



# CMAT

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# The Problem in General

- Greater reliance on professional literature.
- Evaluation of literature vital to success.
- Little research information.
- Only one such study is known:

Schwartz, A. & Hupert, J. (2003). Medical students' application of published evidence: randomised trial. *BMJ*, 326, 536-538.
- Need for more training.



# The Problem in General (cont.)

## Conclusion:

- There is a need for more research evidence on the impact of the professional literature on clinical decision-making skills.
- What evidence there is suggests a need for more training of students in this critical evaluation skill.



# The Problem Specifically

**Our client, Anita Glicken, identified the need for this tool as such:**

- “There is a need for additional evaluation tools which can be incorporated into standardized patient exams or online Problem-Based Learning cases which address application of clinical evidence in student decision-making.”

**The desired deliverable:**

- “Data collection form and database for research study on physician assistant students’ application of published evidence.”



# Current Methodology

- Diagnose a standardized patient
- Hand-write the initial diagnosis and ordering of the test
- Confer with the supervisor (professor)
- Make a decision
- Hand-write the answer



# Proposed Methodology

- Diagnose a standardized patient
- Use CMAT to verify or change the original diagnosis
- Leave records of the diagnosis and ordering of the tests in the database
- Exit CMAT

\*\*To execute CMAT functionality ColdFusion, Access, and HTML were used



# Team Solution

## ColdFusion and Database Design:

- Dynamic Web-base data collection assessment tool
- Need for database
- Need for Administration tool  
[http://www.designbydi.com/ucdesign/brian/admin/admin\\_login.cfm](http://www.designbydi.com/ucdesign/brian/admin/admin_login.cfm)
- CMAT – students forms  
[http://www.designbydi.com/ucdesign/Brian/student/student\\_login.cfm](http://www.designbydi.com/ucdesign/Brian/student/student_login.cfm)



# Team Solution (cont.)

## Database Tables, Queries, and Reports:

- Access tables
- Queries and reports
- Job aids for Anita



# Team Solution (cont.)

## CMAT Usability:

- Soft Usability
  - ❖ Flexibility of CMAT across medical fields
  - ❖ Abstracts and 4-point matrix
- CMAT Usability
  - ❖ Intuitive – Student Users  
[http://www.designbydi.com/ucdesign/Brian/student/student\\_login.cfm](http://www.designbydi.com/ucdesign/Brian/student/student_login.cfm)
  - ❖ Intuitive – Admin Users  
[http://www.designbydi.com/ucdesign/brian/admin/admin\\_login.cfm](http://www.designbydi.com/ucdesign/brian/admin/admin_login.cfm)



# Team Solution (cont.)

## CMAT Usability:

- In-class evaluation
- Student evaluation form



# Lessons Learned

## Reflections:

- Teamwork and communication are critical
- Must nail down the functional requirement early in the project - when time is limited, you can't afford scope creep
- It always takes longer than you anticipate, so plan for it
- Greatest weakness not doing more usability testing
- Greatest accomplishment: utilizing everyone skills to the best of their ability



# Lessons Learned (cont.)

## Reflections:

- Communicate effectively
- Ask for technical assistance early in the project
- Manage the project – not have the project manage the team
- Work as a team
- Abide by the team agreement
- Do not volunteer additional functionality



# Lessons Learned (cont.)

## Reflections:

- Communication is essential
- File control
- Asking for help
- Working as a team
- Team agreement
- Timing of project vs. class deliverables
- Client scope creep



# Lessons Learned (cont.)

## Reflections:

- Communicate your ideas openly, ask for the feedback right the way
- Do not complain it is distracting in the team environment
- Bring up any problem right the way don't wait until it is too late to avoid conflict
- Listen to you teammates everybody on the team has a lot to offer
- Encourage mentoring



# Lessons Learned (cont.)

## Reflections:

- Communication
- Static vs. Dynamic roles
- Process Flow
- ID: The “Big Picture”



# Q&A