### Coursework reports 2014–15

### CO3320 Project – Preliminary Project Report

#### Introduction

The primary purpose of the Preliminary Project Report (PPR) is to encourage students to begin thinking about, and working on, their Projects at an early stage of the year.

The general standard of this year's PPRs was reasonably good, and the pass rate was high (approximately 97 per cent, almost identical to the previous year).

Individual feedback is provided by staff at Goldsmiths to each student within a few weeks of the submission deadline. The more information a PPR contains about work done to date, problems encountered, and future plans, the easier it is for staff to provide helpful feedback.

Please note that the PPR is expected to **conform to a standard structure**, as specified in the current edition of the **CO3320 Project** subject guide. The subject guide specifies that the report should be around 2,000–4,000 words. The examiners are looking for evidence of a student's ability to write clearly and concisely, and their ability to judge what information should be included and what is irrelevant. Around 15–20 pages is usually about right for the PPR.

Some of the common weaknesses seen in this year's PPRs were:

- 1. Failure to identify an appropriate question to address or aim to achieve.
- 2. Inadequate literature review (including poor referencing and citation).
- 3. Poor Project plan (including lack of thought about testing and evaluation).

Each of these topics is discussed below.

## 1. Failure to identify an appropriate question to address or aim to achieve

Ideally, the examiners are looking for a Project to address a specific problem by following the structure of an academic research Project:

- · identifying a specific question to be addressed
- proposing a means of answering that question (which may entail proposing a solution to an identified problem)
- performing some sort of experimental data collection relating to the proposed means of answering the question
- · analysing the collected data
- drawing conclusions from the analysis which relate back to the original research question.

Projects which merely involve the implementation of a piece of software or website, with no academic question driving the development, will struggle to achieve the highest grades, although such Projects can receive good marks if approached in the right way. In order for such Projects to be acceptable, they must demonstrate the application of solid software development practice (including **requirements gathering**, **design**,

**implementation**, **testing** and **evaluation**). Even a Project which is, on the face of it, a straightforward software development task, can be cast as an academic research Project if appropriate questions can be addressed (e.g. can novel feature *X* improve some aspect of a business process? Can novel user interface feature *Y* improve customer satisfaction of the system?). The more specific a question that can be framed, and the more specific the means of analysis, the easier it will be to provide a definitive answer to it in the Project.

A small number of PPRs seemed to offer no original contribution from the student. The nature of these Projects generally involved the student 'finding out about' a subject, and reporting what had been found. The examiners are looking for a Project that shows you putting the techniques and knowledge you have learned during your studies into practice; and for a good Project, the examiners are really looking for an original idea and/or for something beyond what has been read in books or other sources. This 'extra' contribution might be very small, but there should be something beyond just reading and reporting.

Having identified a suitable Project area, some students still failed to clearly set out their aims and objectives. The **aims** of the Project describe the broad overall purpose and desired outcomes of the work; the **objectives** describe the concrete steps you intend to take to achieve your aims. The more specific you are about your aims and objectives at the start of the Project, the easier it will be to formulate an appropriate plan of work for conducting the Project.

# 2. Inadequate literature review (including poor referencing and citation)

The literature review is an important aspect of your Project, and the PPR should include a summary of the literature you have reviewed to date. The literature review serves to put your Project in the context of what other people are doing in the same area. By having a good knowledge of what other people have done, you are less likely to 'reinvent the wheel', you might avoid approaches that other people have tried and failed to make work, and you might find inspiration for how to do things better. A weakness of some of this year's PPRs is the use of references to websites rather than academic sources such as journals or conference papers. The problem with websites is that they are not peer-reviewed, and the information they contain is not necessarily reliable. If you are using information obtained from websites, consider how reliable it is, and consider including some discussion about the reliability of your sources.

Another issue concerning references and citation is that some students included a Reference List at the end of their PPR, but did not indicate in the main text of their PPR which references were relevant where. This is done by using a **citation**, which is a short marker in the main text (e.g. '(Taylor, 2012)'), which denotes an item in the Reference List. Even more importantly, some students copied sentences from other authors' work without the proper use of quotation marks and citations. It is perfectly acceptable to copy text from another source (within reason), but only if you clearly indicate, through the use of **quotation marks** and a **citation**, where you have obtained the text from. Failure to do this raises the suspicion of plagiarism – trying to present someone else's work as your own – whether intentional or otherwise. There are severe consequences for plagiarism, so be very sure you know how to use quotations, citations and references appropriately.

Even with proper citation, care must be taken not to over-use quotations from other sources. The literature reviews of some PPRs consisted of little more than a list of quotes from other sources, with little or no original text from the student. Such reviews are tedious to read, have little narrative structure or flow, and are generally of very little specific value. A good literature review involves explaining the relevance to the Project of what has been done before, and how it will influence how the current Project will be undertaken. It therefore requires significant input, and insight, from the student, not just a list of quotes from other authors.

# 3. Poor Project plan (including lack of thought about testing and evaluation)

It is important that the Project plan is realistic and achievable within the time available. Some students presented Project plans that were far too ambitious. It is better to submit a smaller, but complete, Project than to submit a more ambitious, but incomplete, one. Plans for further extending the work can always be discussed at the end of the final Project report if desired. Drawing up a realistic Project plan is **really important**: this year, several students submitted final Project reports that started off very well, but which included only very scant (or even completely missing) later chapters (e.g. Results, Discussion and Conclusions). In order to pass the Project, the final report must describe how **all** stages of the Project were conducted at a satisfactory level.

In contrast, a few students submitted very brief PPRs with very light Project plans. Remember that the final Project report is supposed to represent the culmination of at least 300 hours of intense, focused study.

For Projects where software development is a major part of the work, the examiners will be looking for evidence that you have followed a structured software development methodology, including requirements gathering, design (use cases, wireframes, etc), implementation, testing, and evaluation. Students pursuing such Projects should think carefully about exactly what needs to be done for each of these, how you will do it, and how long it will take.

In addition to identifying a specific question to be addressed, it is also very important to be clear right at the beginning of your Project exactly how you are going to **evaluate** the success of your work. A common failing in the PPRs was a **lack of a clear plan for evaluation**.

Think about what question(s) you want to answer, then think carefully about some of the following more specific issues:

- How will you test the system?
- · What results data will you collect?
- How will you analyse the results?
- How will you judge the significance of the results (e.g. what will you compare them against)?

For Projects which involve developing software for a group of intended users, be sure to include in your Project plan a process of stakeholder consultation at the start of the Project to establish their requirements and their views on your proposed solutions. There are very few cases where such stakeholder consultation will not be appropriate.

For software development Projects, in addition to stakeholder consultation at the design stage, it is also important to include some element of stakeholder evaluation after the system has been developed. For such

Projects, care should be taken at an early stage to decide who will evaluate the end product, and how such evaluation will be carried out. It may be that different sorts of evaluation are appropriate for different groups of stakeholders. Without seeking stakeholder evaluation and analysing the results, it can be hard to evaluate whether the Project has succeeded or failed in its goals.

For Projects that involve questionnaires and user feedback, many of the PPRs showed a lack of thought about exactly what would be required. Be sure to think about questions such as:

- Who will you ask? (Is there a single group of stakeholders, or multiple groups? How can you select the most representative sample possible from each group?)
- How many people do you need to include in order to generate reliable results? (Think about what is required for statistical significance, although sometimes practical matters may prevent you from including as many people as you would like.)
- What will you ask?
- · How will you analyse the data?
- How long will all of this take?

In data collection and analysis, as in all other aspects of the Project, the more detailed and specific you can be at an early stage of the Project about exactly what you are going to do, how you are going to do it, and how long it will take, the higher the chance of you completing a successful Project on time.

Even if you have done a good job of drawing up a detailed Project plan at the start of the Project, and attempted to foresee potential problems that might arise and thought about how you might deal with them, it is not unusual for unexpected delays to occur. It is therefore essential to review your plan regularly, and be prepared to adjust it if necessary. It is often useful to rate each feature you are thinking about including as **must have/nice to have/could have**. You should concentrate on the most important features first, and get those fully implemented and tested, and only implement other features if and when you have the time.

Finally, some students did not allocate time in their Project plan for writing up their final Project report! This is obviously an essential part of the Project, and will likely take longer than you expect. It is advisable to write sections of the final report as you go, rather than leaving the writing of the whole report until a few weeks before the submission deadline.

In general, the 2014–15 PPRs spanned a very wide range of standards, from the weak to the truly outstanding. The preceding comments have highlighted some of the common problems. Further advice on how to produce a good PPR can be obtained in the following ways:

- Read the CO3320 Project subject guide
- Look at examples of good Projects from previous years in the Project Library section of the VLE (https://computing.elearning.london.ac.uk/mod/page/view.php?id=1846)
- Discuss problems and questions with fellow students on the Discussion forum of the **CO3320** page on the VLE.