ESP 2242: Essential Reading 1

Designing Learning Experiences

Introduction

Designing learning experiences is an integral part of any teaching-learning process.

Generally, quality assurance is targeted at the policies, practices and infrastructure of the institution and little emphasis is paid to teaching and learning experiences. If there is some attention being paid to teaching and learning, the emphasis is on the quality of teachers, their educational qualifications and training and the support they might be receiving rather than on the actual teaching and learning process. The focus should be on the quality of understanding the contents by students rather than quantity of information covered by teachers. A core indicator of quality assurance processes should be aimed at providing a rich and resourceful learning experience to students and helping students to achieve meaningful learning experience.

In order to bring about meaningful learning in students, teachers have to focus their attention on learning design and try to orchestrate the entire learning experience of the students and ensure that their learning is meaningful and motivating. In other words, teachers have to provide opportunities for students to bring about the kinds of situations that they are most likely to encounter in their real life situations and enable them to relate to the learning process.

Learning design refers to the orchestration and arrangement of students' learning experiences in a way in which the opportunities for learning are optimised (Naidu, 2004). There are individual differences of learning. We learn differently; use different learning strategies, approach the learning situation differently and have specific learning styles. However, that some approaches to learning are more productive, enjoyable and meaningful than others (Brown, Collins, & Duguid, 1989). Therefore as teachers we should be able to identify the most productive approaches to learning and should be able to provide opportunities for learning so that students would be able to construct meaning from their learning experiences.

We are more familiar with the teacher-centred approach where teacher delivers the content and the student passively listens to the teacher. In this instance, teacher is

the only source of knowledge and information. Even most of the books are written in a linear sequence of topics. In this approach, students are requested to go through a series of readings in a linear fashion and they are asked to write reports based on the readings which are written by others.

In most teaching-learning situations, the goal is to develop competencies in students. However, neither they are provided with opportunities nor exposed to bring their own experiences into the learning situations. How can students develop competencies without actually engaging in the learning situations?

Therefore, it is necessary to focus on the needs of the student from first contact with the study programme through the registration process, the course itself, learning, assessment, and also follow up and feedback. In a learner-centred approach students are entirely responsible for their learning and the teacher's role is to facilitate learning and provide opportunities for students to actively engage in the learning process.

In this reading you will be looking at the definition of learning experiences, factors that should be considered when designing learning experiences and some of the pedagogical designs used in designing learning.

Learning Experiences

In a teacher-centred approach, the teacher is the main source of information and takes the sole responsibility of "transferring knowledge". In this view, a teacher plans the teaching session and focuses on the method of delivery rather than giving opportunities for students to learn by themselves. With the constructivist view of learning, there is a shift from teacher-centred to student-centred learning where the teacher becomes a "facilitator" by preparing "leaning experiences" for students to learn meaningfully.

The term learning experiences encompasses all the various things learners will come into contact with during their learning process.

> *A course is a major learning experience that consists of a number of smaller experiences. Reading a textbook can be a learning experience; so can watching a film, taking a test, doing a written exercise, and performing a laboratory experiment. Even taking a final examination is a learning*

> *experience! Some learning experiences, such as lessons, are part of a formal programme; other valuable experiences, such as browsing round the appropriate shelves of a library or talking to fellow learners, may not be programmed at all.* (Hodgson 1993, pp 69).

Designing learning activities help teachers to structure what learners are required to do. It also includes preparing the “learning experiences” for their learners in order to help them to do the learning activities and to achieve the required learning outcomes. Designing learning experiences help teachers to be in a better position to present the subject matter content more meaningfully to their students. Designing learning experiences not only help teachers but also students to get an overview of the whole course so that they are able to participate actively in the learning process.

Figure 1 illustrates the learning experiences designed for this course; Teacher Educator as an Educational Technologist (ESP 2242).

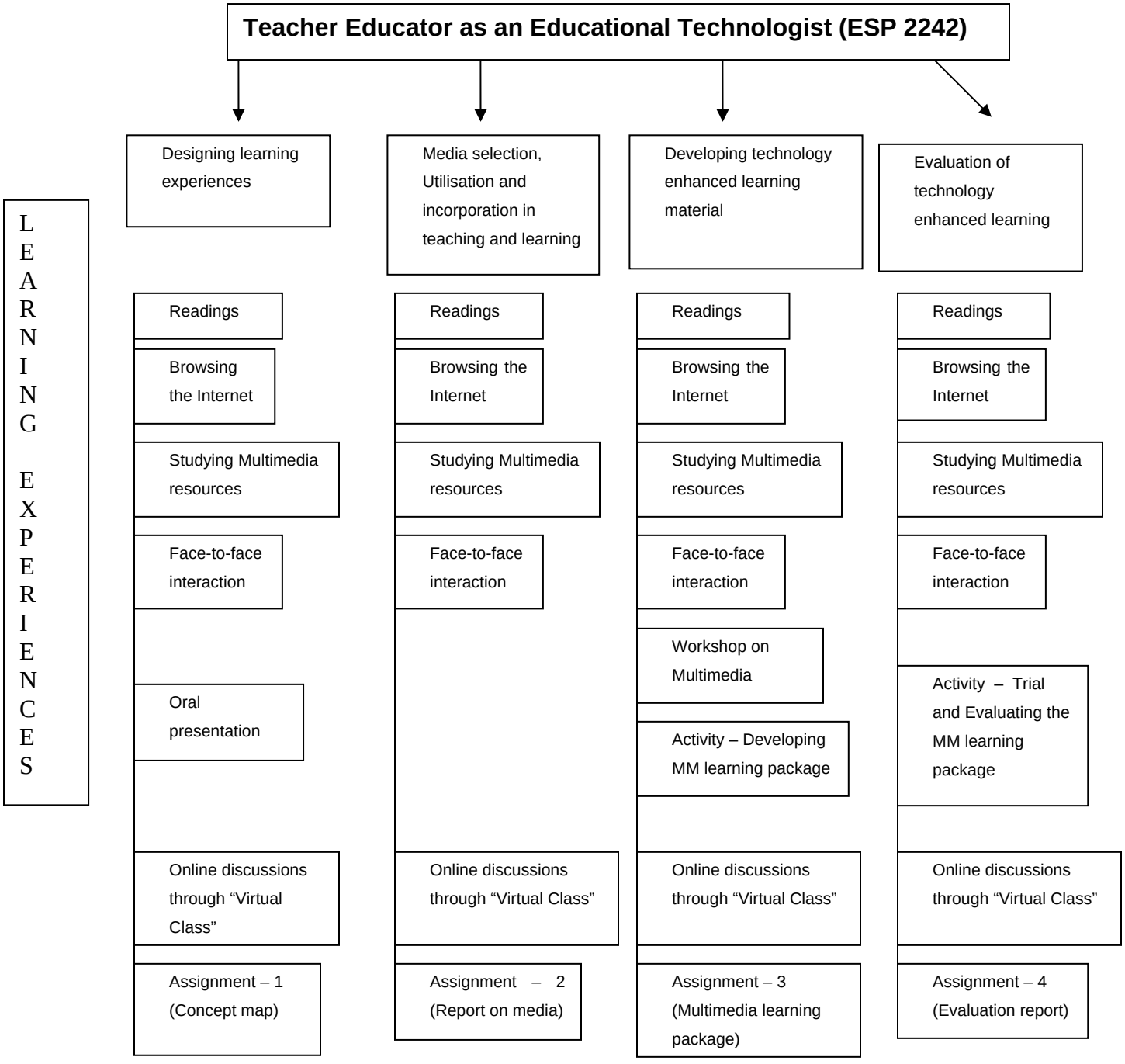

Figure 1: An example of "Learning experiences" (LE) provided for the course Teacher Educator as an Educational Technologist (ESP 2242).

Factors to be considered when designing learning experiences

Several factors should be considered when designing learning experiences. These are:

1. Nature of the target audience

Who will be your students? Without knowing adequate information of students, it is not possible to design an effective study programme.

According to Rowntree (1990, p. 39-40), you have to know their

Demographic factors such as,

- How many students?
- Age range?
- Gender?
- Marital status?
- Whether they are employed or not? If employed, their occupation?

Motivation factors such as,

- Why are they going to take this course?
- How is it related to their lives and their work?
- Why did they choose this particular mode of learning – conventional or open and distance learning?
- What do they want to get from the course? What are their hopes and fears?

Learning factors such as,

- How intelligent and capable are they as learners?
- Have they had any prior experience with learning “at a distance”?
- Prior level of general educational attainment?
- Attainment in whatever abilities will be needed in coping with your teaching?
- Do they have adequate time and facilities available for study?

Subject related factors such as,

- What knowledge, skills and attitudes do they already have regarding the subject of your course?
- Do they have personal interests and experiences that are relevant?

- What are their educational qualifications?
- What competencies are needed before starting the programme?.

In addition, Reddi & Mishra (2003, p. 22) have included the resource factors of learners as an additional factor in order to know about the target audience.

Resource factors such as,

- When, where and how will they be learning?
- Who will be paying their fees and expenses?
- How much time will they have for the programme?
- What access do they have to media/facilities?
- What access will the have to human support – counselors, other learners?.

2. Nature of the subject

- What is the subject area?
- Whether it is a practical based course or a language course?

Learning experiences should be designed in such way to suit the subject area.

3. Aims and Objectives of the course

It is important to start thinking about aims and objectives of the course as early as possible in the process of planning a course and expect to revise them from time to time as your planning proceeds.

These objectives should help you in four main ways:

- Communication – objectives can help make clear your educational intentions – to yourself, to colleagues and eventually, to the students.
- Content and sequence – objectives can help you to distinguish between possible and essential content and to identify ways of sequencing it.
- Media and methods – objectives can help you decide on the most appropriate teaching media and the most appropriate learning

activities

- Assessment and evaluation – objectives can help you decide on suitable ways of testing students – whether they have gained knowledge from the course and of evaluating the effects and effectiveness of your materials (Rowntree, 1990, pp 46-47).

4. Deciding and sequencing the content

What are the main topics, concepts and principles to be covered in your course? Subject-oriented approaches, learner-centred approaches, concept analysis and visual representations such as concept maps are some of the useful approaches in deciding and sequencing content. Concept mapping is not only used as a sequencing device but could also be used as an evaluation tool to identify the gaps of "misunderstanding" among students. (Refer Additional Reading 1 for more information on Concept Mapping.)

5. Teaching methods and media

What are the appropriate teaching methods and media to teach this particular subject?

Bates (2000, p. 200-201) identifies the following set of factors that can be used for selecting educational media technology (ACTIONS Model).

A=Access and Flexibly

- How accessible is the technology for the intended group of learners?
- How flexible is it for a particular group

C=Costs

- What is the cost of the technology and the unit cost per learner?
- How do costs differ between technologies within a particular context?

T=Teaching and Learning

- What kinds of learning are needed?
- What instructional approaches will best meet these needs?
- What are the best technologies for supporting teaching and learning?

I = Interactivity and User-Friendliness

- What kind of student interaction does this technology enable?
- How easy is the technology to use?

O = Organizational Issues

- What are the organizational requirements and the barriers to be removed before this technology can be used successfully?
- What changes in organization need to be made?

N = Novelty

- How new is this technology? How reliable is it?
- How will this technology contribute to institutional renewal

S = Speed

- How quickly can courses be mounted with this technology?
- How quickly can materials be changed?

This Model gives an overview of the factors that have to be considered when selecting media for teaching. However, the most crucial determining factors especially in developing countries are the availability, access and cost of media. If the selected media is not accessible then it is not worth considering to integrate in the teaching process even though it is a very effective medium.

6. Assessment criteria

- What are the assessment criteria for the overall course?
- What are the appropriate ways of assessing students on each lesson, within this overall strategy?
- What knowledge, skills and attitudes will be assessed?
- At what points in the course will they be assessed? Will the assessments “counts” towards any form of certification?
- What kind of feedback will learners be given as a result of assessment?

The next section of this reading will discuss how learning experiences can be integrated into learning designs. The following experience-based pedagogical designs provide opportunities for students to explore and bring their personal learning experiences into learning process and help them to engage in meaningful learning.

Some Pedagogical Designs used in Designing Learning

People always think in terms of experience and stories. They tend to understand new events and problems referencing to previously understood experiences and stories. This notion is in agreement with Ausubel (1963) who stated that to achieve meaningful learning, student should be able to link new learning concepts with prior and existing knowledge he already has.

Ip & Naidu (2001) refer to first-hand (first-person) experience as “experience” and third-hand (third-person) experience as a “story”. According to them first-hand-experience-based designs are learning environments that provide a safe and authentic environment for learners for thinking, reflection, decision-making, making mistakes and learning from their own experience. Role-play simulation and rule-based simulation are two examples for first-hand-experience-based designs. In role-play simulations, learners take up roles or take stories from other people and present as their own experiences. In rule-based simulations, learners directly input variables and observe the resulting changes in values as output variables.

Third-person-experience-based designs are learning environments that make extensive use of real-life stories to support the learning and teaching process. Both these designs are grounded in the belief that experience and stories comprise not only the most authentic repository of knowledge but also serve as a strong motivator of learning.

There are many experienced-based pedagogical designs used in designing learning. However this reading will focus only on three major designs; Goal-Based (Scenario-Based) Learning, Problem-Based Learning and Case Study-Based Teaching and Learning.

Goal-Based (Scenario-Based) Learning

Goal-based scenarios (GBS) are simulations in which there is a problem to solve, or a mission or task to complete (Schank, 1997; 1990). It serves to motivate learners and give them opportunity to "learn by doing" by making mistakes, and receiving feedback. The intention of goal-based scenarios is to provide authentic scenario for students which offer them an opportunity to learn by making mistakes in a safe environment (Naidu, Oliver & Koronios, 1999). The actions of the learner are not scrutinized by peers and any mistake made by the learner will not result in a degradation of their assessment of learning.

Generally, goal-based learning comprises of a scenario or context where a convincing problem is created as a story. Learners are supported by stories presented by actors within the scenario. The goal of the students is to solve the problem or to complete the task considering their own experiences. In order to achieve the goal the students need to acquire particular skills and knowledge and make informed decisions.

The targeted learning outcomes are skills needed to accomplish the goals. GBSs afford learners' to use both first hand experience (their own experiences) and third hand experience (experience of expert practitioners). The learners will be able to make decisions based on their experiences as well as experts' experiences. Detailed explanation of goal-based scenario is illustrated in Table 1.

Table 1: Clinical Decision Making in Nursing: A Goal-Based Scenario

Clinical Decision Making in Nursing A Goal-Based Scenario		
• Goal: The "goal" for the learner in this simulation is to deal with a crisis and develop an action plan for managing the patient's situation.		
Phase 1: Case Encounter		
• Learners encounter the case at handover where they are explained its history and pathology.		
Phase II: Understanding Problem		
Precipitating event	**Identifying its causes**	**Managing the crisis**
Learner encounters the precipitating event.	Learner seeks to locate the causes of the precipitating event.	Learner attempts to deal with the crisis and contain it.
Phase III: Seeking Solutions		
Making decisions	**Listening to stories**	**Case-based reasoning**
Learners are required to make decisions about patient care.	They listen to experts and ask questions about their experiences.	Learners attempt to reason based on the experts' stories.
Phase IV: At the Case Conference		
Raising issues	**Listening to stories**	**Developing care plan**
Learners explore new and related issues to the problem by reviewing sources of information.	They ask experts additional questions about their experiences.	Learners develop their final care plan based on experts' stories.
Phase V: Developing a Care Plan		
• Learners submit their care plan to the supervisor and receive feedback on their decision-making.		

(Source: Naidu, 2003, pp 31).

Problem-Based Learning

Problem-based learning (PBL) approach is commonly used in teaching and learning process. The students are presented with an instructional problem and the goal of the students is to solve this problem based on their own experiences.

Distributed problem-based learning refers to the use of problem-based learning in a networked computer-supported collaborative learning and teaching environment (Naidu, 2003, pp 6). In this situation, face-to-face communication among participants is not necessary.

The process starts with the presentation of a problem. Next, the problem analysis stage where students work individually to find explanations for the occurrence of this problem. Based on this exercise, students identify what they know and do not know

about the problem at hand and make decisions to carry out individual research. Later students report their findings to the group. Re-evaluation of the problem takes place from the feedback from all students and possible revision of first perceptions of the problem. In distributed problem-based learning all these activities could be possible via the collaborative learning network. In addition, students can prepare and present the "critical reflection record" synthesizing the discussions that has taken place on the collaborative learning environment.

Table 2 illustrates the stages of the distributed problem-based learning which takes place mostly in an electronic environment.

Table 2: Distributed Problem-Based Learning

<table>
<tr><th colspan="4">Distributed Problem-Based Learning</th></tr>
<tr><th colspan="4">Presenting the problem</th></tr>
<tr><td colspan="4">Outline the problem situation and its attributes.
Describe the learning process, and define the learning task.</td></tr>
<tr><th colspan="4">Participants post their first perceptions of the problem</th></tr>
<tr><th>Issues</th><th>Hypotheses</th><th>Method</th><th>Data</th></tr>
<tr><td>Learners articulate their first perceptions of the problem</td><td>Learners state their conjectures about the problem</td><td>Learners identify and choose data collection strategy</td><td>Learners gather data and share this with their peers</td></tr>
<tr><th colspan="4">Participants explore the problem and their first perceptions</th></tr>
<tr><th>Issues</th><th>Hypotheses</th><th>Method</th><th>Data</th></tr>
<tr><td>Learners explain and justify their first perceptions</td><td>Learners expand and focus their conjectures</td><td>Learners agree to revise their action plan if necessary</td><td>Learners gather additional data, and share with peers</td></tr>
<tr><th colspan="4">Participants may revise their first perceptions of the problem</th></tr>
<tr><th>Issues</th><th>Hypotheses</th><th>Method</th><th>Data</th></tr>
<tr><td>Learners identify any new or related issues to problem</td><td>Learners revise their conjectures re: the problems</td><td>Learners make adjustments to their action plan</td><td>Learners gather additional data and share with peers</td></tr>
<tr><th colspan="4">Participants prepare and post a critical reflection record</th></tr>
<tr><td colspan="4">In this last phase learners present a "critical reflection record" which synthesizes the discussion that has taken place on the collaborative learning environment. This is more than a record of what transpired and reflects each person's understandings of the problem.</td></tr>
</table>

(Source: Naidu, 2003, pp 27).

Case Study-Based Teaching and Learning

Teaching a case is a story about the “real world” or actual events told with a definite educational purpose in mind. Using a case in teaching is a way of bringing the real world into a classroom so that students can “practice” on actual or realistic issues and incidences under the guidance of the teacher. It provides more opportunities for students to have discussions, exchange of ideas, knowledge, and experience among participants than the conventional lectures (Lynn, 1996; Rangan, 1995).

Selection of appropriate case studies is the most important criteria in running an effective case study method as students can get ideas from these case studies, understanding of issues and constructs that can be applied in other novel situations.

Cases are generally third-hand experiences. Discussions and debates help students to transfer such third-hand experiences into students’ own first-hand experience. In case-based learning, students are directly confronting their peers about their position or articulation of the situation in a suitable friendly supportive environment (Naidu, 2003). This method can provide a very stimulating environment to learners.

The main design features of the goal-based learning, distributed problem-based learning and case study based teaching and learning are summarized in Table 3.

Table 3 – A summary of design features of pedagogical designs

Type of Design	Goal-based Learning	Distributed Problem-based Learning	Case Study-based teaching and learning
Key features	• Goal-based scenarios • Learning by doing	Problem solving with a task structure to support computer mediated problem solving	Cases to study and analyse by students
Source of Experience	Third hand experience based stories by actor in the scenario	Third hand experience based problem via a case or vignette. First hand experience among the learners	Third hand based stories – describing, or based on actual events
Role of Experience	Used to enable learners to make an informed judgement on action that is required.	Utilization of learners experience to solve a problem and learn new thing during the process	Focal point of debate, discussion and analysis
Nature of support	None required	Peer support in a structured sequence	Peers: debates, discussion and analysis

(Source: Ip & Naidu, 2001).

You may have noticed that there are some similarities in all three approaches. For instance; problem solving is the main goal in all three approaches. However, the approach used in presenting the problem is different. The problem is directly stated in Problem-based learning approach whereas in Goal-based (scenario-based) learning approach, the problem is articulated within a scenario. In a case study approach, the problem is presented as real events or cases. You may refer Ip and Naidu (2001) for more information.

Summary

In order to bring about meaningful learning in students, teachers have to provide opportunities for students to bring about their real life situations into teaching and learning process. As a result, students' learning experiences become meaningful and motivating. Therefore designing learning experiences play an integral part of any teaching-learning process. Providing various tasks or "learning experiences" which are based on students real life situations help them to actively participate in the learning process and help them to learn more meaningfully thereby acquiring a deeper understanding of the subject content.

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