Student-Generated Assessment Questions
The Journey so Far

Paul Hibbitts
hibbittsdesign.org
@hibbittsdesign

Photo: https://unsplash.com/photos/FHnnjk1Yj7Y
Student-Generated Assessment Questions
Inspiration

Photo: https://unsplash.com/photos/jR4Zf-riEjI
CMPT 363 Fall 2013 Final Exam (5 pages, 320 points)
Closed Book, Time: 3 hours

Student Name: ____________________________________________

Student #: ____________________

PLEASE READ FIRST
Time allocation is important in this exam. I recommend that you briefly review the entire exam before you begin.
No time extensions will be given.

Answer Part A (short answers) in the space provided after each question, and Part B (usability assessment) and Part C (design challenge) in the supplied exam booklet. Please write clearly and concisely.

Part A: Short Answer (8 questions, for a total of 64 points)

1. List and describe in one sentence each, the five measurements of usability as defined by Jakob Nielsen. (10 points)
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Search...
Letting Your Students Do the Work: Student-Generated Exam Questions – Veronica Kitchen

My first year at Waterloo was also my first year teaching my own courses. In mid-November I found myself overwhelmed by the task of writing exams for my large second-year political science course. Since I’d never taught the course before, I had no question bank, no old exams to adapt, and not a whole lot of spare time. I struggled to write enough questions to populate my exam, plus a make-up or two. I mentioned this demoralizing state of affairs to Nicola Simmons at a CTE event.

Why don’t you get your students to write the exam?” she suggested. Surely this was wrong, I thought. I’m the teacher, and writing the exam is my job. Surely letting my students write the exam would be tantamount to giving them the answers beforehand. But then I thought about it a little more, and decided it was worth a try. At the very least, writing exam questions would be a good review for stu-
Student Generated Exam Questions

■ Student-Generated Exam Questions
  ○ cte-blog.uwaterloo.ca/?p=686

■ Asking Students to Create Exam Questions
  ○ avandeursen.com/2016/07/24/asking-students-to-create-exam-questions

■ Teaching and Evaluating All at Once: Asking Students to Write Their Own Questions
  ○ cft.vanderbilt.edu/2010/07/teaching-and-evaluating-all-at-once-asking-students-to-write-their-own-questions

■ The Student-Developed Quiz (or Exam)
  ○ nactateachers.org/images/The_Student-Developed_Quiz_or_Exam__Scaffolding_Higher-Order_Thinking.pdf
Student-Generated Assessment Questions

Envisioning
<table>
<thead>
<tr>
<th>Quiz Title</th>
<th>Due Date</th>
<th>Points</th>
<th>Questions</th>
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Bloom's Taxonomy

- **Remember**: Recall facts and basic concepts
  - define, duplicate, list, memorize, repeat, state

- **Understand**: Explain ideas or concepts
  - classify, describe, discuss, explain, identify, locate, recognize, report, select, translate

- **Apply**: Use information in new situations
  - execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch

- **Analyze**: Draw connections among ideas
  - differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test

- **Evaluate**: Justify a stand or decision
  - appraise, argue, defend, judge, select, support, value, critique, weigh

- **Create**: Produce new or original work
  - design, assemble, construct, conjecture, develop, formulate, author, investigate

Vanderbilt University Center for Teaching
Different Types of Questions based on Bloom's Taxonomy

Lower Order

Knowledge (Remembering)
These types of questions test the students’ ability to memorize and to recall terms, facts and details without necessarily understanding the concept.

Key Words: Memorize, Define, Identify, Repeat, Recall, State, Write, List & Name

Examples of questions:

- "What is...?"
- "How would you describe...?"
- "Why did...?"
- "How would your show...?"

Comprehension (Understanding)
These questions test the students’ ability to summarize and describe in their own words without necessarily relating it to anything.

Key Words: Describe, Distinguish, Explain, Interpret, Predict, Recognize & Summarize

Examples of questions:
Creating Good Exam Questions

■ Different Types of Questions based on Bloom's Taxonomy
  ○ faculty.academyart.edu/faculty/teaching-topics/teaching-curriculum/enhancing-teacher-student-interaction/different-types-questions-blooms-taxonomy.html/?p=686

■ Writing multiple choice questions using Bloom’s Taxonomy
  ○ gradehub.com/blog/using-multiple-choice-questions-using-blooms-taxonomy

■ Asking Good Test Questions
  ○ teaching.cornell.edu/teaching-resources/assessment-evaluation/asking-good-test-questions

■ Exam Questions: Types, Characteristics, and Suggestions
  ○ uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/developing-assignments/exams/questions-types-characteristics-suggestions
Final Exam Question and Answer Rubric

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<th>Exceptional</th>
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<th>Good</th>
<th>Fair</th>
<th>Poor</th>
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<tr>
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<tr>
<td>Clarity</td>
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By Paul Hibitits (hibbitstdesign.org)
Time for Questions & Discussion

- **Inspiration**
  - Previous CMPT-363 final exams
  - BCCampus OpenEd (and ETUG!) ❤
  - Research on student-generated exam questions

- **Envisioning**
  - Use of weekly quizzes in CMPT 363
  - Leveraging Bloom’s Taxonomy
  - Research on creating good exam questions
  - Draft exam question assessment guide (i.e. rubric)

- **Coming up**
  - Roll-out
Student-Generated Assessment Questions Rollout
# Final Exam Question and Answer Rubric

<table>
<thead>
<tr>
<th></th>
<th>Exceptional</th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relevance</strong></td>
<td>Extremely strong linkages to course learning objectives and this week's course materials. Extremely relevant to the creation of effective user interfaces.</td>
<td>Very strong linkages to course learning objectives and this week's course materials. Very relevant to the creation of effective user interfaces.</td>
<td>Moderately strong linkages to course learning objectives and this week's course materials. Moderately relevant to the creation of effective user interfaces.</td>
<td>Somewhat strong linkages to course learning objectives and this week's course materials. Somewhat relevant to the creation of effective user interfaces.</td>
<td>Vague linkages to course learning objectives and this week's course materials. Slightly relevant to the creation of effective user interfaces.</td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td>Question contains the aspect of evaluation or creation. Question provides a very meaningful intellectual challenge.</td>
<td>Question contains the aspect of application or analysis. Question provides a moderately intellectual meaningful challenge.</td>
<td>Question contains the aspect of remembering or understanding. Question provides a somewhat meaningful intellectual challenge.</td>
<td>Question contains the aspect of remembering or understanding. Question provides a limited meaningful intellectual challenge.</td>
<td>Question contains the aspect of remembering or understanding. Question provides very little or no meaningful intellectual challenge.</td>
</tr>
<tr>
<td><strong>Clarity</strong></td>
<td>Question and correct answer is very clear and not ambiguous. Writing is exceptionally clear, concise, and well organized.</td>
<td>Question and correct answer is moderately clear and not ambiguous. Writing is very clear, concise, and well organized.</td>
<td>Question and correct answer is mostly clear and not ambiguous. Writing is mostly clear, concise, and well organized.</td>
<td>Question and correct answer is somewhat clear and somewhat ambiguous. Writing is somewhat clear, concise, and well organized.</td>
<td>Question and correct answer is unclear and is ambiguous. Writing is unclear or disorganized.</td>
</tr>
</tbody>
</table>
This assignment does not count toward the final grade.

Practice Weekly Review Quiz Week 1 (Sep 3 - 9)

Due Sep 6 by 11:59pm Points 25
Submitting a text entry box or a file upload File Types pdf, doc, and docx
Available Sep 3 at 5:30pm - Sep 6 at 11:59pm 3 days

This assignment was locked Sep 6 at 11:59pm.

BACKGROUND
The creation of course assessment questions is a valuable learning exercise for students, as it moves beyond the simple recollection of facts to a deeper analysis of course material.

MATERIALS
Review both the class slides discussed Introduction to UX and required reading Usability 101: Introduction to Usability for this week. Create one potential question using a multiple-choice or short answer format, with the correct answer, to test student understanding of that material.

- Asking Good Test Questions
- Exam Questions: Types, Characteristics, and Suggestions (tips on creating good multiple choice and short answer questions) NEW
- Writing multiple choice questions using Bloom’s Taxonomy (includes examples of multiple choice questions to assess different levels of learning)
Grade Summary

Revolution: To Sign or Not to Sign

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<th>Grader</th>
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<tr>
<td>Jessica Doe</td>
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<tr>
<td>Ranjit Chauhan</td>
<td>Accept</td>
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- Release Grades
- Post to Students

<table>
<thead>
<tr>
<th>Student</th>
<th>Jessica Doe</th>
<th>Ranjit Chauhan</th>
<th>Final Grade</th>
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<td>Nora Sanderson</td>
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<td>Jane Smith</td>
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<td>Bruce Jones</td>
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<td>Joe Rogers</td>
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<td>Max Johnson</td>
<td>22</td>
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</tbody>
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CMPT363 E100 User Interface Design

Important Reminders

- Instructor User Research Plan Meetings Oct 8th and 9th
- GoSFU and mySchedule will be unavailable Oct 11 - 15
- User Research Report assignment due Oct 21

Weekly Review Quiz due Oct 14

Oct 15th Preparations

Slides to be Discussed
- Conceptual Models and Design

Upcoming Required Reading
- We Think Therefore It Is – Conceptual Modelling for Mobile Applications

To Do
- Weekly Review Quiz Week...
  25 points | Oct 14 at 11:59pm |
- Oct 15 Class One-Minute S...
  1 points | Oct 15 at 11:59pm |
Student-Generated Assessment Questions
Progress so Far
<table>
<thead>
<tr>
<th>Final Exam Question and Answer Rubric</th>
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<tbody>
<tr>
<td><strong>Outstanding</strong></td>
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<td><strong>Relevance</strong></td>
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<tr>
<td><strong>Clarity</strong></td>
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</tbody>
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By Paul Hibbitts (hibbittsdesign.org)
“I feel like the most current iteration of the rubric is very clear and fair.”
— CMPT 363 Student
Handling Quiz Remarking Requests

Requests for re-marking weekly review quizzes must include a written case for the re-marking and be submitted via email to me (Paul) within 2 days.

Quizzes will be re-marked in their entirety and may result in a higher, unchanged, or lower mark overall which will be final.

Suggestions for improving or clarifying the marking rubric always welcome!
Contact in Canvas LMS

Comment or question for Paul?

I am not available right now, but please send me a message below.

Type your name

Type your email

Type your message

SEND

Course Facilitators
Paul Hibbitts
✉️ paulh@sfu.ca
✈️ @hibbittsdesign

In-person office hours:
Tuesdays 4:00-5:10pm HC 2148

Virtual office hours chat:
Thursdays 12:00-1:00pm

Suggestion or complaint?
喫 Anonymous Course Feedback

Teaching Assistants
✉️ mohsen_kamalzadeh@sfu.ca
✉️ gayatri_ganapathy@sfu.ca
Describe what a job story is and mainly why might be used in place of user stories:

Answer: a job story captures product requirements by describing a user situation instead of using a persona, which allows us to not have to make assumptions about the user demographic but focus on the consequent motivation and outcome of any potential user.
Question:

Recall that we discussed ways to represent stories of usage in class. For this question we will be focusing on Scenarios and User Stories. Describe these two concepts and provide an example for each to show how Scenarios and User Stories represent stories of usage differently.

Answer:

A scenario is a description of people and their activities, including reaching their primary goal. As such, a scenario would look like:

"John, a student in CMPT 363, needs to find group partners for the project portion of the course. Using Canvas' discussion board, he determines that he can create a post there in order to find a group."

User stories explicitly describes a role, goal/desire and a benefit of accomplishing that goal/desire in the following format:

"As a student in CMPT 363, I want to create a post on Canvas' discussion board so that I can find a group for the project."
Question

In class, we learned about Proto-Personas when we were talking about user research. The 4 elements of this diagram are: name/image/quote, demographics, behaviours, goals/concerns. Create a Proto-Persona diagram with the 4 elements mentioned. Include at least 4 points for goals/concerns, demographics, and behaviours.

Mary is a retired Italian grandmother. She is 5 feet tall and 65 years of age. Cooking is an essential part of her life, but she does not like washing dishes. She begins her day with tea every morning and cooks 3 meals everyday for her and her husband. On Saturday nights, her daughter and three grandchildren come to visit for a large dinner feast and special desserts all prepared by Mary. She always makes sure to follow her recipe books precisely. She possesses many baking ingredients, recipe books, and cooking supplies to keep up with her busy cooking lifestyle.

Answer
- One possible solution would be

```
MARY

"I love cooking but I hate doing the dishes"

BEHAVIOURS
- Cooks every day
- Always follows recipe books
- Makes tea every morning
- Makes a really big meal once a week

DEMO
- Italian
- Grandma
- 65 years old
- 5 feet tall
- Retired

GOALS & CONCERNS
- Doesn't like washing dishes by hand
- Not tall enough for shelves
- Has a lot of cooking supplies
- Wants to make delicious Italian food
```
You are conducting a user report and you’ve assembled some interview questions. Analyze the following interview questions and answer the pertinent questions.

1. State whether this a good or bad question, and explain why: "Tell me what features you would like to see in this app."
   1. Answer: This doesn’t tell you about how the user is interacting with the app. A wish list is not helpful. The user is not a designer. Could take the interview off track.

1. Write one follow-up question to the following question: "Do you use this app on a mobile device or desktop computer?"
   1. Answer: Follow up: Why do you use this on your (mobile device/desktop computer)?

1. State what is wrong with this interview question and suggest an alternative: "When was the last time you used this app?"
   1. Answer: This is a structured question. It doesn’t leave much opportunity for insightful information to be shared. It would be better if we asked how frequently do you use the app? How much time do you have to use this app? Why do you use this app x times per day?
“Having to review the notes to come up with good questions helps students retain more information as we have to put in practice what we learned.”
— CMPT 363 Student
Time for Questions & Discussion

■ Roll-out
  ○ Initial assessment guide (rubric)
  ○ First quiz is a practice quiz (not part of grades)
  ○ Use of moderated assignment feature for TA calibration
  ○ Highly visible reminder for weekly review quizzes

■ Progress so Far
  ○ Rubric clarifications
  ○ Handling quiz remarking requests
  ○ Supporting anonymous feedback (thanks OpenETC! ❤️)
  ○ Examples of student submissions

■ Coming up
  ○ What’s Next?
Student-Generated Assessment Questions
What’s Next?
What’s Next?

- Continue weekly review quizzes until end of term
- First round final exam question picks
- Review choices with course teaching assistants
- Edit and revise choices as needed
- Prepare the actual final exam! 🎉
Thank You! Questions & Discussion

Contact Info
- Blog: hibbittsdesign.org
- Twitter: @hibbittsdesign
- Email: paul@hibbittsdesign.org

CMPT-363 User Interface Design
- Multi-device Site: paulhibbitts.net/cmpt-363/193/home
- Canvas Course: canvas.sfu.ca/courses/47119
- Final Exam Question Rubric:
  docs.google.com/document/d/19xpRcQhsQfVc2ARENdUxsTuvub5WrHiNET0HVJjPjPI/edit?usp=sharing