Part I: Follow-Up on Last Year’s Assessment Report Recommendations

The findings from last year’s assessment called for more emphasis on correctly ordering methods in the user-centered design process. The recommendation was addressed in two ways:

- The findings were discussed among HCI faculty, who resolved to introduce or review appropriate selection and order of methods in the context of their courses.
- The rubric for evaluating the project proposal in the HCI capstone course was modified to address appropriate scheduling of methods. This rubric was shared with the subsequent instructor of the capstone course.

While this year’s learning outcome did not expressly address method ordering, the assessment still involved the review of capstone projects. Our review did not reveal any inappropriate ordering of methods in the capstone projects.

Part II: Report on This Year’s Assessment Project

While your annual assessment project may have assessed multiple learning outcomes, this report should focus on just one program learning outcome.

Abstract

We reviewed capstone projects to assess students’ abilities to communicate findings based on appropriate methods in the user-centered design process. The assessment was triangulated with a review by the instructor at the time of submission and a subsequent review by a second evaluator at the end of the school year. While 36 of 37 students produced projects that met an acceptable level for this learning outcome, we noted some common deficiencies including a lack of revision based on evaluation and missing empirical evaluation. Based on these findings,
we recommend discussing the rubric for reviewing capstone proposals with the course instructors.

Learning Outcome Assessed
Students will be able to communicate findings through written reports and common HCI summations, including personas and scenarios.

Data Collection and Methodology
We reviewed the capstone projects from the Autumn 2013 and Spring 2014 classes of the HCI capstone course (HCI 594). This course is required in the HCI Masters program and taken near the end of the program. The capstone course was also offered in Winter 2014, but we did not review projects from this course because these projects were research projects and our assessment outcome did not apply to them. Despite excluding one section, we were able to consider 30 projects, which comprise more than two-thirds of the students who took the capstone course during the regular 2013-2014 school year. We note that two of these projects were completed in groups of two and three projects completed in groups of three. The remaining 25 projects were completed by individual students. Considering the five group projects, a total of 38 students were involved in the assessment (25 + 2*2 + 3*3).

To obtain triangulated measures of our learning outcome, we assessed the capstone projects using two approaches:

1. At the completion of the course, the course instructor (full-time faculty member) reviewed the final project and applied criteria addressing the selected learning outcome.
2. A second evaluator (full-time faculty member) reviewed the final reports of the capstone project in September 2014.

Both reviews used the same criteria, detailed below:

Methods and process are outlined and include multiple methods, iterations and evaluation. Major results and outcomes are described. Supporting documents and materials are clearly referenced in main report.

The first review produced an outcome based on the number of minor (-1) and major (-2) deficiencies, which was then adjusted to produce a 5-point outcome. The second review used a point allocation scheme (presented in the appendix) to produce a 5-point outcome. Both evaluators produced comments, typically indicating deficiencies.

Results

The full final report for one student project was missing and could not be reviewed by the second evaluator. It was dropped from the analysis. For the remaining projects, the assessed scores from the two methods were compared, producing a correlation of 0.69 (N=29). The scores from the two review methods were averaged to produce a single 5-point score for each
project. The average of all projects was 4.48. 22 projects (from 25 students) received a score greater than 4 (considered good); 6 projects (from 11 students) received a score between 3 and 4 (considered acceptable) and one project received a score less than 3 (considered unacceptable).

Deficiencies noted more than once were:
- Missing empirical usability evaluation method (i.e. usability testing)
- No evidence of design revision based on evaluation

Below is the required table summarizing the number of students achieving an acceptable level for this learning outcome:

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th># Students Assessed</th>
<th># Students with Acceptable or Better Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will be able to communicate findings through written reports and common HCI summations, including personas and scenarios.</td>
<td>37</td>
<td>36</td>
</tr>
</tbody>
</table>

Interpretation of Results
The learning outcome is being achieved at an acceptable level. Yet, we would like to see further improvement. Concerns include the following:

- Student projects should show more indication of iteration in their process.
- Student projects should routinely incorporate empirical evaluation to inform design revision.

Recommendations and Plans for Action
Perhaps the best intervention occurs at the proposal stage. We propose to discuss the noted deficiencies with the capstone instructors. Possible changes may include explicit mention of iteration and empirical evaluation in the rubric for evaluating capstone proposals.

For our next assessment, we plan to review student portfolios instead of capstone projects. This approach will ensure that we exclusively consider individual work.
Appendix

Below is the point allocation used by the second evaluator:

<table>
<thead>
<tr>
<th>Concept or Goal</th>
<th>Point allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Were multiple methods used?</td>
<td>1.5</td>
</tr>
<tr>
<td>Is there evidence of iteration?</td>
<td>.5</td>
</tr>
<tr>
<td>Is there evidence of empirical evaluation?</td>
<td>1</td>
</tr>
<tr>
<td>Are major results described?</td>
<td>.5</td>
</tr>
<tr>
<td>clarity AND precision of writing</td>
<td>1</td>
</tr>
<tr>
<td>Supporting docs are referenced in the main document</td>
<td>.5</td>
</tr>
</tbody>
</table>