Using Electronic Assessment to save faculty time & improve the measurement of student performance
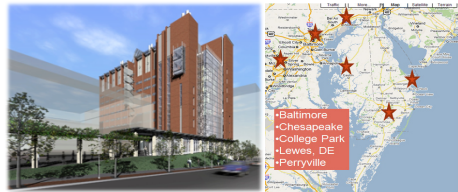
Dr. James F. Craig, Professor, Educational Consultant, jcraig@umaryland.edu; Ms. Sarita Sanjoy, Instructional Technology Specialist, ssanjoy@umaryland.edu OIT

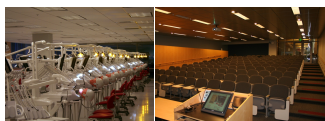Dental School University of Maryland Baltimore – 650 W. Baltimore Street Baltimore MD 21201

1. Introduction

We integrated Questionmark (QM) Perception electronic testing into the curriculum in 2006 to enhance the measurement of student performance and build test item bank for every course/program. This helped reduce faculty/staff time devoted to the preparation, administration, and grading of all the assessments as all aspects of testing is done electronically. All assessments are delivered via school issued laptop with secure browser. Students receive their grades along with feedback on the items they missed as soon as they finish submitting the assessment. Percentage grades are automatically loaded into the Blackboard's course grade book. Reports are generated for faculty to review and identify problematic test items for grade adjustments and improvement. More than 20 question types are available and may include multimedia and case-based questions. More than 200 assessments were delivered in Fall 2010 and because assessments are delivered electronically, "old assessments" don't end up in student test files. An added advantage going electronic is that we have been green and saving 180,000 sheets of paper and many printer cartridges.
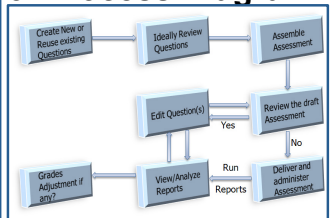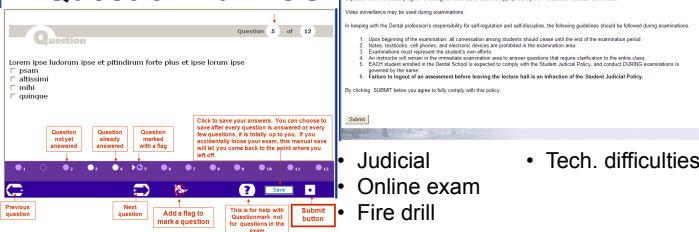
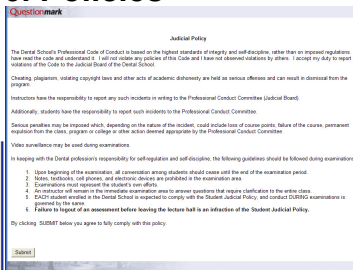## 2. UMB DS Facilities

Facilities contd.

3. Process Diagram

4. Questionmark GUI

5. Exam and Security

6. Policies

- Judicial
- Online exam
- Fire drill
- Tech. difficulties

7. Survey Results

During orientation, the ETC introduced QM & had you take a Mock exam. Did that help prepare you for taking actual QM exam?

Outcome	%	#
Strongly Agree	22%	79
Agree	52%	186
Neither Agree nor Disagree	21%	77
Disagree	5%	17
Strongly Disagree	0%	2
TOTAL	100%	361

Like most & quotes about QM

Response (times mentioned)	#
Immediate feedback (score, items missed)	181
Ease/convenience	18
Paperless (no bubbles, save environment)	15
Can "flag" questions and come back to them	8
Prefer paper and pencil	3
Miscellaneous – having timer, prep for Boards	9

- Know what you missed while content is still fresh in your mind so you can go back and check on correct information
- Less nerve-racking than waiting for a long time for instructors to grade your exam to see your grade and know if you passed
- Can leave faculty feedback concerning missed questions in case they were confusing or miss-keyed
- Reduces stress not having to wait for grades - hopefully

During exams the IT staff is supportive in helping me resolve technical issues.

Outcome	%	#
Strongly Agree	45%	162
Agree	42%	151
Neither Agree nor Disagree	13%	46
Disagree	0%	1
Strongly Disagree	0%	1
Total	100%	361

Overall, I would rate my experience with Questionmark assessments as

Outcome	%	#
Very Satisfied	36%	129
Somewhat Satisfied	48%	175
Neutral	10%	37
Somewhat Dissatisfied	5%	17
Very Dissatisfied	1%	3
Total	100%	361

How many Questionmark assessments have you taken (include quiz, case documentation, survey, typical)?

Outcome	%	#
1 - 10	0%	0
11 - 20	0%	0
21 - 30	2%	6
31 - 40	6%	21
More than 40	92%	334
TOTAL	100%	361

8. Numbers

Spring2010 – to date 44
Fall 2009 - 199
Spring 2009 - 155
Fall 2008 - 158
Spring 2008 - 155