Student-Generated Assessment Questions The Journey so Far

Paul Hibbitts hibbittsdesign.org @hibbittsdesign



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Photo: https://unsplash.com/photos/FHnnjk1Yj7Y

Student-Generated Assessment Questions Inspiration

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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-

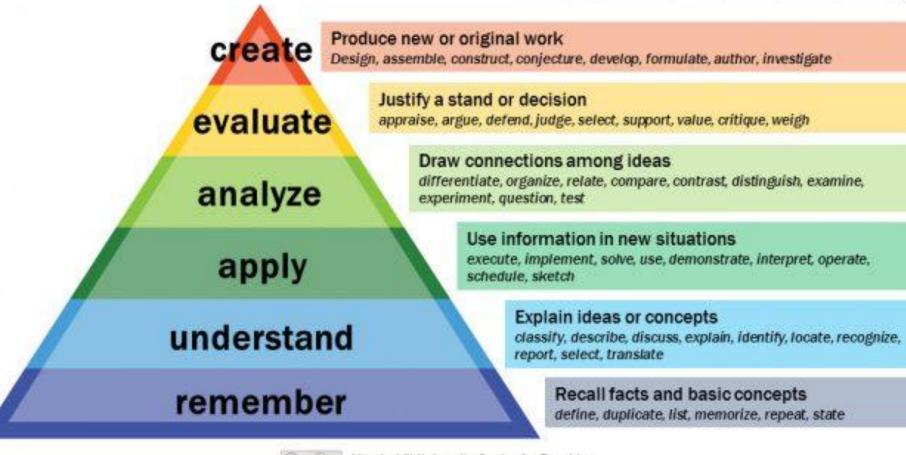
Student Generated Exam Questions

- Student-Generated Exam Questions
 - <u>cte-blog.uwaterloo.ca/?p=686</u>
- 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
 - <u>cft.vanderbilt.edu/2010/07/teaching-and-evaluating-all-at-once-asking-student</u> <u>s-to-write-their-own-questions</u>
- The Student-Developed Quiz (or Exam)
 - <u>nactateachers.org/images/The_Student-Developed_Quiz_or_Exam-_Scaffol</u> <u>ding_Higher-Order_Thinking.pdf</u>

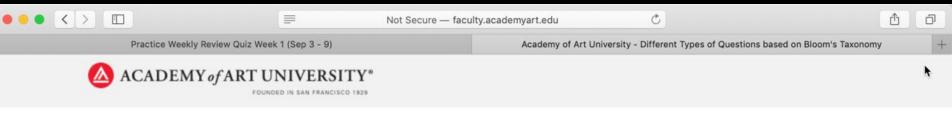
Student-Generated Assessment Questions Envisioning

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47.N	UX Techniques Guide	Closed Due May 16, 2018 at 10am 6 pts 6 Questions	
1.1	Assignments		
	Quizzes	▼ Surveys	
Account	All Readings Discussions	Reading Quiz #1 (for week 3 required reading) Closed Due May 23, 2018 at 10am 4 pts 6 Questions	
ری) Dashboard		Reading Quiz #2 (for week 4 required reading)	
Courses	Contact Paul or Hamid	Closed Due May 30, 2018 at 10am 4 pts 6 Questions	
	Grades	Reading Quiz #3 (for week 5 required reading) Closed Due Jun 6, 2018 at 10am 4 pts 6 Questions	
Calendar	People Files	Reading Quiz #4 (for week 6 required reading) Closed Due Jun 13, 2018 at 10am 4 pts 6 Questions	
Inbox Commons	Syllabus Collaborations	Reading Quiz #5 (for week 7 required reading) Closed Due Jun 20, 2018 at 10am 4 pts 6 Questions	
◆ ◆↓ Canvas	Announcements Pages	Reading Quiz #6 (for week 8 required reading) Closed Due Jun 27, 2018 at 10am 4 pts 6 Questions	
Spaces	Outcomes Settings	Reading Quiz #7 (for week 10 required reading) Closed Due Jul 11, 2018 at 10am 4 pts 6 Questions	
Help		Reading Quiz #8 (for week 11 required reading) Closed Due Jul 18, 2018 at 10am 4 pts 6 Questions	
		Reading Quiz #9 (for week 12 required reading) Closed Due Jul 25, 2018 at 10am 4 pts 6 Questions	

Bloom's Taxonomy



Vanderbilt University Center for Teaching



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Faculty Evaluation and Coaching Department 415.618.3855 | facultyevalcoach@academyart.edu

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| Help for Students |

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

- <u>faculty.academyart.edu/faculty/teaching-topics/teaching-curriculum/enhancing</u>
 <u>-teacher-student-interaction/different-types-questions-blooms-taxonomy.htmla</u>
 <u>/?p=686</u>
- Writing multiple choice questions using Bloom's Taxonomy
 - o gradehub.com/blog/using-multiple-choice-questions-using-blooms-taxonomy
- Asking Good Test Questions
 - <u>teaching.cornell.edu/teaching-resources/assessment-evaluation/asking-good-</u> <u>test-questions</u>
- Exam Questions: Types, Characteristics, and Suggestions
 - <u>uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/</u> <u>developing-assignments/exams/questions-types-characteristics-suggestions</u>

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Final Exam Question and Answer Rubric

	Exceptional	Excellent	Good	Fair	Poor
Relevance					
Level					
Clarity					

By Paul Hibbitts (hibbittsdesign.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

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Final Exam Question and Answer Rubric

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

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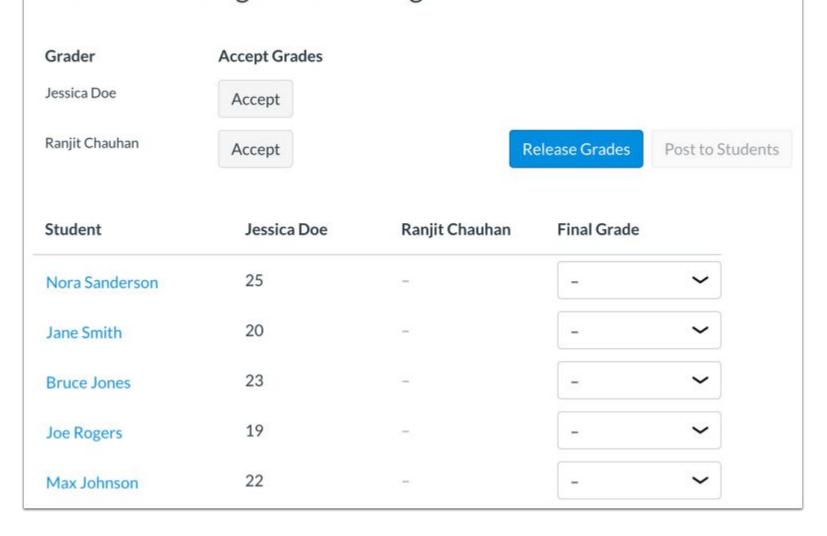
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Account	Fall 2019 Home	This assignment does	s not count toward the final grade.		Submission × Not Su		
ଇ	Modules	Practice Wee	ekly Review Quiz Week 1 (Sep 3	Submission		
Dashboard	Schedule	- 9)			Grade: 0 (2	5 pts possible)	
	Resources					onymously: no bric Evaluation	
Courses	UX Techniques Guide	Due Sep 6 by 11:59pm Submitting a text entr	y box or a file upload File Types pdf, doc, and	nd docx	Comments: No Comments		
Calendar	Weekly Readings	Available Sep 3 at 5:30	0pm - Sep 6 at 11:59pm 3 days				
E Inbox	UX News	This assignment was loo	cked Sep 6 at 11:59pm.				
÷.:	Assignments	BACKGROUND					
•∻₊ Canvas	Discussions	The creation of course a	assessment questions is a valuable learning exer	cise for			
Spaces	Grades	students, as it moves be course material.	eyond the simple recollection of facts to a deeper	r analysis of			
? Help	Syllabus	MATERIALS					
пер	Contact Paul or TAs	Review both the class s	lides discussed Introduction to UX @ and require	ed reading			
	People	Usability 101: Introduc	tion to Usability & for this week. Create one pot	ential			
	Files	test student understand	le-choice or short answer format, with the corre ding of that material.	ect answer, to			
			u <u>estions</u> ಜಿ p <u>es, Characteristics, and Suggestions</u> ಜಿ (tips on e and short answer questions) NEW	creating			
			oice questions using Bloom's Taxonomy ☎ (inclue uestions to assess different levels of learning)	des examples			
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Grade Summary Revolution: To Sign or Not to Sign



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Account CS Dashboard	Fall 2019 Home Modules	CMPT363 E100 User Interface Design	i View Course Stream
Courses Calendar Inbox \div Canvas Spaces (?) Help	Schedule Resources UX Techniques Guide Weekly Readings UX News Assignments Discussions Grades Syllabus Contact Paul or TAs People Files	<section-header>Instructor User Research Plan Meetings Oct 8th and 9th 4. GoSFU and mySchedule will be unavailable Oct 11 - 15 4. User Research Report assignment due Oct 21 Weekly Review Quiz due Oct 14 Totes Preparations Sides to be Discussed Propredue Models and Design</section-header>	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
		 Upcoming Required Reading We Think Therefore It Is - Conceptual Modelling for Mobile 	

6∂ You are currently logged into Student View

Applications

Resetting the test student will clear all history for this student, allowing you to view the course as a brand new student.

Reset Student

Leave Student View

Student-Generated Assessment Questions Progress so Far

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Final Exam Question and Answer Rubric

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	Outstanding	Very Good	Good	Fair	Poor
Relevance	Exceptionally strong linkages to <u>course</u> <u>learning objectives</u> and this week's course materials. Exceptionally relevant to the creation of effective user interfaces.	Very strong linkages to course learning objectives and this week's course materials. Very relevant to the creation of effective user interfaces.	Moderately strong linkages to <u>course</u> <u>learning objectives</u> and this week's course materials. Moderately relevant to the creation of effective user interfaces.	Somewhat strong linkages to <u>course</u> <u>learning objectives</u> and this week's course materials. Somewhat relevant to the creation of effective user interfaces.	Vague linkages to course learning objectives and this week's course materials. Slightly relevant to the creation of effective user interfaces.
Level	Question contains the aspect of <i>evaluation</i> or <i>creation</i> . Question provides an exceptionally meaningful intellectual challenge.	Question contains the aspect of <i>application</i> or <i>analysis</i> . Question provides a very meaningful intellectual challenge.	Question contains the aspect of <i>remembering</i> or <i>understanding.</i> Question provides a moderately meaningful intellectual challenge.	Question contains the aspect of <i>remembering</i> or <i>understanding</i> . Question provides a limited meaningful intellectual challenge.	Question contains the aspect of <i>remembering</i> or <i>understanding</i> . Question provides very little or no meaningful intellectual challenge.
Clarity	Question and correct answer is exceptionally clear and concise. Exceptional grammar, spelling and punctuation.	Question and correct answer is very clear. Very good grammar, spelling and punctuation.	Question and correct answer is moderately clear. Good grammar, spelling and punctuation.	The question and correct answer is somewhat clear. Somewhat good grammar, spelling and punctuation.	Question and correct answer is unclear. Poor grammar, spelling and punctuation.

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"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!

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CMPT363 E100 > CMPT363 E100 User Interface Design _



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Contact in Canvas LMS

Comment or question for Paul?	Paul Hibbitts
I am not available right now, but please send me a message below.	☑ paulh@sfu.ca ☑ @hibbittsdesign
Type your name	
Type your email	In-person office hours:
Type your message	Tuesdays 4:00-5:10pm HC 2148
SEND	Virtual office hours chat: Thursdays 12:00-1:00pm
	Suggestion or complaint?
	Anonymous Course Feedback
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回	84/91 17.8 / 25 (71%) Graded Average	74/91	\rightarrow
			Submitted: Oct 7 at 11:51pm

Submitted Files: (click to load)

wkquiz-1.docx

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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.

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Gra	de	out	of	25

Assessment

18

View Rubric

Test Question	s (v.3)
Criteria	Ratings
Relevance	No details 8 / 10 pts
Level	No details 6 / 10 pts
Clarity	No details 4 / 5 pts
	Total Points: 18

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	Weekly Review Quiz Week 5 (Due: Oct 7 at 11:59pm - CMPT363 E100	Oct 1 - 7)	84/91 Graded	17.8 / 25 (71%) Average	14/91			\rightarrow
Question:				Paper View		÷	Submitted: Oct 5 at Submitted Files: (cli	
Recall that we disc	ussed ways to represent storie hese two concepts and provide ferently.						Assessment Grade out of 25	
Answer:						- 1	19	
A scenario is a desc like:	cription of people and their acti	vities, including reaching the	eir primary g	oal. As such, a sce	enario would l	ook	View Rubric	
	CMPT 363, needs to find group les that he can create a post the		rtion of the c	ourse. Using Can	nvas' discussio	n	Test Questions (v.3)
User stories explici	itly describes a role, goal/desire	and a benefit of accomplish	ning that goal	/desire in the foll	lowing format		Criteria	Ratings
"As a student in CN	1PT 363, I want to create a pos	t on Canvas' discussion boar	d so that I ca	n find a group for	r the project."		Relevance	No details 7 / 10 pts
							Level	No details 7 / 10 pts
							Clarity	Full Marks 5 / 5 pts
								Total Points: 19
							Assignment Comme	ents

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◎ ↓ 錄	Weekly Review Quiz Week 5 (Due: Oct 7 at 11:59pm - CMPT363 E100	Oct 1 - 7)	84/91 Graded	17.8 / 25 (71%) Average	21/91			
	Question In class, we learned about Pr	oto-Personas when we were tall	king abou	t user research.			Submission to view:	
The 4 elements of a this diagram are: name/image/quote, demographics, behaviours,				Oct 7 at 10:15pm (grade: 21)	•			

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.

goals/concerns. Create a Proto-Persona diagram with the 4 elements mentioned. Include at least 4 points for goals/concerns, demographics, and behaviours.

Answer

- One possible solution would be

MAPY (00) "I Love cooking but I have doing the dishes"	BEHAVIOURS - COOKS every day - Atways follows recipe books - Makes tea every morning - Makes a really big meal once a week
DEMO - Italian - Grandma - G5 years old - 5 feet tall - Fethred	<u>COALS & CONCERNS</u> - DOES N'4 like Washing dishes by hand - NOT tau enough for sherves - Has a lot of cooking supplies - Wants to make delicious italian food

Oct 7 at 10:15pm (grade: 21) Submitted Files: (click to load) oct7-cmpt363-1.pdf Assessment Grade out of 25 21 View Rubric Test Questions (v.3) Ratings Criteria No details Relevance 8/10 pts No details Level 8/10 pts Full Marks Clarity 5/5pts

- 2

Total Points: 21

▶ Weekly Review Quiz Week 5 (Oct 1 - 7) 84/91 17.8/25 (71%) 33/91 ▶ Dec: Oct 7 at 11359pm - CMPT233 E100 ▶ ▶ Paper View • Paper View • • Ou are conducting a user report and you've assembled some interview questions. Analyze the following interview questions and answer the pertinent questions. Submitted: Oct 7 at 10:45pm 1. State whether this a good or bad question, and explain why: "Tell me what features you would like to see in this app." Assessment 1. State whether this a good or bad question to the following question: "Do you use this app on a mobile device or desktop computer?" Assessment 1. Write one follow-up question to the following question: "Do you use this app on a mobile device or desktop computer?" Image: 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? 1. Answer: This is app x times per day? No details		a canvas.sfu.ca Ĉ				₫	0 +	
You are conducting a user report and you've assembled some interview questions. Analyze the following interview questions and answer the pertinent questions. Submitted Files: (click to load) 1. State whether this a good or bad question, and explain why: "Tell me what features you would like to see in this app." 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. Submitted Files: (click to load) 1. Write one follow-up question to the following question: "Do you use this app on a mobile device or desktop computer?" 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?" Yiew Rubric 1. State what is wrong with this interview 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? No details & 3/10 pts				33/91				\rightarrow
Comments - The 3rd question is not necessarily bad. In fact, asking about the last time they used it might reveal more insight than	 You are conducting a user report and you've assembled some interview que and answer the pertinent questions. 1. State whether this a good or bad question, and explain why: "Tell me wh 1. Answer: This doesn't tell you about how the user is interacting with 1. designer. Could take the interview off track. 1. Write one follow-up question to the following question: "Do you use the 1. Answer: Follow up: Why do you use this on your (mobile device/dested). 1. State what is wrong with this interview question and suggest an alterna 1. Answer: This is a structured question. It doesn't leave much opportune would be better if we asked how frequently do you use the app? How 	Graded estions. Analyze nat features you the app. A wish I nis app on a mob ktop computer)?	Average Paper View the following in would like to s list is not helpfu ile device or de s the last time y ul information t	/ nterview qu ee in this ap II. The user i II. The user i esktop comp you used thi to be shared	estions op." s not a outer?" s app?"	Submitted Files: (c Assessment Grade out of 25 20 View Rubric Test Questions Criteria Relevance Level	Iick to load) (v.3) Ratings No details 8 / 10 No details 8 / 10 No details 8 / 10 No details	pts stion rily king d it

"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/19xpRcQhsQfVc2ARENdUxs Tuvub5WrHiNEt0HVJjPjPI/edit?usp=sharing