

# Project Development Roadmap

## Background

The project learning design and development process that we are developing and currently using comprises one overall project which is divided into 3 sub-projects. The overall project is the SLENZ project in which we are working on three sub-projects each with a specific purpose.

These three sub-projects are :

1. Orientation Activities
2. Foundation for Living
3. Midwifery

Each sub-project is treated as a project in its own right (and referred to as such) although there are some cross-overs between them. The first project was identified by the SLENZ team as a necessary element of the overall SLENZ project to provide for the orientation of both staff and students into Second Life. The second and third projects were initiated by initial formal proposals from educator teams who responded to the Request for Proposals. Introductory thinking of both the latter projects is contained in this proposal document.

At the face-to-face workshop held in December 2008, a decision was made to use a staged design and development process for all three projects, with three separate stages for each over the period January to July 2009. Specific objectives tied to specific learning outcomes were agreed for the second and third projects. The rationale for this staged approach was to ensure that each project would be able to at least provide some activity that could be trialled with students in the second half of 2009. None of us has been through this process before so we need to manage the risk inherent in uncertain time and resource estimates.

A framework or 'roadmap' was constructed for the design and development of each sub-project that could be used in either a staged or a single process.

## Principles of the framework

There are a number of principles which underly the framework.

1. Each phase of the framework would consist of a variety of activities and conversations to develop and refine the thinking and the definition of the necessary information.
2. Each phase of the framework would produce one or more documents which act as a formal conduit for the information that needs to be passed from one phase to the next and from one team member or team to the next.
3. The conduct of each phase and the completion of any documents would be the responsibility of an identified role in the team. However, all team members are encouraged to participate and to comment on and add to the work at any stage.
4. That the purpose of the framework is twofold
  - a) to provide the opportunity for a comprehensive approach to the design of suitable and feasible learning experiences for the identified learners, and

b) to provide a formal record of the summary of the thinking, the requirements and the design of each experience (both from an educational and a technical perspective) .

5. While the design and development activities may go through a number of iterations, the thinking may change direction a number of times and a number of different communication channels may be used. At the end of a phase, the thinking and decisions to date are summarised and clearly and unambiguously recorded in the relevant document.

6. The information captured in the end of phase document will form the basis for the work of the following phase.

7. Information should only need to be articulated once - although additional details from the further development of high level views are likely to be needed.

## The Framework.

We considered that essentially the initial design and development of a project lent itself to three major phases. Each stage of each project would progress through all of the phases. However, as each stage would be building on the work of the previous one, some of the previous thinking and work would be reused. There will be further phases including testing and evaluation of the completed activity (still to be added).

## The Roles

We identified various roles within the framework, each with their own area of responsibility. These are:

- **Project Leader:** responsible for the overall management of the project
- **Phase Leader:** responsible for the management and coordination of a phase
- **Learning Designer:** responsible for coordinating the work of those designing the educational experience
- **Lead Developer:** responsible for coordinating the work of those developing Second Life artefacts
- **Lead Educator:** responsible for coordinating the work of those who will be delivering the learning experience

# The Phases

## 1. Develop the Conceptual Understanding (Who?, When?, Why?)

### **Purpose:**

This phase provides a high level view of **what the the project should achieve and why**, the scope, the context, the participants, the method, the budget and the timeframe. It may also include the measures by which success may be evaluated. In general it answers questions of the nature of - what is the general purpose of the project, who will be involved, why are we doing it etc. This phase is the basis for all the stages and helps to identify what those stages will be, however it will be re-visited at the start of each new stage to confirm that all contextual information is in place for the stage.

**Phase Leader:** Lead Educator

### **Suggested activities:**

The activities for this phase are concerned with capturing the views of a number of external stakeholders (students, staff, institution, external bodies etc.) as well as prompting thought and discussion on what the overall learning experience is intended to achieve and for whom. Any method may be used to capture this information but the following are current suggestions:

- Blog postings to put forward ideas and to collect comments from others
- An audio recording of a meeting between staff (and students?) talking about their context
- Use voicethread.com, video conferencing or face to face meetings

The result of these conversations need to be summarised and the essential information captured. It is preferable that this summary takes the form of a document that can be readily shared by all interested parties. Where a formal proposal has been written, the information within it should also be included.

### **Required information:**

- The rationale behind the proposed learning experience
- The rationale behind using Second Life as all or part of the proposed learning experience
- Identification and description of type (level etc) of students who are the target for the proposed learning experience
- Identification of stakeholders and their thinking on the proposed learning experience
- Identification of the learning outcomes covered by the proposed learning experience and the courses that they sit within
- Description (general) of the learning outcomes
- Identification of the staff who will contribute to the development of resources, including Lead Educator
- Identification of the staff who will be involved with the delivery of the proposed learning experience
- Identification of the training needs of such staff
- Identification of important dates within the proposed development of the learning experience (e.g. date for final delivery, date for final testing, dates for end of stages etc.)
- Identification of probable resource need (e.g. land in SL, time for design of the learning activities, time for the design and construction of the relevant resources etc.)
- Identification of any potential obstacles to the successful delivery of the proposed learning experience
- Identification and initial description of the stages in which the development will be built (if appropriate).

**Final Document:** Context Summary Document

This document is intended to act as a brief record of the work undertaken within this phase. It should be as succinct as possible. The items bulleted under 'required information' could act as a heading structure for the document. Under each heading would appear the final outcome of the conversations that have taken place. Some of this content would also have been collected from the formal proposal.

## 2. Develop the Learning Narrative (What?)

### **Purpose:**

This phase deals with the **design of the learning experience** and the activities that it contains. This phase will be repeated for each stage of the project and identify where it is building on work from the previous stage.

Building on the work of the previous phase and using the Context Summary as a base, this phase will identify and describe, in some detail, the actual learning activities that will take place in support of the specified learning outcomes. One major purpose of this is to identify the resources that will be required.

The phase is mostly concerned with identifying what will happen and to some extent how it will happen. The phase will help to identify all the resources that are required to construct the activities required by the learning experience. This will include resources such as lesson plans, online student material, video etc as well as, in general terms, the items that are required within Second Life, for example: a birthing unit, an interview room etc..

It primarily answers the questions around 'What will this learning activity require?' and collects all relevant information about the content of the activity. It describes what the students and the educators will do, how they will interact and how the students will be supported. From this description, a list of necessary resources can be derived. At this stage the resources may just be identified and listed but not described in significant detail.

**Phase Leader:** Learning Designer

**Suggested activities:** This section needs completion

### **Required information:**

The phase needs to capture the following information for the stage under consideration :

- a comprehensive list of the resources that will be required by the learning activity.
- a description of the preferred form for those resources (e.g. SL activity, video, lesson plan on a wiki etc..)
- a description of how the resources will be used (i.e. who will interact with them and in what manner)
- a description of how the resources will interact with each other (e.g. this object will provide this information, i.e. the "Bowl of Fruit" will provide information on nutrition during normal labour)
- identification of existing resources that will be used (or re-used) (e.g. the water pool from stage 1 now requires an animation).
- identification of source for non-SL resources (e.g. wiki content to be created by Lead Educator, 2 minutes of machinima on construction of birthing unit required from SL team for the video etc...)

**Final Document:** Learning Design Document

Once again the bulleted list of required information will provide the structure and headings for the final document.

We need to remember (and capture the information about) that at times external resource builders will need to provide content to the SL developers (e.g. content of notecards) and vice versa, e.g. SL snapshots or machinima.

### 3. Develop and Implement the Technical Design (How?)

#### **Purpose:**

This phase deals with the **design of all the resources** required by the learning activities of the stage both those in and out of Second Life. This phase will be repeated for each stage of the project and identify where it is building on work from the previous stage.

The purpose for this phase is to ensure that all resources needed to create the learning experience are identified, designed effectively and constructed. Based on the learning activity or activities identified in the Develop the Learning Narrative phase, and on the list of required resources derived from that, this phase is primarily concerned with the questions around 'How will we fulfill these requirements?' and documents the final answers to those questions. It thus considers the design of all the resources that are required for the final construction both those that will be built in SL and those that won't.

**Phase Leader:** Lead Developer

#### **Suggested activities:**

- Identify the list of all elements from the Learning Design document that will be constructed in SL
- Identify the components of those elements (initially at high level only)
- Identify where content is required from outside of the SL development team
- Identify elements that already exist and/or which need a) construction b) adaptation c) additions
- Identify technical aspects of the build that need to be investigated (e.g. the need for a server service to stream live video/audio, need for a host for reliable storage of video to display (YouTube or ?) etc..)

Although the responsibility of the development team, the identification of the necessary resources will need on-going discussion with the Learning Designer and Lead Educator to determine the exact nature of the resources (e.g. which texture to use for external walls)

#### **Required information:**

The following list will be constructed as the technical design and build progresses.

- comprehensive list of all elements
- detail of interaction between human and constructed element
- detail of interaction between elements
- naming standard/convention used
- versions
- back up information (where, when and how to retrieve)
- comprehensive list of all 'global' atoms used (e.g. scripts to report on content of elements, textures used across elements and/or projects)

**Final Document(s):** Technical Design Specification, External Resource Specification

The Technical Design Specification will begin as a working document that initially lists the high level components identified as required in the previous phase (e.g. birthing unit). Following any conversations to clarify what is needed, the construction work and the on-going documentation of the various elements, sub-elements and atoms begins and is recorded as the construction progresses.

The final version of the working document is the eventual Technical Design Specification document and should act as a comprehensive record of everything that has been built in SL. The eventual number of atoms is likely to run into thousands (even without considering versions) and many of which will need to be identified and identifiable.

The details of the External Resource Specification has not yet been finalised.

## **SUMMARY**

### **Project Development Roadmap**

<b>Generic Project Phase</b>	<b>Process and Documents</b>	<b>Primarily Responsible?</b>	<b>Project level or for each Stage?</b>
<b>Develop Conceptual Understanding (Why? Who?) (When?)</b>	Context Summary document	Lead Educator	Project level and revisited for each stage
<b>Develop Learning Narratives (What?)</b>	Learning Design Document	Learning Designer	Each Stage
<b>Develop the Technical Design (How?)</b>	Technical Design Specification External Resource Specification	Lead Developer  Lead Educator ?	Each Stage

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### ***Vocabulary***

**PHASE** is used to distinguish the different activities of the development process.

**STAGE** is used to distinguish between the different parts of a particular project, i.e. staged development. The first set of activities to be developed stage 1 and so on.

The 'Develop the Conceptual Understanding' phase produces the **CONTEXT** document.

The 'Develop Learning Narratives' phase produces the **LEARNING DESIGN** document.

The 'Develop the Technical Design' phase produces two documents,

- the **TECHNICAL DESIGN SPECIFICATION** document, and
- the **EXTERNAL RESOURCE SPECIFICATION** document.

This roadmap is not yet complete and represents the work and thinking of the entire SLENZ project team to date.

Please feel free to comment on this document. The project team welcomes all feedback

**SLENZ Project Team, March 2009**