Info102: Team Assignment

Assignment title:

- ***The Development of a University Teaching and Learning System for the 21st Century***

The Book Chapters

In the course we have covered (or will cover) the following chapter in Wallace (the course textbook):

- Chapter Two: Information systems and strategy
- Chapter Nine: Knowledge management and e-learning
- Chapter Ten: Ethics, privacy, and security
- Chapter Eleven: Systems development and security

In the Wallace (course textbook) there is chapter we have not covered:

- Chapter Twelve: Project management and strategic planning

In this team assignment your (team) solution (as presented in your report and presentation) will:

- Involve components, elements, and factors as discussed in all of the above chapters we have covered (or will cover) in the course
- However, in your report and presentation you will be expected to include the components, elements, and factors set out in Chapter 12

Introduction

Universities provide a broad range of courses which include: Bachelor of Science, Masters, and doctoral degrees. Additionally, maintaining a professional qualification may require continuing updating of knowledge relating to developments in a dynamically changing world, this is termed *continuing professional development* (CPD) and it is frequently the case that CPD is mandatory if the professional qualification is to be retained. Universities may provide highly focused domain specific courses to meet the needs of CPD.

Future employment will require high levels of training (including vocational training) including re-training. Moreover, there is a further realisation that there is a ``skills gap'' in many industries. Meeting the demands of vocational training requires both full-time and part-time courses. Additionally, commercial organisations may need to "up-skill" employees; in such a case a university or further education college may provide short highly focused practical courses addressing specific skills. The range of potential educational needs require a range teaching and learning systems. Such systems have historically been delivered using face-to-face teaching with an on-line presence to deliver resources available *anytime and anywhere*.

An issue for universities is the broad range of abilities, learning styles, and the time students are available for study; this applies to both face-to-face and on-line (distance) learning but is more difficult to detect in the latter mode of delivery. The use of *anytime and anywhere* provision of teaching resources and materials generally addresses the time factor. Addressing the range of academic levels and learning styles represents a more difficult challenge in which students will progress at different rates; in such a scenario encouraging and maintaining student engagement including measuring progress and engagement is a significant issue.

The Assignment Problem

The introduction presents a brief background to the current educations landscape Universities must operate in. A University has set as it's goal the development of an on-line portal to provide access to the full range of courses (delivered by the university) with the teaching and learning resources accessible by teaching staff and students 24/7 *anytime and anywhere*.

The current Internet-based system operated by the university is very old and requires replacement with a new scalable system capable of providing staff and students with *anytime and anywhere* access to it's teaching and learning services. The system must accommodate the peak demands of the current 25,000 students currently receiving 'face-to-face' teaching with on-line resource availability.

However, the university is planning to expand it's range of courses with a potential student population of 75,000 (the students will be drawn on a national (not international) basis) with increased diversity in the range of methods courses are delivered (e.g., 'face-to-face' and on-line distance learning) to accommodate the traditional university degree course (delivered on-line) and short courses designed to provide commercial companies and government agencies with specific targeted aims and topics.

The university has instructed the IT department to develop a proposal for a teaching and learning portal to meet the requirements specification and address the requirements set out in the introduction section and above in this section using the available ICT technologies including Web 2.0 and Web 3.0 technologies.

The Assignment Specification

Your task in this assignment is to develop a proposal for teaching and learning portal and submit a detailed report to the university board setting out:

- The information systems required to build the proposed teaching and learning portal
- A design for an information system (made up of integrated function specific information systems) to support the proposed teaching and learning portal
- The potential technologies that may be used in building the teaching and learning portal including (but not restricted to) ICT, data transfer, data processing, and the presentation of data.
- The design of a prototype unified dashboard to display the course information and the links to the course resources.
- The approach proposed to accommodate the requirements for data storage, analysis, and querying with role-based access controls. The proposed approach to data storage must address the security, statutory, and regulation requirements.

Your Task

In this assignment you must develop a detailed and comprehensive proposal to address the requirements as set in the introduction, assignment problem, and assignment specification sections. The proposal must be submitted in the form of a report (see the following section) and presented in a 10-minute presentation (see Section Submission).

Your Report

Your report will be submitted as set out in the Submission section and must comply with the following structure:

- An assignment page showing:
  - The team number (as assigned).

- o The name of the team Leader (in English and Chinese).
- o The names of all team members (in English and Chinese).
- o All student id numbers.
- o All student email addresses.
- o The title of the assignment.
- o Failure to comply with these requirements will result in grading penalties.
- A title page for the report setting out: (a) the report title (you may choose your own interesting and appropriate title for the report) and, (b) the date of the report.
- An index page listing the sections in your report
- A brief executive summary (this will ideally be a 1 (maximum 2) page summary of your analysis and conclusions
- Your analysis of the problem with your proposals, conclusions, and recommendations based on your analysis and potential methods considered
- Brief conclusions with recommendations as set out in your analysis.

As this is a team effort this will NOT be a short 3- or 4-page report. The report must be comprehensive and cover in detail all the elements addressed in the assignment.

Assignment Submission

The assignment report will be submitted in English in *electronic* format as follows:
- The assignment will be issued in week #5 on Wednesday 31st March 2021.
- The assignment must be submitted in week #9 by 12:00 noon (China time) on Wednesday 28th April 2021.
  - o Late submission will result in a grade penalty.
- The submission will be made as follows:
  - o The report will be prepared using MS Office 365 (Word) with correct formatting and
  - o Careful proof checking prior to submission.
  - o The report will also be submitted as a PDF document.
  - o The report (Word and PDF) will be placed in ONE zip archive file and emailed to the teachers (the submission must be sent to both teachers) using the email addresses set out in the course specification document.
  - o Failure to comply with the set assignment process will result in a grade penalty.
- All communication with teachers must b made by the team leader.

Assignment Presentation

- In week #10 (dates and times to be advised over Moodle) each team will be required to:
  - o Present their assignment results and report in a 10-minute (PowerPoint and oral) presentation (verbal and in English by all members of the team based on their contribution to the final report) to the course teachers.
- The report submitted with the quality of the presentation will be used in grading the team performance.
- Following the presentation there will be questions on the report and the presentation.

The Assignment

Prepare a report using the following structure:
- This is a team assignment and all work and submissions must be the result of the collaborative effort by the team members.

a. This is a team assignment and all members of the team will receive the same grade based on the team performance
- In working on, and submitting the assignment students must comply with all the Lanzhou University regulations
- The grading structure is set out in the Data Science Joint Education Program (Info102 – Introduction to Information Systems) available on the Moodle course website.
- All questions relating to the assignment and the assignment specification may be submitted in the 'office-hours' sessions or by email.