rush time targets with specific deadlines and constant reminders, pressured us always to be actively progressing with the journey, amidst our other routine duties and workload. Some of us, initially, felt this pressure even as a process of enforcement as evident by the comment, “...We were forced to do this because of the workshop objectives and targets...” Moreover, the constructive guidance given by the leadership, motivation resulted from a conducive environment, interactive team work culture and continuous satisfaction over achieving targets always encouraged and facilitated the MATEs to hang on to the process.

At the same time, conventional work habits/patterns of some members seem to have prevented them from moving steadily at the beginning of the journey. Some pointed out that limitations in technical skills and technological facilities in addition to their inexperience and unawareness of certain concepts were obstacles encountered by them, claimed as “Unawareness”, “Lack of prior experience”, and “Need for more practice”.

In general, all of us faced huge time constraints due to heavy workload and busy schedules in the Faculty since this task was an additional inclusion in the list of tasks already in place. Hence, the need for having a positive attitude towards the task in hand, and also the need for encouragement were identified:
“...As a task it is a very enjoyable process. But, when you are inundated with lot of other work, how do you enjoy? We need to shift our attitudes. Even if a very few is having negative attitudes, that interrupt you...Leadership of seniors is very important to overcome barriers. Continuous encouragement is necessary...” (MATE-2)

However, all MATEs were in a common agreement that the aspects we were addressing in this process are well suited for the enrichment of the unique ODL approach adopted at OUSL, and hence very relevant for the development of our routine professional responsibilities as University academics. All of us highly valued this opportunity of exposure to enormous repositories of no cost resources, easily and efficiently made accessible to us and our students through ICT. The following quotes confirm this satisfaction.

“...From OER we can find different types of educational resources (multi-
media, text, lesson plans, activities, animations, diagrams, assessments etc.) which are relevant to our lessons. By using them we can make our lessons more attractive, meaningful, and interactive and we can provide many opportunities to students for self learning. OERs can facilitate each stage of the teaching learning process...” (MATE-4)

“...As an educator working in the Open University I think I should use OER in my teaching-learning process because we are working in an open distance learning environment, so we should make our lessons more interactive and we should provide opportunities for self learning because our students are distance learners...” (MATE-4)

Despite the excitement of having access to a vast amount of OER, our members were somewhat concerned about the use of OER in the ICT integrated teaching and learning in line with selection and contextualization of relevant, appropriate and quality learning resources. On such a base, some of the members believed that overcoming of barriers such as language (resources being available only in English) and limitations such as technical facilities and skills, and access to the internet would be challenge, as evident by comments such as:

“...Technology is a challenge...Medium (English) is also a challenge...I wonder whether our students can face these challenges...” (MATE-3)

“...Development process is an interesting, time taking and hard work. If only the resources which have been selected within a limited period of time are included, there is a possibility, sometimes, that the learners become restricted to the views given in those resources...How about the individual creativity? Is it like consumption without production? ...” (MATE-2)
Nevertheless, those comments are to be viewed in the light of their broader perception on the Integration of OER into an ICT based teaching and learning processes.

“...Using SBL, OER and online learning we can make our students self-regulated learners...We are designing the course in a student-centered way...focus is on ‘learning’. OER are used to facilitate learning...and enrich the learning experience...There are many ways in which you can integrate OER...SBL is helping us to integrate OER into teaching and learning in a more effective way...Without ICT it will be difficult to do this...Learners will be responsible and feel that he/she is actually learning...The gap/distance with the teacher in the ODL system will reduce...teacher-student relationships will develop...” (MATE-4)

“...When we design our courses, OER should be effectively used to facilitate and enrich learning activities...OER should not be used only as an external resource/reading material, but need to be built-in within the design...Scenario-based learning is helping us to decide what to integrate and how to integrate OER...and ICT is further supporting us to do that efficiently...” (MATE-1)

“...The inclusion of ICT & OER is to be taken into consideration at the time of developing the scenario. Scenario must provide the space for the inclusion as well as ICT & OERs should be appropriate to enrich the scenario...” (MATE-2)

By the end of the process, all MATEs were well-prepared and confident to plan and integrate the experienced aspects into their course material development and teacher training. They even suggested encouraging solutions to overcome the challenges they themselves identified at the beginning. Following are some of the comments in this regard.

“...The use of OER is to be considered as a collective effort in a resourceful environment. In such a context, no worry to implement that...” (MATE-5)

“...Finding quality and appropriate OER; contextualization; integration are some challenges to be expected. But we can face such challenges through engaging in collaborative efforts with individuals/groups with similar interests...” (MATE-1)

“...In the long run, this would be the most effective way of teaching and learning. If the popular barriers (facilities, technology, language) can be broken, e-learning and teaching, with an ample amount of OER, would be
the most accessible, effective, efficient and economical way of learning. Teachers’ authority is to be expected to be ceased gradually. Why should we keep that?” (MATE-2)

Our team members reflected on the process as a whole and specifically mentioned the reasons behind this high confidence and motivation, and further, accepted that this endeavor challenged and changed their entire thinking process on teaching and learning, and confirmed this experience as one of the critical turning points of their professional life. Following are some of overall reflections highlighting these views:

“...I got good opportunity to work with a capable, knowledgeable and devoted leader. This is a good opportunity to learn new concepts and new trends. Selecting OER and developing scenarios are very interesting. While we are working with group we enjoyed ourselves a lot. Work in team gave me strength and reduced my weaknesses. The workshop series gave the capacity building of myself. It helped me to develop myself through finding OER, writing scenarios .... etc...” (MATE-5)

“...Actually OER are very useful resources and by using OER we can facilitate our teaching-learning process. During this experience sometimes I faced problems when I started to search OER through different web sites. But now it is much easier to me. Actually this experience is very important to me and it motivates me and helps me to develop my skills as an educator. Now I have better idea about course designing process and how we can support the distant learner by using online facilities. Finally I want to say I learnt lot about various things which are strange to me earlier...” (MATE-3)

“...In the course development process, the most challenging task is providing a fair amount of quality resources. Other than just thinking about the importance/value of OERs alone, their use can be seen in the total picture of course development very valuable.... In the ODL system, the importance of OER is immense. Minimum time in contact sessions can be used with the most suitable resources. Ultimate target of OER would be e-teaching and learning. Role of resources is vital than the role of tutor...” (MATE-2)

“...I am really happy...The main thing is, we are working as a team. The whole Faculty is here and we are developing our own capacity in different ways, together, as a ‘learning community’. We are engaged in this process, and we can take this back to the field...Now we are motivated...I feel my thinking is developing day by day. That is what we need as academics...” (MATE-1)
These ideas unarguably prove that how the thought process of us, the five MATEs, has been shaped in an interactive, shared environment. We realized that within such an environment, there are ample opportunities for the development of a ‘sharing culture’ that encourages self-development as well as promote and contribute towards others’ development.

**Progressing further**

Developing the re-designed course as an online course was the next challenging step in our journey. We decided to develop this as an “Online Plus” course in the Moodle learning management system that could be implemented as a stand-alone course for students.

ICT and OER integration to the course was a very demanding task for us. Designing and developing the online course with a suitable blend of various online and offline activities, providing variety, yet not overloading the students was a key challenge we faced. Designing challenging online activities to promote active participation of learners, leading them towards the assignments, was not that easy. Thus our workload was increased and we faced severe time constraints.

Designing and developing online learning activities was very challenging as well as an enjoyable process. We were determined to make the maximum use of the various interactive features and facilities that were available in the Moodle LMS. A variety of online activities including MCQ quizzes, crossword puzzles, discussion forum, and reflective journal were developed. Especially, the discussion forum facility was extensively used in a variety of ways, providing the opportunity for the learners to interact with each other. Interestingly, we were also able to find and integrate some quizzes and activities that were already available online, as OER.

Another challenge was to make the online course more motivating to the learners by designing, developing and integrating multimedia components such as graphics, animations, audio clips, video clips...etc. at relevant instances These also functioned as learning resources, supporting learners in their learning and assessment tasks.

Designing OER integration into the online course was the next challenge that awaited us. We engaged in searching, identifying and selecting appropriate OER to be integrated at relevant instances of each course to support the learning process, as well as designing the online learning experiences in order to effectively integrate OER to support learning. With the support of Project
Assistants, the online course was developed in Moodle LMS, and content, online activities, multimedia, OER, other resources...etc were uploaded to it.

Review of the developed online courses was done by local experts in the Centre for Educational Technology & Media (CETMe) at OUSL. Once the review process was over, the improved online course was implemented and pilot tested with a selected sample of students.

Implementing the online course with the students was another challenge, since all three key aspects of the project, the SBL approach, the concept of OER and the online mode of learning were novel to the students as well. An orientation workshop was conducted for the learners, by the project leader and team members. Clear guidance and constant monitoring and facilitation by the instructors were required to support them, to progress with their learning, dealing with these three novel areas.

Taking part in this technology journey with us, our learners have been exposed to a novel and interactive world of learning. They have reflected on their experiences, highlighting strengths as well as challenges, by responding to questionnaires, focus group discussions and reflective journals.

Scenario based learning (SBL) approach adopted in the course was a novel experience to all students, yet they found it very effective and interesting. SBL approach has helped them to achieve the intended learning outcomes of the course in a more learner-friendly manner, in a real-life situation. One student suggested that, “... if we can have scenarios in a video form it may be very attractive ...” It was also identified that “SBL is very good way of helping adults to learn”. Further, it has influenced them towards changing their current practices in learning as well as teaching. All were willing to adopt SBL approach in their teaching-learning process in the future.

A majority of students have experienced this type of learning in an online learning environment (OLE) for the first time in their life journey. They were mostly familiar with the conventional face to face learning mode, sometimes supplemented with multimedia, and identified benefits of online learning, as compared to the conventional mode.

“...I am highly enthusiastic about this course because I am sure it will help me to develop my professional aspect as an educator. In addition, this will also be of help to me personally in building up more effective communication skills. I know this course, being an online one, will be challenging. The main challenges, as I perceive, will be concerning my skills
in using the online mode, which, I hope, I will successfully overcome with the help of my team leader, fellow team members and my dedication…”

During the learning process they found that using the OLE in this course was very supportive, easy, interesting and a very effective mode of learning. The opportunity to learn from their own places, at their own time, interact with the tutor and peers through the discussion forum, getting quick feedback to their queries, and having access to a large number of resources were identified by them as great advantages of online learning. Students had to face the new technology with a changed direction in their learning. This change is explained by one student stating that, “...I thought it is impossible to learn without a teacher. Now I got an idea about how to learn effectively through the online mode of delivery…”

Further, they found this environment as a platform to use “new technology for the teaching learning process”. However, they also experienced some limitations in this journey, such as internet access problems related to network issues, and use of the resources in English language has become a limitation for learners whose ‘first language is not English’.

The concept of OER was new to all the students who usually found their teaching and learning resources from internet and libraries. They were amazed to recognize that such free resources were available. They commented on the use of OER as a way of supporting them by providing easily available, technologically advanced updated resources which make their journey easier. It was revealed that while OER presented in the course were relevant, clear, and attractive to them, there were certain challenges they faced using some OER, due to the English language limitations and technical issues. Yet, they were very much motivated in integrating OER in their teaching and learning, as evident by one student’s statement, “...We should develop a mechanism to create our own OER and our organization should support to initiate this. I realize OER as very effective…”

Despite some challenges faced, the students claimed that they have benefited greatly from this online learning environment in a number of ways, especially in the use of new technologies, scenario-based learning approach and using OER as learning resources. Their overall impression on the OER-integrated online learning environment of this course was very positive according to their remarks such as ‘valuable’, ‘interesting’, ‘motivating’, ‘time-saving’ and ‘very educative’. It was also identified that SBL, OER and OLE have had a major impact in changing their current practices in learning and changing their thinking and beliefs in teaching and learning.
Reaching the goal

Re-designing the course “Teacher Educator as an Educational Technologist” with ICT and OER integration has been one of the most exiting experiences we had during our professional life. It was a unique and a novel experience including multi-fold capacity building in course design using SBL, OER integration and ICT integration. Also, it has been a very challenging and demanding process for us, who were full time academics engaged in a variety of other activities. Despite various challenges, we succeeded in completing all tasks in each phase of course design and development, due to the committed collaborative efforts and team work, and the constructive inputs from international and local experts.

During the process of course design and development, we realized that the effectiveness of ICT and OER integration in enhancing learning will depend on appropriate instructional design of the learning experience. Integration of OER in the course was driven by the need to further support and to enrich its teaching-learning process. We also apprehended that the SBL pedagogical approach adopted in the course design supported integration of OER in a more meaningful manner. It helped us to make decisions on how to select relevant OER and how to appropriately integrate those linking with the learning scenarios and activities, making the learning experience more effective. It was evident that confidence building in applying their new knowledge and skills and attitude building on developing a “sharing culture” and promoting “Open Educational Practices” (OEP) among the team members has resulted.

All MATEs collectively agreed that the journey to redesign the existing Educational Technology course in integrating ICT and OER in OLE mode of delivery was an experience with a considerable impact on all of us. All of us engaged in the task with a high sense of responsibility and accountability, in collaborating with each other really depicting a group work culture, from the beginning to the end of this task. Therefore this journey supported us to get our team-work abilities improved, specially, in a novel environment like this.

In the meantime, as a requirement in engaging in this journey, we were able to become familiar with and improve our skills in concept mapping and reflective writing processes, while progressing in the re-design our course. We all felt that SBL, OER and OLE are very close to us because of this engagement, which would not be so effective otherwise. In the future, our own teaching learning process also would be more successful than this with the enrichment of these novel experiences. This opportunity to create an innovative learning environment in collaboration with each other has broadened our horizon of experiences with a drastic change in the mind set.
The journey continues

“Now, what do you think of our journey?” The team leader asked the MATEs, at the end of this lengthy, exhausting yet challenging and enjoyable journey. We considered the long, gruelling hours of collective effort we have put into this project and could only reply with contentment and a hint of pride “We did it!”

This happy ending prompted us to revisit and reflect over the process we went through. Where were we? And where are we now? We have come out of the cell of ‘conventional thinking’ that we were originally trapped in. We have certainly accomplished our task. We were able to successfully face the challenge of designing an innovative learning environment for our learners to become active participants in a ‘technology journey’ integrated with ICT and OER. They learnt the subject matter by practically experiencing the same process, becoming ‘learners as designers’ during the process.

Interestingly, we realized that the same approach has been experienced by ourselves as well, during the course re-designing process. We have developed our competencies in course design using SBL with ICT and OER integration, through undergoing a process of “learning through designing”.

As ‘change agents’, we can now provide continuous stimulation for a long lasting effect in our learners. What this small victory means is that we have successfully accomplished the change we have set out to, and made a difference, albeit small in nature but large in impact. This experience encourages us to face any future professional challenge with a huge armory of competence.

“What next?” Having achieved our mission, while becoming reflective practitioners, we thought about our next steps to move forward, through the lens of our self-reflections. In light of the rewarding experience we had throughout this journey, our next attempt is to redesign all other six courses in the MATE programme in a similar learning environment, with ICT and OER integration.

We have acquired a deeper understanding of the unique attributes of the technological tools as well as of the precise processes of applying these tools into practice. Now we are confident in making optimum use of technological tools to enhance learning. We, the five MATEs, await an optimistic future, looking forward to our next steps in this journey with technology.

As one journey ends, another begins...!
References


Chapter 6

The Pathway to Paradigm Shift


Jumpstarting the online revolution

At every Senate and Council meeting of the Open University of Sri Lanka (OUSL), progress reports are submitted giving details about the courses converted to the online mode. The conversion of all existing courses to online courses was an expected paradigm shift of the University. Always at those meetings the senior academics of the Faculty of Education who are present become embarrassed as our number of such converted courses was always minimal when compared to those of the other three Faculties of the University. This was mainly due to the high workload of the small number of academics in the Faculty of Education, where a large number of study programmes are being offered. So, numerous other responsibilities were dominating thus deviating our attention from online course development. However, when this opportunity came our way to redesign a course as an online course with OER integration, under a project initiated at the Faculty with the financial support from the Commonwealth of Learning (COL), we became very excited and full of hope for the future.

Although we were excited and very hopeful, we were conscious about the challenges we would be facing. As we embarked on the journey of converting an existing course to an online course, we became very mindful about those challenges. The challenges were mainly two fold. On the one hand we were facing challenges in integrating ICT into the course. The group members were at different levels in relation to ICT knowledge and skills. Therefore at certain times the group had to depend heavily on a couple of members who were more at ease with ICT than others. However at times when those members were unavailable, the progress of the group slowed down. Along our journey there were many occasions when we were lagging behind our schedules. On the other hand, integrating OER to the online course also surfaced many challenges. Lack of know-how and understanding of the concept of OER which was alien to all members of the group became a barrier and further slowed down the progress of the team. Challenges surfaced in finding suitable OER efficiently and adapting them suitably to the course context as well.
However, in the wake of challenges, there came opportunities as well, especially in relation to ICT and OER. The workshops conducted from time to time to facilitate the process of transforming the existing course into an online course and also to build the capacities of the academics, provided many opportunities of learning to the group in relation to ICT and OER. At these workshops, the academics were able to concentrate on learning more about the integration of ICT and OER without the burden of their routine work. In addition to the support received from the facilitator, there were opportunities to share knowledge and skills among group members and also from the other groups during the workshops. Gradually the group members became more efficient and skillful in finding relevant and suitable OER material and integrating them into the new online course.

The Department of Secondary & Tertiary Education of the Faculty of Education of the OUSL conducts a very popular programme of study called the *Post Graduate Diploma in Education (PGDE)*. This programme aims at professionally developing graduate teachers as well as other graduates employed in the education sector. It is offered as a level 7 programme in the hierarchical structure of the University. It has been offered as a traditional and primarily print-based distance education programme consisting of 9 courses for many years. One of those courses is the course on Educational Technology.

Although we, the authors of this chapter (Team PGDE), are basically from different disciplines, we are all members of the Educational Technology course team, as Educational Technology is common to all disciplines in respect to the teaching-learning process in the PGDE programme. Therefore, when with the dawn of 2013, this new venture – the process of redesigning a course as an online course integrated with OER commenced, we, the course team members of the Educational Technology course had no hesitation in selecting the same course for redesigning.

Now, as you go on reading the story of our journey of redesigning the existing normal course as an online course integrated with OER, presented in this chapter, you will come to know more about how the process started, the different stages of the process, the opportunities made available and how we managed the issues and challenges encountered in our journey. The experiences of the group members and how their mindsets were changed are illustrated by way of the reflection notes we wrote and the concept maps we constructed from time to time. Furthermore you will read about how our students received the final output – the redesigned online course on Educational Technology integrated with OER, and their reflections on the experiences of changing to online learning.
About the course

The Educational Technology course with the course code ESP2204 focuses on developing the professional skills of the teachers in the teaching-learning process. This is a 06 credit course and it requires a minimum of 150 study hours during a period of 24 weeks (approximately 6 study hours per week). The course offers our learners, who are mainly graduate teachers, the opportunity to design, develop, implement, and evaluate appropriate educational technology in their teaching-learning process. The main role of a teacher is to create an environment in which the student can play an active role in a successful learning situation, and become a facilitator in that process. It is thus important for the learning environment to stimulate student behavior and promote independent learning.

Challenges and issues: The need for a change

When compared with the rapid and vast technological developments in the field of education during the past years, we found the following weaknesses in relation to the existing course.

a) Limited use of technology and more dependence on traditional methods of instruction,

b) Lack of awareness of quality parameters of delivery systems among teaching staff particularly among visiting staff,

c) General inefficiency of administrative systems

d) Difficulties in ensuring equal standards in all regions and

e) Lack of standard criteria to measure the quality of services.

As you already know our students are all teachers or in other categories in the field of education. They sometimes face situational barriers such as poor learning environments and lack of time to attend day schools and engage with the self-study print materials, which hinder their studies. Learners complain that they take more time to complete the course requirements than anticipated, because they had to cope with the demands of studies, home, and work. This leads to challenges, such as the learners’ ability to integrate the demands of off-campus study with family, work, and social commitments. They experience feelings of isolation and stress due to lack of organizational support, which may eventually lead to non-completion of the study programme itself.
Students in this course need continuous interactions with their peers. The student-student interactions are facilitated only at the inaugural sessions, and the few day schools and tutorials – where they get the opportunity to actively interact with each other and become a community of learners and thus reduce the sense of isolation which is a characteristic of open and distance learning. However, this was not being achieved as effectively as expected.

The diversity of students in various aspects such as learning styles impact on student achievement. Students work differently under different situations such as different types of subjects or with different learning styles. Because of the relatively infrequent face-to-face interaction between an instructor and the students, this course has brought many new challenges to the teaching and learning process. Moore (1989) identifies four types of interactions in education: learner-content, learner-teacher, learner-learner, and learner-technology (see Fig. 6.1).

Fig. 6.1: Student interactions in a distance learning course, (Source - Moore, 1989)
Without an effective learner support services system that provides on-site face-to-face tutorials, timely feedback on student performance and access to library services, student achievement will inevitably be undermined and non-completion or dropout rates may tend to increase.

Therefore it is essential for the student teachers following the PGDE programme to have more opportunities for interaction than it is possible in traditional primarily print based distance learning. The way forward in this regard practiced in most countries in the world at present for whatever study programmes is to offer them online.

**The paradigm shift: How it happened**

The redesigning of the existing course in Educational Technology as an online course titled “Educational Technology Foundations” commenced after the first round of capacity building workshops which were held from 2nd to 5th January 2013 to make us knowledgeable about OER and integration of OER and ICT into course design. In the second round of workshops the focus was on redesigning a course integrating OER, SBL and ICT. It was there that we selected the course in Educational Technology for redesigning with the agreement of all team members. The flow chart shown in figure 6.2 illustrates the concept of transition of the normal offline course to an online course.

Initially, the team formulated thirteen learning outcomes for the course. In addition, for each learning outcome, learning context and/or learning scenarios, learning activities and assessment activities had to be prepared by the team. It was real hard work for the team members. Especially since all of them had to do their regular academic work related to five major programmes of study conducted by the Department. For the team members, the hardest task was to develop scenarios as most of them were inexperienced in that area. In fact it was a novel experience to them and they were of the opinion that developing scenarios is a very creative work. However after so much wear and tear we had somehow designed a draft course to be put online. The course at that stage comprised 13 learning outcomes. The idea at that stage was to cover all sessions of the existing print-based course.
Integrating OER in Educational Practice: Practitioner Stories

Post Graduate Diploma in Education (PGDE)

Level 7 programme

Consists of 9 compulsory courses

ESP2204(Educational Technology)-6 credits

Mode of Course Delivery

Day Schools
Practical Sessions
Tutorial Sessions

Evaluation

Continuous Assessment (CA)

2 Take home Assessments
Activity based Assignments

Final Examination

Learning Outcome 1
Learning Outcome 2
Learning Outcome 3
Learning Outcome 4

Open New Avenue to Online Supplementary Course

ESP2204(Educational Technology Foundation)

Content Scenario Based Learning

Learning Activities/Assessments

Quizzes
Concept Maps
Reflective Journals
Assignments
Discussion Forum

Fig. 6.2: Flow chart to show the transition of the offline course to an online course
In the next round of workshops, that was held in April 2013, the team was able to obtain feedback from the expert facilitator regarding the course at that stage. Based on the suggestions made by him we changed and reduced the learning outcomes to four which are presented below.

1. Examine the importance, and the role of educational technology in the teaching - learning process;

2. Apply appropriate teaching methods and techniques to promote effective and efficient learning in different situations;

3. Design, develop and use assessment and evaluation strategies to promote learning;

Design, develop and use teaching and learning resources to promote effective and efficient learning in different students.

The next stage of course redesigning commenced thereafter and different team members worked on different aspects of redesigning. This work included developing scenarios, learning activities, assessment activities and also finding suitable learning resources including OER. The team members put in a lot of effort to ensure the suitability and the quality of inputs incorporated in the course. At the beginning there were difficulties in finding OER material which are exactly relevant to the subject matter covered as well as finding such material appropriate in the cultural context of the country. Further workshops, conducted in May 2013 facilitated the work of the team members in completing their individual responsibilities. The workshops conducted throughout from the beginning, built the capacities of the team members and as days progressed, they were better prepared to face the challenges that came their way throughout the process.

An important and even more challenging task for the team was to prepare assessment rubrics for different types of assessment activities appropriate for the online learning environment. The team acknowledges the assistance received from a few experts in this exercise particularly from the reviewer before finalizing the final copy. Then we started to upload the course online by using the Moodle platform. At last we had a blended online course! Then having completed that, we came to the exciting moment of submitting the online course to the education technologist of the University for comments and feedback. In due course, the education technologist gave us feedback for further improvement of the course and also suggested to offer the course as a supplemental course. So finally our online course titled “Educational Technology Foundations” was ready for piloting as a supplemental online course.
Afterwards, the necessary arrangements were made to pilot the course and eleven students of the PGDE programme volunteered to participate in the exercise. They were from the English medium and Tamil medium programmes. The data collection instruments such as pre-questionnaires, post-questionnaires and interview schedules were used to collect feedback information from the participants. Four of them were interviewed in depth using an interview schedule. Their reflections on the experiences of the course generated rich information.

The reflections of participants

In this section, the reflections of the participating students in the piloted online course on the change towards online learning are presented. Their reflections covered various aspects such as the integration of ICT and OER, the use of the SBL approach and also the online environment provided. They reflected on the challenges they faced while participating in the course and came out with some suggestions for improvement as well.

Later on, the reader can find out how the mind sets of the team members changed during the entire process of redesigning the course through some of their reflections and from the concept maps they constructed at different stages of the process.

The integration of OER and ICT

The participating students agreed that integration of OER and ICT helped them to further understand the concepts in the module and also stated that the mode of online delivery was more stimulating than the traditional offline mode. Their comments on the use of OER in the teaching-learning process were very positive. They mentioned that these provided learning resources at a low cost, enabling the use of new technology for the teaching-learning process and enhance open access for education in any age level.

One of the participants expressed his ideas regarding the use of OER as follows:

“I feel that OER based learning help to get up to date knowledge and it saves the time of the students. At the same time it gives equal opportunities to every student”

The majority of participants stated that the use of SBL made them feel they are in real situations in the teaching learning process. One participant has written “SBL is more fun and it teaches me to learn from our mistakes. It is very useful
for adult learning as well as for students to a greater extent than the chalk and talk method”

Furthermore, participants agreed that the quizzes helped them reflect on the sessions presented, and also discussion forums helped them to interact with each other. Regarding the subject content, most of them agreed that it is well organized and easy to understand.

The online learning environment

All participants expressed their happiness in being able to have the experience of participating in an online course. A majority (80%) mentioned that they would have preferred more online activities in the course. A similar percentage would have preferred more online resources. All participants agreed that the online teachers were very helpful. They appreciated the comments made by the online teachers as feedback for their inputs in relation to various activities.

One participant mentioned that “accessing learning resources was very easy to me” and “It is flexible to me in online learning and it is user friendly” Most of them commented that receiving quick feedback online, on learning activities and assignments motivated them to engage more in the course. Further they mentioned: “discussion forums helped us to interact with each other and share our ideas in a friendly manner”

All of them mentioned that reflecting on their learning process gave them a new experience and motivated them to continue learning. Furthermore, all the participants commented that it would have been better if more topics for the discussion forum were given by the teachers and also to have more online activities and more online resources.

The use of the SBL approach

Here we present the views of the participants on the use of the SBL approach in the online course. There were mostly views in support for the use of SBL and a few comments against the use of SBL.

‘For’ SBL

The participants described the scenarios as enjoyable and challenging. They identified scenarios as problems and agrees that meaningful learning occurs because they had to progress through the interactive scenarios to solve the teaching – learning problems by visiting different situations and collecting different evidence. Their views also indicated that the SBL approach could be
used effectively in secondary and tertiary education to help students learn and develop their problem solving skills. They also commented that when working with the scenarios they had to define problems, analyze the different factors that could be causing the teaching – learning problem and implement feasible solutions. The participants were further of the view that the scenarios highlighted to them how important it is to consider all the implications of a decision they are making based on their technical knowledge. This suggests that the scenarios help the students to deal with uncertainty and improve their critical thinking and decision making skills. There were further comments on the usability of SBL approach. According to them it enables them to be close to their real classroom situations. It motivates them to engage with activities in a useful manner.

Some of the comments made by the participants are reproduced here for further understanding

P1: “SBL is good for an online course and it helps us to think and learn something that the normal course does not have like case study or any innovative things, this is one of the good approaches”. “Scenarios are friendly and it is a good approach. It can be used for practical situations also. We can’t say we are not motivated”.

P2: “When I went through the scenarios my first appointment date was remembered. Learning with scenarios was really useful for me to improve knowledge in teaching.” “SBL was very useful to understand the students’ abilities with regard to their age and grade. As each and every student is different from each other therefore the way we teach to students, must change daily”. “This SBL can be used to help new teachers to teach practically instead of theory based teaching. This can be used for language teaching and some other subjects”. “It gives ideas to improve myself and I was encouraged in my actual life also”.

P2 and P3: “Scenario is fine and practical. I think it is OK. Under educational Technology Foundations, we are instructed on how to teach in teaching learning process. Scenario is practical and it helps us to understand and improve how to use Educational Technology. It focuses on practical aspects we face in actual classrooms. It helps us to achieve the expected outcomes. The scenarios help us to understand how we should use teaching methods and techniques accordingly in actual classrooms as well.”

P4: “My view is that scenario based assessment and other questions are very useful for us to achieve the outcomes of the course. It includes several questions in different angles”. 

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‘Against’ SBL

There were some adverse comments about the SBL approach from the participants. Some of them were about the particular scenarios given in the online course but not about the SBL approach itself. Although several participants said the scenarios helped them think about the process of solving a teaching – learning problem there was some who disliked multiple routes in the scenarios that could be pursued to reach a solution. Some felt it would be sufficient to learn a single correct way of reaching a solution rather than actually focusing on the process of reaching a solution.

Some participants while acknowledging that scenarios helped them think about ways to solve a teaching – learning problem, expressed concern whether that would help them in writing assignments and answering examination questions. This shows that some students think that activities are only worthwhile if they are directly related to the writing assignments, exam and measures of performance. It also demonstrates the importance of emphasizing the real purpose of scenario based learning tools and how improving problem solving skills can be very beneficial for their future career. A few comments from the participants are given below.

P4: “Sometimes we face problems understanding the scenario.”

P1: “Scenarios are complex. Some can’t understand scenario. Some have fed up with for those direct questions are much better.”

P4: “Scenario 1 is a little bit difficult”. “The given scenario is not applicable to all situations”.

Integration of OER

The participants appreciated the variety of educational resources available on the web as a source of alternative practices, processes, and approaches upon which they can draw, and to which they can direct their students. OER was understood by some of them as being the catalyst for a constant dialogue directed towards the improvement of a particular resource. Others conceived of OER in terms of freely available materials that they can reuse, adapt and incorporate into their teaching because it has been liberated from traditional copyright constraints.

The participants also commented about issues such as quality and suitability of OER as well as about their intentions of using OER for their own teaching and learning processes. The willingness and intention to integrate OER into the
participants’ own practices can be considered as an important outcome of the pilot course. There were comments as well on the OER provided in the online course. Some comments of the participants are provided here.

P3 “OER are things that are available to be taken, reused, repurposed and repackaged and put together in a way that suits the person who’s reusing the educational resource. So there are no copyright issues, there are no worries; it’s freely available”.

P1 “I’d probably say it is a resource that someone has created that they don’t mind what you do with.”

P3 “Some of the OERs were useful to do learning activities. Some part of the subject content I could understand but some are not.”

P2 “We should consider the quality of this OERs and we need to look at whether it is useful to our activities”

P4 “For me OERs are really useful but is very difficult to find OERs from the internet”

P1 “At the beginning of the course I felt that it is better if I had a training in searching OERs”

P2, P3 and P4: “Finally we could find appropriate OERs which are very useful for us to engage with our course activities and useful for the teaching learning process also.”

Online Learning Environment (OLE) as the mode of delivery

There were positive comments from the participants about the appropriateness of the online learning environment. The consensus was that the online environment is facilitating. They described the online environment as very learner friendly. They are motivated to complete the activities individually. Most of them also agree that the assessment activities of the course are very useful for them to enhance their knowledge.

They were able to achieve the learning outcomes successfully. Some of the comments from the participants are reproduced here.

P1: “OLE can be used in anytime anywhere appropriately. I believe I could achieve 80% of the learning outcomes of this course if time was not a matter”.
P2: & P4 “I think this is good. If I have proper information & guidance I can do this. I do not have to come to the university. I can freely access when I have free time. I think I wish to continue with online education in future.”

P1: “Increase in ICT knowledge is developed; it was a different experience for me. As teachers, all of us should have a good knowledge of OLE”

P4: “Direct activity is fine as we have time problem ready link with resources and references”.

P2: “All activities and classifications are good and helpful. The given feedback was very good “

Analysis of student logs showed that 65% of students had completed the activities on scenarios out of the day time hours. It means most of them have logged in at night after they have completed their other usual chores. To end this section we would like to present some, challenges and suggestions that surfaced in collecting information from the participants in the piloted online course.

Challenges faced by the participants in using the OLE in their learning

1. Some of the days they could not access internet
2. The language barrier (as almost all OERs in English)
3. The difficulty to find OER resources for the primary grades.
4. Some guidance given to follow the course is not clear.

Suggestions to improve

1. Need all facilities such as computer, internet etc.
2. Include more learning activities
3. Flexibility in the dead lines of activities

A final word on participants’ feedback

All in all the members of the team were quite elated about the positive feedback obtained from the participants of the online course. The feedback information was obtained through several techniques such as questionnaires and interviews. There were positive comments on the use of the SBL approach,
integration of OER and also on the OLE. At the same time they were constructive enough to come out with some issues and also to make a few suggestions for improvement.

The reflections of the team members

Throughout the workshop period during the year 2013 and even after that the team members wrote their reflections from time to time. The first workshop was on 2nd January 2013. It was the beginning of the New Year and we were very enthusiastic and ready to learn new things.

The workshop was on integrating OER and ICT in courses. All academics who participated became reflective practitioners as we were required to keep notes in reflective journals. Two such reflective notes written at the early stages by two team members are reproduced here as examples. We tag the writers of these reflective notes 1 and 2 as PGDE 1 and PGDE 3 respectively.

Reflective note 1

02.01.2013: The concept of OER was in the air during the later part of 2012. I was wondering about this new concept. Is it going to make things more complex for us? Would it facilitate the delivery of our courses? etc. Anyhow it was very intangible.

Now today at the workshop, the concept has become more tangible. It came to my mind that when very simply stated the OER are educational resources under the Creative Commons license, which can be used freely by people under various conditions and to different extents.

OER would enable the sharing of expertise, selection of better educational materials and avoid duplication of work. I hope to have a look at OER tomorrow in the internet, which are relevant to the course our group is developing. I feel happy that I am learning something new which would in the long run facilitate the development of our courses & programmes.

Reflective note 2

03.02.2013: After attending the workshop I started reading on OER and how I could integrate OER materials for the Educational Technology course. I feel that I should work with my team and draft the outline of the study guide. I involved myself in developing the learning outcomes for the selected course which was not developed previously. During the month I have downloaded few OER’s which will be useful in future. I feel that the
team should develop a time frame work and allocate work among ourselves in order to complete this work in a successful manner.

For the study guide I wish to develop puzzles. OER materials could be incorporate with the puzzles. Referring OER will help students to enhance and update knowledge on the subject in a practical manner.

By attending the 1st workshop on OER, I realized the effectiveness on scenario based teaching learning process. I incorporated two scenarios for a session which I conducted, on Rubrics. While conducting the session I realized how powerful the scenario based learning is. It helps the participant to understand the situations in a practical aspect. After this experience I wish to include a scenario in ET course as well. I feel scenario base learning will help students to broaden their critical thinking and problem solving ability. I wish to share my views and ideas with the team on 17th Feb.

Towards the end of the series of workshops, all of us were asked to do an analysis on how our reflections changed with further learning. From this analysis, it clearly emerged that the understanding of group members of OER and related concepts which were very vague at the initial stages improved significantly towards the later stages. The factors that facilitated this improvement were workshops and related activities, hands on experiences, guidance, support, motivation, listening to presentations of other groups, help from colleagues and technical support. On the other hand some factors came to light as factors which hindered the thinking process of the members. Those included Institution-related, Project-related, Work-related, Peer-related and Personal factors. There was a general consensus that OER is very relevant to distance learning. One concern was locating culturally appropriate OER.

Concept maps

The other activity we were required to do during the process was to construct concept maps from time to time. The idea was for self understanding of our mind maps and building up of our capacities. Towards the end of the workshops we had the opportunity to compare our own concept maps in order to identify how they changed with the passage of time. For this purpose we were provided with guidelines from the facilitators. Some of the concept maps and their comparisons are presented in figures 6.3 to 6.8.
Open Learning

Everyone has the right to Education

OER
Teaching, learning and research materials in any medium, digital or otherwise

Open Badges

CC licensing

Open Scholarship
Massive Open Online Courses

BY
BY-SA
BY-ND
By-NC
By-NC-SA
By-NC-ND

Fig. 6.3: The initial concept map of Team member 5
Fig. 6.4: The Final concept map of Team member 5
Fig. 6.5: The initial concept map of Team member 2
Fig. 6.6: A later concept map of Team member 2
Fig. 6.7: The initial concept map of Team member 5
Fig. 6.8: The initial concept map of Team member 6
We suppose that by comparing the two versions of the concept maps drawn by the team members at two different occasions, the readers could understand the changes which occurred in their mind sets during the process of redesigning the course as an online course. These changes involved the understanding of key and related concepts, their interrelationships, their importance and usability in course design and development especially in the context of online learning.

When we look back at the 1st concept maps we constructed, it is seen that only the main ideas or concepts are included. However individual differences were apparent in the concept maps constructed by different members of the team. The positive factor was the understanding of all members about the main concepts OER and ICT and their importance in the teaching-learning process. The later concept maps display a more comprehensive understanding of the main and related concepts as well as on designing courses integrated with OER and ICT.

Conclusions and the way forward

“The pathway to a paradigm shift” was the story written here in this chapter. The principle characters of this story were a team of academics of the Department of Secondary & Tertiary Education of the Faculty of Education of the OUSL, involved in the PGDE programme. The exercise or the process the team participated in was the redesigning of an existing course of the programme as an online course integrated with OER, SBL and ICT. The existing course, “Educational Technology” was redesigned as the “Educational Technology Foundation” course. The whole process spanned a period of 18 months.

The members of the team, who have not even heard about a concept called OER 18 months ago, have managed to redesign an existing course as an online course integrated with SBL, OER, and ICT. Without stopping at redesigning only, the team has developed and uploaded the online course on to the Moodle platform, piloted it as a supplementary online course and would be in a position to offer it to the students in the near future. The members of the team, having got the knack of redesigning existing courses as online courses integrated with OER, SBL and ICT would move forward in redesigning the other courses of the PGDE programme in a similar manner using their developed skills and built up capacities. Hopefully the senior academics of the Faculty who participate in university council meetings, senate meetings and other high level forums would not feel embarrassed anymore when progress reports are being called for the university’s shift towards embracing online learning. We expect they will be
proud to report the innovative efforts of the Faculty of Education on designing and developing OER-integrated online courses – the first of such courses at OUSL!

References

Underscoring the Role of ICT and OER in Curriculum Renewal in Higher Education Programmes in Sri Lanka

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Despite the endorsement of the Millennium Development Goals and Education for All by country after country, widening disparities across countries and within countries, have precluded the assurance of these laudable goals. Inequality in human development is still continuing (Human Development Report, 2014). Large disparities in income, wealth, education and health and other dimensions of human development persist across the world, heightening the vulnerability of populations. According to the Human Development Report in 104 developing countries, 1.2 billion people had an income of $ 1.25 or less a day. UNDP has categorized Sri Lanka, as a High Human Development country with a Gross National Income Per Capita Rank of 103 and a Development Index Rank of 73, a loss of 30. In a world where communication has become mandatory, only 18.3% of the Sri Lankan population uses the Internet.

Meanwhile, Sri Lanka has proclaimed its goal as becoming a Knowledge Hub in Asia and on Transforming the School Education System (TSEP) as the Foundation of its Knowledge Hub Project. TSEP is focused on enhancing access to and the quality of primary and secondary education in Sri Lanka to provide a foundation for the knowledge-based economic and the social development of the country (Sri Lanka Country Snapshot http://www.wds.worldbank.org). This is because no country can become a Knowledge Hub if its education is neglected. University Faculties of Education in Sri Lanka have a critical role to perform in this regard as their mandate is teacher development. An objective appraisal of school education in this country, however, indicates that despite achievements made in extending access to primary and secondary education, its quality needs to be improved, which in turn necessitates an improvement of teacher quality.

At the same time, Sri Lanka’s progress in higher education cannot be viewed positively without regard to access or quality. The Times Higher Education report of 2014-15 ranked IIT Kanpur as the best performer in South Asia with an overall score of 31.9. India has seven other universities/higher education institutes among the 100 best performers in Asia but no institution from other South Asian countries figures among these 100 institutions. The 13 performance indicators employed by THES for ranking, come under five areas: teaching,
research, citations, industry income and international outlook. The overall performance of a higher education institution depends largely on the quality of its academic staff, therefore the capacity building of academics becomes a priority. Academics in the Education Faculties in universities also have a dual role to play in view of their role as teacher educators.

It is in view of this context that the conceptualization of education needs to undergo change from a predominant emphasis on subject matter content and its regurgitation at examinations, to an emphasis on developing the ability of learners to deal with real world problems, be they connected to employment, human rights or social cohesion, to name a few. The development of teacher educators needs to be cognizant of the trends that are taking place internationally. For example ICT in its various forms has become an indispensable and an integral element in all areas of the development of our society and especially in the field of education. It is therefore imperative for our teacher educators to enhance their abilities in the use of ICT for strengthening the quality of their programmes of study in order to improve the quality of teachers they are educating.

If both equity and quality are to be ensured, rather than establishing more universities with a larger student intake, more innovative approaches used across the globe need to be experimented within Sri Lanka. Extending access has to be achieved not by awarding more and more qualifications but in making more students more focused on real-world issues and developing them to find solutions on their own through experimentation, reflection, creativity and risk-taking. A major issue which Sri Lanka, or any other developing country has to face, is linking access to higher education with its quality.

The evolution of ICT over the last two to three decades has led to significant changes in providing access to teaching-learning resources from those stored on library shelves to those available on the World Wide Web. No longer do the students, especially those enrolled in postgraduate programmes, have to moan about the inadequacy of resources due to non-affordability and access to journals and books published in the developed world. Yet, even though access to the Internet provides access to valuable resources, the quality of these resources cannot be guaranteed.

This issue provides the background and a strong rationale for the initiatives undertaken by the Faculty of Education, Open University of Sri Lanka that is reported in this book. The focus of this initiative is on the integration of ICT and OER (Open Educational Resources) in Learning and Teaching. The content in this publication captures the journeys of participants in the process and it is but one indication of a much sustained effort by the Faculty group. Evidence of the
many other benefits of this effort will only reveal themselves in time as faculty members begin to integrate ICT and OER in their teaching. The first chapter presents the overview and the rationale for and the activities undertaken by the Faculty of Education in integrating OER and ICT in Learning and Teaching. Strengthening teaching-learning resources has become a must for improving the quality of teachers we produce as well as the quality of teacher educators who are able to peruse, select and adapt if necessary, available educational resources to fulfil their responsibility towards teacher development.

Providing access to educational resources under an Open License, as explained here, will enable education to move towards narrowing the gap between the privileged and disadvantaged groups in our society. An open license, however, does not imply relinquishing rights to ownership. Open Educational Resources serve both to protect intellectual property rights as well as enable learners and teachers to access, use and share high quality teaching-learning resources. OER would understandably, strengthen the quality of educational programmes, as they can be copied, re-used and adapted at no cost and without requiring permission, while ensuring appropriate acknowledgement of ownership rights.

The authors in this publication recount how the integration of OER into the teacher education programmes of the Faculty of Education, OUSL was carried out. It is noteworthy that the project is truly inclusive with all academics in the Faculty participating in the capacity building workshops and sharing their reflections with other academics in the university system through this publication. It is also noted that the initiative has been planned and implemented seriously, again maintaining inclusiveness, by selecting five courses from five programmes conducted by the Faculty rather than attempting to develop one particular programme. Hopefully, the initiative, a fore runner, in many respects, will not remain an isolated activity of the Faculty of Education but will be able to be used to convince other Faculties of the University and other Universities, to embark on this kind of a journey for the benefit of their students and teachers.

The significance of this initiative rested on the unique process adopted in developing situated learning environments to apply subject matter content to real world problems, developing learning scenarios, as part of the design and development of online courses. The reflections of teams who engaged in putting the ideas into action, presented as stories are refreshing and stimulating. Their reflections demonstrate, as is expected, the diversity in the approaches which as the manner in which different teams in developing their courses.
As the authors point out, a major challenge faced has been developing learning scenarios. The Faculty of Education of the Open University has previous experience in developing learning scenarios when the MATE programme was developed with sponsorship of the Commonwealth of Learning and under the able guidance of Professors Som Naidu and Mohan Menon. As a part of this initiative, the Faculty of Education developed an entire programme of study (the MATE) using scenario-based learning as its pedagogical framework. As far as we are aware, this is the only instance of a Sri Lankan University adopting a situated learning approach to curriculum and course design.

The MATE programme is an example of how learner and learner and learning-centered programmes of study can be developed with a focus on students’ learning experience as opposed to what they reproduce in their exams. While the Faculty views the Programme as an example of a Best Practice and a successful initiative, which provides a useful base for the Project on Integration of OER, it does not automatically become a mechanical process to be followed in all Faculty programmes. The Faculty was able to show how learner and learning-centered programmes of study can be developed through the MATE programme. Incidentally, the Faculty can take pride in the fact that MATE is the only programme in which students’ learning is assessed through assignments, without a final examination. Over the last decade, the Faculty of Education has grown with a larger compendium of programmes and courses and involving a larger number of academics. The newly-recruited academics need capacity building in this approach to teaching, thus the continuing need for capacity-building workshops. That these workshops have been effective is borne out by the reflections in this publication.

As pointed out the stories in this publication and the reflections of the participants in this process are not uniform. The Department of Early Childhood and Primary Education (ECPE) team had identified the challenges they faced first and then went about how they attempted to meet those challenges. In the case of the Department of Special needs Education (SNE) team understandably their main concern was addressing differences. The team with the responsibility for integration of OER into the Master of Education (MEd) Programme focused on the context first and then proceeded onto their ‘journey’ while the MATE team moved towards bringing about transformational change. The PGDE Team reflects on the challenges by first giving an overview of the Postgraduate Diploma in Education (PGDE) Programme which had been chosen by them for Integration of OER.

The MEd Team appears to have set about the activity, in a planned manner, as shown by their ‘outline of the journey’ with an estimated timeline of one academic year and a flow chart. The PGDE Team also presents flow chart to
illustrate the transition from the existing course to an online course. All the Teams have presented their initial and final versions of the Concept Maps after describing the process they engaged in, in drawing these Concept Maps as figures. More importantly, the Five MATEs also present an analytical comparison of the Concept Maps and the SNE Team has included a summary of CMS. Undoubtedly, the description of the process they engaged in by these Teams would enlighten and facilitate any other teams who venture into integration of OER into their study programmes. The MATE Team also explains with excerpts from participants how the Concept Mapping strategy had helped them to understand OER. It is also noteworthy that discussions had taken place among team members (e.g. PGDE Team) on the pros and cons of Scenario Based Learning (SBL) which allows for arguments and counter-arguments to be expressed.

That Integration of OER is not a simple or a straightforward activity as is amply illustrated by the changes that the teams were required to do. Examples are the preparation of a new assessment rubric (PGDE Team), revising course content (SNE Team) and re-formulation of the Learning outcomes (ECPE Team). The description of the research design in Chapter 1 is also extremely useful as it reiterates the need to combine research with curriculum development and teaching-learning. Especially when a novel approach is introduced, continuous evaluation using an action research design would pay many dividends, as evaluation would indicate where and how improvements to the implementation process needs to be done to maximize benefits. In this context, the Generic Evaluation Plan and the use of reflections for evaluation by the academics involved in the initiative is particularly relevant in accomplishing the context and learning-centric approach as envisaged, as well as to facilitate other Faculties that wish to engage in a similar initiative.

The most impressive feature, as I see it, in the description of the process of integrating OER into the selected courses is the development of scenario-based learning environments, including concept mapping, capacity building of academics together with student participants and meeting the challenges identified and the use of reflections, which make the project participatory and stimulating. It is clear that this is only the beginning of a long journey that the Faculty of Education has embarked upon. The Faculty can rightfully claim to have the capability to take the initiative to its completion. It has the clout to persuade other academics both within and outside OUSL to take up the challenge of curriculum renewal and ICT and OER integration to demonstrate how they too can move with current trends in developing learner and learner-centered programmes of study. The Faculty of Education deserves to be congratulated on accepting this and promoting challenging responsibility.
References


Integrating OER and ICT and Innovative Pedagogical Initiatives in Sri Lankan Higher Education

_Uma Coomaraswamy_
_Honorary Fellow of COL; Former Vice-Chancellor, OUSL_

I am pleased and honored to have been requested to send in my reflections on the compilation of this book -- _Integrating OER in Educational Practice: Practitioner Stories_, an outcome of a long journey undertaken by the Faculty of Education under the leadership of its Dean on the integration of ICT and OER into Teacher Education programmes at The Open University of Sri Lanka (OUSL).

In my assessment as a former senior academic and Vice-Chancellor of OUSL, the Faculty of Education, the premier provider of teacher education programmes in Sri Lanka, has always been one that has kept abreast with new trends and perspectives in teacher education, and taken up challenges to introduce innovative strategies in its educational programmes and ensuring high quality of learning and teaching and more productive students and educators.

The Faculty, with limitations in resources including human, but serving very large numbers with a commitment to quality teaching learning, needed to ensure that within the framework of investing in course design and development they should choose the most cost-effective approach. Thus it made a strategic decision to manage the resources available for design and development in the most cost effective way by embracing open licensing environments and harnessing existing OER as new ways of developing better programmes, courses and materials. This idea of drawing upon the enormous wealth of OER to improve the quality of our teaching and learning programmes reflects a ‘demand-driven approach’ to education, which is also very much a learner-centered approach. The Faculty of Education also valued the opportunity OER provides for ‘users’ to become ‘producers’ of totally new open content and tools, by having the opportunity to change and adapt OER for their purpose.

In Sri Lanka, interest in and the production, distribution and use of OER is still very much in the early stages of development. This is because it demands a paradigm shift in the way individual teachers, learners and institutions perceive the culture of learning, lack of awareness about OER and lack of skills in the use of OER.
Having accepted OER as major learning resource, Faculty recognized a number of barriers which hinder their utilization and impede the use of OER. Barriers identified were:

- Inadequacy in computer skills of some academics;
- Lack of higher level of skills in information searching, selection, adaptation and evaluation;
- Lack of ability to locate specific, and good quality OER;
- Lack of ability to use, change, and adapt OER thus integrating OER into their courses.

The Faculty systematically approached its goal of integration of ICT and OER into Teacher Education programmes in collaboration with COL through the following phases:

- Creating awareness about OER and its potential and free use of software tools, licenses and best practices;
- Capacity building of all their academic staff (for sustenance of the practice) with skills in course design and development, teaching and supporting learning online and integration of ICT and OER in course design and development;
- Using the acquired skills, adopting a team approach with five teams, and developing five online courses with OER integration in 5 different programmes and piloting them with student-teachers;
- Evaluating the impact of ICT and OER integration;
- Presentation of their ‘stories’ to an audience of their Faculty and invited guests.

I had the opportunity of attending this final session of the Evaluation Workshop in Kandy where the compilation of the reflections of the five course teams was presented as ‘stories’. The presentations of the five teams and one-on-one discussions that followed the presentations in June 2014, displayed the following:

- Their ability to think outside the ‘box’ and move away from conventional mindsets;
- Positive attitude towards the use of OER despite constraints on time, English language and ICT skills, adequate ICT infrastructure etc.;
- Acquired culture of ‘Introspection’, continuously reflecting on their practices through a progressive concept mapping exercise which brought to light the challenges they faced and solutions they found;
• Their great ability to grasp the skills needed to locate specific, relevant and quality OER and integrate within a relatively short period of training time;
• Some of the OER users have also become producers to a certain extent;
• Overall interest in pedagogical innovation displayed by them as individuals and as a Faculty;
• The support and leadership they got from the management at the Faculty level;
• Improvement in the research capacity of some staff; and
• Their capacity to act as ‘change agents’

At this workshop we saw them having traversed a diverse set of difficult terrains on this journey to reach the above and compile their success stories as individuals and as a Faculty.

Congratulations for engaging in this hard and inspiring task with explicit outcomes!!

Now, what changes are needed at the institutional level to make more effective use of OER?

• OER and its potential value to improve the quality of curriculum, content and instruction, facilitate academic collaboration and enhance equitable access to knowledge resources need to be popularized.
• Greater efforts of knowledge building, especially among institution’s management, have to be enhanced. Such knowledge building has to be comprehensive and current.
• Policy support at government and institutional level or lack thereof places limitation on the extent to which OER can play an active role in providing the necessary infrastructure and encouraging academic staff in engaging in OER related activities.
• No new educational practices can flourish without a synchronization of individual interests of academics and institutional goals formally stated in their Corporate/Strategic plan of the institution.
• Development of an OER policy may be an important way to provide a legal framework for governing OER practices and fostering the production and use of OER.
Transitioning to Transformational Change with OER and ICT and Innovative Curriculum Design

Upali Sedere
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Open Educational Resources (OER) present to anyone who is interested in learning, an unprecedented learning opportunity. While the proliferation of OER is to a large extent due to the affordance of the World Wide Web, OER can come in many other forms. Furthermore, the Internet and the Web enables widespread dissemination and availability of OER to students who otherwise would not be even aware of the existence of many of these resources.

OER can be used by students as well as teachers in a wide range of ways. They can be integrated and used by teachers in existing subjects and programs of study, or they can be studied for general interest and as part of informal learning. A skilled learner does not need a teacher or even an institution to learn from OER available on the World Wide Web.

OER carry an open license making it possible for any organization, individual to use them, modify them and make use of them. There are OER in the form of content, syllabi, instructional modules, handouts, PowerPoint presentations, video and even books available totally free which learners can use, and can quote, edit, print and use with due and appropriate reference to the source.

Access to a wide range of OER, from the very simple to highly complex material, enables teachers to engage in innovative pedagogy and employ more learner and learning centered pedagogies. With access to a wide range of learning resources, teachers can assign learners out-of-class activities so that more of the class time can be spent for active learning and greater interaction with students and among students. In such learning situations learners are not only spending their time more effectively but also learning to be independent learners.

The Faculty of Education of the Open University of Sri Lanka has taken a huge step forward in proactively integrating OER and ICT in its educational programs for the professional development of teacher educators in the country. This is something that has been close to my heart and something that I have always
hoped all academic programs at OUSL will embrace formally. The support and sponsorship of this work by the Commonwealth of Learning (COL) has been critical - support which I hope will continue in the ensuing years. However none of this will have been possible without the hard work of the current and the past members of the Faculty of Education and the leadership of OUSL. This is pioneering work, in many respects, and I hope that this initiative of the Faculty of Education will mark an important beginning and step in the right direction, and one that I hope other Faculties in OUSL will want to emulate. And I will wish them well in their efforts to transform OUSL and to usher it into a new era of a learner and learning centered education and where it is competitive with international standards.

The introductory chapter on ‘Engines of Education: Integrating OER in Learning and Teaching’ is particularly illuminating for anyone desiring to follow this path to teaching and learning and curriculum renewal. It has provided the Faculty members a pathway for moving forward.

The MATE Team of the Department of Secondary & Tertiary Education states that their target group is teachers and teacher educators, who are mostly mature learners, often observed to be reluctant in using new technologies and facing difficulties in the transition towards adoption of technology in teaching and learning. They state that “no one knew how to go about change, but everyone agreed a change was needed”. And they were placed in a very challenging situation. The outcome is the work done and is presented in this volume.

The story of the PGDSNE Team of Special Needs Education Department, titled ‘Silver Lines in Special Needs Education’ addresses how inclusive education can be brought under the framework. The Early Childhood and Primary Education academics have produced a chapter titled ‘Let’s Change Our Minds’ that shows their potential for taking up of the challenge of transition to integrate OER and ICT into their portfolios.

The MEd Team examines ‘Opening our world to Scenarios, OER and ICT’, as reflections on the Master of Education Degree Programme. The PGDE study group reflects on how a paradigm shift is taking place through this experience. Collectively the Faculty academics have taken a good coverage for analysis of the scenarios and to find their way of meeting the challenge of integration OER, ICT with the running programs in the range of Early Childhood Education to Masters in Education.
It is very encouraging to see that the Faculty of Education has taken the steering wheel for change. As an OUSL Council Member and an Education Expert who had been very much involved in the formulation of the Open University in early 1980s, I not only appreciate this initiative and the engagement, but certainly believe that if continued it will transform OUSL into an institution of international repute in the rapidly changing world of learning.

The work reported here adopted an innovative pedagogical approach in adopting a scenario-based learning approach that is meaningful and motivating for the learner. The stories of the experiences of the course in this book make for exciting reading and I will strongly recommend them to you.

Congratulations!!!
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Appendices

Appendix 1: Guidelines for Developing Concept Maps

Project on Integration of ICT and OER into Teacher Education programs and Capacity Building of Teacher Educators at the Open University of Sri Lanka

Guidelines for Developing Your Concept Maps

1. **KEY/RELATED CONCEPTS**....
   What are the key/focal concepts? And what are the related concepts. Have you identified all of these clearly?

2. **RELATIONSHIPS BETWEEN KEY AND RELATED CONCEPTS**....
   How do you see the relationships between key/focal and related concepts? Are these labelled clearly?

3. **LINKS AND CROSS LINKS**....
   Are the links and cross links between key/focal concepts and related concepts identified. Have you labelled these clearly?

4. **EXAMPLES**....
   These are specific events, objects and valid instances of the key/focal concepts represented on your concept map. Are these identified? And what are they?

*See Figure 1 below for an example of what these terms mean.*

![Figure 1. Features of concept maps.](image)

(Adapted from Novak & Gowin (1984, p. 37).)
Appendix 2: Guidelines for Writing Reflections

Project on Integration of ICT and OER into Teacher Education Programs and Capacity Building of Teacher Educators at the Open University of Sri Lanka

Guidelines for Writing Your Reflections

1. What are your current views on the following concepts and their relationships?
   - Open Learning
   - Open Scholarship
   - MOOCs
   - Creative Commons
   - Open Educational Resources
   - Open Educational Practices
   - Badges (Open Badges)
   - OER-Based eLearning and Teaching
   - Course Design for OER-based learning and teaching

2. Have your views about these concepts and the relationships among them, changed from your original perceptions (before two months), and if so, in your concept maps to show how?

3. What factors facilitated your thinking process (if any) around the above concepts?

4. What factors hindered your thinking process (if any) around the above concepts?

5. What is the relevance of OER in your teaching and learning?

6. What are your concerns (if any) about using OER in your teaching and learning?

7. How prepared are you to integrate OER in your teaching-learning process?
8. Provide a short reflection on your experiences up to now, on the course
design process you are currently engaged in.

   a. Your feelings - enjoyments, frustrations, motivations,
      concerns...etc
   b. Process – challenges, strengths, limitations, supports,
      hindrances...etc
   c. Progress – achieving targets, overcoming barriers, managing
      issues...etc.
   d. Impacts – capacity building, development of
      knowledge/skills/attitudes/mindset...etc
   e. Overall

9. Any other comments/suggestions:
Appendix 3: The Generic Evaluation Plan

Project on Integration of ICT and OER into Teacher Education Programs and Capacity Building of Teacher Educators at the Open University of Sri Lanka

A Generic Evaluation Plan for the Pilot Studies

(To be adopted/adapted by all Teams)

1. Evaluation Criteria

Key aspects of Evaluation:

a) Scenario-based Learning (SBL) pedagogical approach
b) Integration of Open Educational Resources (OER)
c) Online Learning Environment (OLE) as the mode of delivery

Criteria under which each aspect can be evaluated:

a) Nature of Adoption and Integration (How SBL/OER/OLE are applied in each course)
b) Usability (Nature of student use, Duration, Extent etc)
c) Effectiveness and Impact (What types and in which ways...etc)

2. Evaluation Methodology –
   a) Research Design - Case Study
   b) Participants – 10 – 20 student teachers/teacher educators

Methods of Data Collection –

a) *(To be selected from among the following, as appropriate, by each Team)*

i. Pre-survey - Questionnaire (Print/Online)
   
   • Focusing on Participants' background information and their initial perceptions on pedagogical approaches, use of teaching-learning resources and online learning
ii. Reflective Journal (Offline/Online) - To be updated regularly throughout the learning process

- Guidelines provided to focus participants' reflections on the above three aspects (SBL;OER;OLE) and related criteria

iii. Analysis of online participation

- Engagement in learning activities, Use of resources, Online Discussions, Interactions..etc

iv. Online Discussions with participants

v. Analysis of Assignments and Learning Activities completed by participants

vi. Post-survey - Questionnaire (Print/Online)

- Focusing on participants' perceptions on SBL, OER & OLE and related criteria, at the end of the process

vii. Semi-structured Interviews - Interview Schedule

- To gather further data from a selected sub-group

Methods of Data Analysis –

Mainly Qualitative analysis – Content Analysis – Coding/Categorizing

Could be supplemented with some basic quantitative data analysis too.

3. Time Frame and Activity Schedule –

October – November 2013 - Planning, Literature Review, Developing Instruments

November - 2013 – April/May 2014 - Implementation, Data Collection and Analysis

- Each Team will need to develop their own Activity Schedules.
4. Implementation Procedure

Each Team will select their participants and schedule activities according to their time frame. However, some common aspects should be adopted, as indicated below.

i. **An Orientation Workshop** (one-day) will be conducted for each set of student participants - Focusing on Introducing the specific Course, SBL approach, Online access in Moodle, OER, Learning activities and Assessment activities, their role...etc. (This is included and budgeted for in the Agreement)

ii. **Pre-Survey and Post Survey Questionnaires** can be common ones to all Teams - As we all are looking at the same Aspects/Criteria. We can have common sections and if necessary, specific sections related to different courses as well.

iii. A common framework can be used (based on the Aspects/Criteria identified) to analyse the **reflective journals/online participations/Online discussions/Learning Activities/Assessment Activities...etc.** in each course

iv. **Semi-structured Interviews** (again using a common schedule) can be conducted with selected participants of each course, in an **Pilot Study Evaluation workshop** at the end of the process

v. Once all Teams have collected and analysed data and prepare draft reports, the **Final Project Evaluation Workshop** will be held.
Integrating OER in Educational Practice: Practitioner Stories

This publication captures the experiences of members of the academic staff of the Faculty of Education on the integration of OER and ICT in its teacher education programmes. The contributions in the book emphasize the importance of changing mindsets of educators in the process of transforming traditional educational practices. I thank all contributors to the publication for extending their cooperation in bringing this book to fruition.

Vijitha Nanayakkara, Vice-Chancellor, OUSL

With a new OER policy being developed at OUSL, and on the back of this productive and a long-term COL-Faculty of Education collaboration, the scene is set for everyone at OUSL to take up the gauntlet for a transformative approach to curriculum renewal, and leadership in the integration of OER and ICT in promoting and supporting innovative pedagogy in its educational programmes.

Mohan Menon, Deputy Vice-Chancellor, WOU, Malaysia; Former Teacher Education Specialist/COL

A hallmark feature of the work that is reported here is its truly inclusive nature with all academics in the Faculty participating in the capacity building activities. Let’s hope that this initiative, a forerunner in many ways, will not remain an isolated activity of the Faculty, but will be able to be used to showcase and convince others to embark on similar journeys of their own.

Chandra Gunawardena, Former COL/UNESCO Chair-OUSSL, Founding Dean/Education, OUSL

The stories and experiences of all the five course teams so candidly related in this publication demonstrate, more than anything else, their ability to think outside the box and beyond conventional mindsets; a pervasive culture of introspection; continuously reflecting on their practices through a progressive concept mapping exercise; an ability to acquire the necessary skills; an overall interest in pedagogical innovation, and the capacity to act as change agents.

Uma Coomaraswamy, Honorary Fellow of COL, Former Vice-Chancellor, OUSL

The work reported in this publication is close to my heart and something that I have always hoped all academic programmes at OUSL will embrace formally. This is pioneering work, in many respects, and I hope that this initiative of the Faculty of Education will mark an important beginning and step in the right direction, and one that I hope other Faculties in OUSL will want to emulate.

Upali Sedere, Education Sector Specialist, Council Member, OUSL