Prototype Web Site Development Application Report
Task: creating an E-Learning Website

Overview of Scope
(requires research, defining site requirements and responsibilities)

1. What makes it unique? What will it offer that other sites do not?
   Subject Area Knowledge (tutoring):
   - Allow students who have either missed, or don't understand a particular subject. They can brush up on an entire semester, or gain enough knowledge to skip a prerequisite.

   - Prepare older workers who have been laid off to enter the workforce with specific in-demand skills that they might be expected to know,

   - Help transitioning workers who are moving to a new job understand how specific applications compare to the applications they have been using. (usually a lateral transition)

   Employer Resource:
   - Help employers extend employee knowledge to match the changing needs of the company. Possibly set up custom courses related to that employer's specific requirements.

   - Support employees as they take on additional roles and responsibilities. Give employees the type of training that will allow them to function well in any environment. (create generalist/troubleshooter)

   - Allow employers to create a workforce "knowledge base" among their employees. Create a virtual "on demand" educational model that can move quickly.

   - Offer a "site license" for employers who sign up for a certain level of courses a month/year?

   - Keep ahead of most accredited schools by covering technologies, practices and policies too new for academic programs and curricula. (I can give you quite a number of these where there are students unable to find courses, or the courses taught are 4-5 years behind what businesses are using)

2. Is the scope of the project in line with expectations?
   - After we thoroughly examine the programs and reach a decision we will have a better idea of this. I see a phased implementation. We will lay out a timeline when we have chosen an application. I feel I have narrowed it down to 2-3 different programs.

3. What roles are necessary?
   Technical Role will:
   - Choose, customize and configure an e-learning application that most closely meets our requirements. This is by far the most difficult and time-consuming task. I have performed the task with other applications similar to these types of programs, but each set of requirements and each application creates its own challenges.

   - Install and host the program, track site statistics, set up the databases and interact with Internet Service Provider with any questions/problems.

   - Identify, install and configure additional modules for application as they become necessary. Maintain website's core functionality, create backups, archive inactive data.

   - Configure simple online payment system that will report to financial officer.

   Creative Role will:
   - With input from group, create graphics, style sheets, layouts, templates and the overall look and feel that will carry through the entire website.

- Create Brand Identity. Position company within niche market. Create press releases and suggest marketing partners. Write and produce marketing materials.

- Work with team to construct a comprehensive marketing plan covering all media. Help identify key markets.

Educational Role will:

- Identify educational needs that are not being addressed, suggest courses and help create online offerings.

- Offer unique hybrid tech/business/marketing courses (already in demand) and suggest strategy for "owning" the market.

- Participate in initiatives.

4. Phase 1.
   We can only plan Phase 1 at this time. We can address compensation for a phase once we have a timeline or task list. Phase 1 items marked with * will need to be discussed in detail.
   - Phase 1a: Identify application that comes closest to requirements and ascertain that modules are available to give us the functionality we need. (demo the program(s) we are considering and determine support available)*

   - Phase 1b: Download program, install onto server, link to database and test functionality.

   - Phase 1c: Test the environment - see what the standard configuration looks like. Compare that to the list of requirements. Determine what needs to be done and create a new task list based on the program's current state. i.e. Define subset -- minimum configuration necessary to begin operations.*

   - Phase 1d: Assess potential problems, create realistic timeline.

     i. Time required to configure application depends on program chosen and requirements necessary. Define what basic configuration should be.*

     ii. Time necessary to build out site depends on features and navigational elements

   - Phase 1e: Discuss look & feel of entire website, create graphics and icons. Site Map/Layout of how students should move through the website.*

Comparing Client Requirements to Available Programs

1. Your Requirements:
   a. The system needs to have two modes: Student Mode and Author (manager) Mode.
   b. Author (manager) mode, the instructor should be able to create lectures, assignments (as exams and quizzes), set up the Grade Book to keep track of students scores, change the schedules for taking the assignments,
   c. In the Author (manager) mode, the instructor should be able to create assignments as Multiple Choice or True/False format questions. As many as five hundred questions may be needed in each assignment.
   d. In the Student mode, students should be able to see the lectures as a document (Microsoft Word) or Power Point slides, take their assignments (quizzes, and exams) online, and see their grades in the Grade Book.
   e. The system should be able to send e-mails to students (all or individual).
   f. The Grade Book needs to hold students' names, and their grades for different assignments.
   g. In the Author (manager) mode, a Math editor is needed to create questions that contain equations or special symbols.

2. Identify application that comes closest to requirements and ascertain that modules are available to give us the functionality we need. (demo the program(s) we are considering and determine support available)
   a. EFRONT http://www.efrontlearning.net/
      - **Student Mode and Author (manager) Mode**   **Yes**

      eFront supports three basic types of users: Student, Professor and Administrator. You can customize user.

      - **lectures, assignments, Grade Book, scheduling**   **Maybe**

      eFront informs and guide the user regarding his current position inside a lesson and what he needs to do to complete it. The course management is done through the Administration's interface. It involves the management of lessons, the logical organization of lessons to categories and the bundling of several lessons as a course. It also involves the assignments of users to lessons and courses. You can create projects with deadlines and assign them to users. The user must upload a file as answer to the project and the tutor can access it and give him a grade.

      - **create assignments as Multiple Choice or True/False**   **Yes**

      eFront has an advanced internal test builder that supports several types of tests and a wide range of question types. All questions are stored to a central pull and can be used in different tests.

      - **students see lectures as a document, assignments**   **Yes**

      You can control who should see what and in what order. This way you can guide the users using certain learning paths.. eFront includes an advanced file manager that allows you to upload, preview, share, zip, rename and delete files.

      - **send e-mails to students**   **Yes**

      This module allows users' to send e-mails directly to their students/professors from lesson's control panel.

      - **Grade Book**   **Yes**

      The Gradebook module provides complete handling of students' grades. In a nutshell, professors can determine which lesson's objects (e.g tests, projects, etc.) affect the overall grade of a particular student. On the other side, students can observe their grades per lesson and understand the way these grades are calculated by each professor.

- **Math editor**   **No**

Modules allows you to extend the basic system functionality as needed. Modules are installed and activated through the administrator interface.

NOTES: Community edition is open source. Go to http://www.efrontlearning.net/product/functionality-matrix for list of what is available.

They just added paypal integration

b. Moodle http://moodle.org/
- **Student Mode and Author (manager) Mode**   **Yes**

Course creator can create courses, teach in them, and assign others to teacher roles.

Teachers are a role in a specific course. Typically, a teacher has full control over all settings for a course.

Non-editing teacher roles are available for adjuncts, and part-time tutors.

Students can participate and view activities but not create them
- **lectures, assignments, Grade Book, scheduling**   **Yes**

Flexible array of course activities - Forums, Quizzes, Glossaries, Resources, Choices, Surveys, Assignments, Chats, Workshops
- **create assignments as Multiple Choice or True/False**   **Yes**

The Quiz activity module (http://docs.moodle.org/en/Quiz_module) allows the teacher to design and set quizzes consisting of a large variety of Question types, including multiple choice, true-false, and short answer questions. These questions are kept in the Question bank and can be re-used in multiple quizzes. Quizzes can be configured to allow multiple attempts. Each attempt is automatically marked, and the teacher can choose whether to give feedback and/or show the correct answers.
- **students see lectures as a document, assignments**   **Yes**

Students can submit any digital content (files), including, for example, word-processed documents, spreadsheets, images, audio and video clips. Assignments don't necessarily have to consist of file uploads. Alternatively, teachers can ask students to type directly into Moodle using an online text assignment. Lesson module: http://docs.moodle.org/en/Adding/editing_a_lesson
- **send e-mails to students**   **Yes**

Mail integration - copies of forum posts, teacher feedback etc can be mailed in HTML or plain text. Users can set a preference for daily emails in their profile.
- **Grade Book**   **Yes**

All grades for Forums, Quizzes and Assignments can be viewed on one page (and downloaded as a spreadsheet file) in a Gradebook.
- **Math editor**   **Maybe**

There are hundreds of modules listed at http://moodle.org/mod/data/view.php?id=6009

Drag and Drop Equation Editor, Include math equations and advanced calculator in your text. Based on MathML., jsMath filter for processing mathematical notation.

The **Authorize.net** module allows you to set up paid courses by merchants.

c. ILIAS   http://www.ilias.de/docu/   (confusing)
- **Student Mode and Author (manager) Mode**   **Sorta**

Learning groups, working groups or groups for certain fields of interest could be constructed.
Users can create groups that are open for everyone or have specially defined access restrictions. Other users can be invited or get access with a password. All necessary tools for the administration of group members and resources are part of the system.

- **lectures, assignments, Grade Book, scheduling**   Maybe

e-learning content is not only offered in courses as often seen in other LMS. All available resources for learning and working like learning modules, SCORM modules, wikis, discussions forums, files or working groups are stored in the repository. Of course, you find there courses as well. While the Personal Desktop is your private workspace in ILIAS, the repository is your e-learning library where you find everything that could be interesting for your e-learning session.

- **create assignments as Multiple Choice or True/False**   Yes

ILIAS offers an integrated environment for the creation and enforcement of tests & assessments. This can be used for the monitoring of learning progress by the users as well as the tutors and examiners.

- **students see lectures as a document, assignments**   Yes

ILIAS offers different possibilities of importing and creating content for e-learning. Therefore, ILIAS is more then a course player. It is a platform for creating and publishing content.

- **send e-mails to students**   Yes
- **Grade Book**   Maybe

All results of tests and questions are exportable in formats of excel or CSV.

- **Math editor**   Maybe

d. Sakai http://sakaiproject.org/   (configuration and instructions look pretty funky!)
- **Student Mode and Author (manager) Mode**   Yes
- **lectures, assignments, Grade Book, scheduling**   Yes
- **create assignments as Multiple Choice or True/False**   Yes

Tests & Quizzes: Create and manage online assessments

- **students see lectures as a document, assignments**   Yes

Lesson Builder: Create and publish online learning sequences. **Assignments**: Create and grade online or offline assignments.

- **send e-mails to students**   Yes
- **Grade Book**   Yes

Gradebook: Calculate, store and distribute grade information to students

- **Math editor**   Yes   Maybe   No

Sakai is distributed as free and open source software under the Educational Community License.

Looked at the configuration instructions and it looks pretty funky.

e. OLAT http://www.olat.org/website/en/html/index.html (more for a collaborative learning environment than for a teacher/student setup)
- **Student Mode and Author (manager) Mode**   Maybe
- **lectures, assignments, Grade Book, scheduling**   Maybe

Course editor: create your course using OLAT course elements
Group management: manage your learners,
Rights management: grant specific users access to course tools
Assessment tool: assess your learners

- **create assignments as Multiple Choice or True/False**   **Yes**

- **students see lectures as a document, assignments**   **Yes**

  Tests (with scores) and self-tests (anonymous, no scores) based on QTI 1.2 standard
  Questionnaire for course evaluations

- **send e-mails to students**   **Yes**

- **Grade Book**   **Maybe**

- **Math editor**   **Yes   Maybe   No**