Student Self-Assessment: Guiding Online Learners to Become Better Prepared

Yi Guan-Raczkowski
Director of Distance Learning
Middlesex Community College

Terry McNulty
Assistant Professor of English
Middlesex Community College

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Sandra Couture, Educational Technology Specialist
Middlesex Community College

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Student Self-Assessment: Guiding Online Learners to Become Better Prepared

- Ways of Helping Online Students to Get Ready
- Implementation of Student Self-Assessment
- Data Analyses and Finding
- Integration of the Finding to Improve Support
How well students do?  
**Online vs. On-Ground**

<table>
<thead>
<tr>
<th>Grades</th>
<th>Online</th>
<th>On-Ground</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>33.8%</td>
<td>28.9%</td>
<td>4.9%</td>
</tr>
<tr>
<td>B</td>
<td>21.6%</td>
<td>24.3%</td>
<td>-2.8%</td>
</tr>
<tr>
<td>C</td>
<td>10.4%</td>
<td>16.5%</td>
<td>-6.1%</td>
</tr>
<tr>
<td>D</td>
<td>2.8%</td>
<td>4.5%</td>
<td>-1.7%</td>
</tr>
<tr>
<td>Failed (F, W, N)</td>
<td>31.5%</td>
<td>24.5%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

_Spring 2007_
Grades: Online vs. On-Ground

- **Grade Differences in Percentage: Online vs. On-Ground**

<table>
<thead>
<tr>
<th>Differences</th>
<th>Sp'07</th>
<th>Sum '07</th>
<th>Fall '07</th>
<th>Sp '08</th>
<th>Sum '08</th>
<th>Fall '08</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.9</td>
<td>-5.7</td>
<td>7.7</td>
<td>3.5</td>
<td>-4.6</td>
<td>8.7</td>
</tr>
<tr>
<td>B</td>
<td>-2.8</td>
<td>-11.2</td>
<td>-4.82</td>
<td>-1.7</td>
<td>5.2</td>
<td>-7.9</td>
</tr>
<tr>
<td>C</td>
<td>-6.1</td>
<td>2.8</td>
<td>-4.9</td>
<td>0.7</td>
<td>5.1</td>
<td>-5</td>
</tr>
<tr>
<td>D</td>
<td>-1.7</td>
<td>1.3</td>
<td>-2.1</td>
<td>-0.2</td>
<td>3.53</td>
<td>2.8</td>
</tr>
<tr>
<td>Failed (W, N, F)</td>
<td>7.0</td>
<td>13.0</td>
<td>6.9</td>
<td>6.4</td>
<td>9.9</td>
<td>9.3</td>
</tr>
</tbody>
</table>

- 6% - 13% more students failed in online courses than those in on-ground.
- What can we do to help?
Helping Online Students to Get Ready

On-Campus orientation - first week of an online semester
Online Orientation - Blackboard Vista Tutorials
One-on-one assistance from distance learning staff
Advising – What online courses look like?
Distance Learning web site, information package

Focused on the **technical aspect** of online learning.

-- Advising: What online courses look like?
-- Orientation: How to use basic tools in online learning?

• Consistent poor performance for online learners
• 6%-13% more students failed in online courses than in on-ground courses.

Fall 2008 – Introduced SmarterMeasure test in Advising/Registration for Spring 2009 online students.
A self-diagnostic tool that assesses students’ likelihood for success in learning online: strengths and weaknesses

- Students take the test online at their convenience.
- 30-40 minutes to complete
- Questions/Tasks
  - **Personal attributes**: motivation, self-discipline, and time management
  - **Learning styles**: predominant learning style
  - **Technical competency**: skills and knowledge
  - **Reading comprehension**: speed and comprehension
  - **Typing**: speed and accuracy
Report of a SmarterMeasure Test

- **Summary scores**
  - Reading Comprehension
  - Technical Competency
  - Technical Knowledge
  - Personal Attributes

- **Comparison to national average**
  - Technical Competency
  - Technical Knowledge
  - Reading Comprehension
  - Typing Speed and Accuracy

- **Detailed breakdown scores with explanations**

- **Resources to provide help for improvement**
### Chart: Ranges of Readiness

(Smartermeasure.com, 2008)

<table>
<thead>
<tr>
<th>Section</th>
<th>Version</th>
<th>Fail</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Information</td>
<td>Standard</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Personal Attributes</td>
<td>Higher Education</td>
<td>70</td>
<td>85</td>
</tr>
<tr>
<td>Learning Styles</td>
<td>Higher Education</td>
<td>30</td>
<td>65</td>
</tr>
<tr>
<td>Reading Rate &amp; Recall</td>
<td>10th Grade Level</td>
<td>30</td>
<td>65</td>
</tr>
<tr>
<td>Technical Competency</td>
<td>Higher Education</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>Technical Knowledge</td>
<td>Higher Education</td>
<td>50</td>
<td>75</td>
</tr>
<tr>
<td>Typing Speed &amp; Accuracy</td>
<td>Higher Education</td>
<td>30</td>
<td>65</td>
</tr>
</tbody>
</table>
Implementation Strategies

Starting in the fall of 2008 for Spring ’09 students

Provided test information to advisors and counselors.
Designed a web page linked to distance learning.
Video – Online Classes – Part II
Distributed flyers on campuses.
Published an article in student newspaper.

Built into the first step of Online Orientation.
Integrated to course requirement: English, Psychology, Education
All online courses— added a web link to MxCC’s SmarterMeasure web page.

Distance Learning Staff
- Monitored test summary results.
- Sent three forms of email to students: Incomplete, Failed, Questionable
- Answered questions on how to interpret results and where to find help.
### Implementation – Summary Table

<table>
<thead>
<tr>
<th>Semesters</th>
<th># of Students Taking SmarterMeasure</th>
<th># of Online Students Taken SmarterMeasure</th>
<th># of Online Students</th>
<th>Percentage of Online Students Taking SmarterMeasure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring ‘09</td>
<td>411</td>
<td>399</td>
<td>900</td>
<td>44.3%</td>
</tr>
<tr>
<td>Summer ’09</td>
<td>326</td>
<td>364</td>
<td>584</td>
<td>62.3%</td>
</tr>
<tr>
<td>Fall ’09</td>
<td>317</td>
<td>657</td>
<td>1043</td>
<td>63.0%</td>
</tr>
<tr>
<td>Spring ‘10</td>
<td>358</td>
<td>747</td>
<td>1139</td>
<td>65.6%</td>
</tr>
<tr>
<td>Summer ’10</td>
<td>229</td>
<td>439</td>
<td>669</td>
<td>65.6%</td>
</tr>
<tr>
<td>Fall ’10</td>
<td>301</td>
<td>707</td>
<td>1065</td>
<td>66.4%</td>
</tr>
<tr>
<td>Total</td>
<td>1942</td>
<td>3313</td>
<td>5400</td>
<td>61.4%</td>
</tr>
</tbody>
</table>
Data Analyses

- **Research Question**
  - Whether SmarterMeasure scores relate to students’ grades in online courses?
    - Personal Attributes, Reading Comprehension, Technology Knowledge/Skills, Learning Style, and Typing Proficiency

- **Correlation Study**
  - Correlation between the SmarterMeasure scores and the final grades
# Correlations - Spring ’09 and Summer ‘09

<table>
<thead>
<tr>
<th>Semesters</th>
<th>Number of Cases</th>
<th>Personal Attributes</th>
<th>Reading Comprehension</th>
<th>Technology Knowledge</th>
<th>Technology Competency</th>
<th>Learning Styles</th>
<th>Typing Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring ’09</td>
<td>386</td>
<td>Significant at 0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer ’09</td>
<td>342</td>
<td>Significant at 0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Personal Attributes

- a big player in student success
  - Motivation
  - Self-discipline
  - Time-management
Integration of Data Analyses to Support Potential Online Students

Advising - emphasizing personal attributes

Our assistance is solely on technology - how to use technology, navigate the course, and troubleshoot, but it is **Student’s Responsibility** to complete all assignments on time.

Registered Students: Success Tips

Online orientation – [Step 3. Achieving Success](#)
On-campus orientation
Email and a Note
MxCC Distance Learning Facebook
Quick Reference

Continuing the implementation of student self-assessment.
## Correlation Study – Six Semesters

**Correlations - Yes - significant at .05 level ; Near - between .05 - .10 level**

<table>
<thead>
<tr>
<th>Semesters</th>
<th>Number of Cases</th>
<th>Personal Attributes</th>
<th>Reading Comprehension</th>
<th>Technology Knowledge</th>
<th>Technology Competency</th>
<th>Learning Styles</th>
<th>Typing Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring '09</td>
<td>386</td>
<td>Yes</td>
<td>Near = 0.07</td>
<td>Near - = 0.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer '09</td>
<td>342</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Near = .007</td>
</tr>
<tr>
<td>Fall '09</td>
<td>619</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Spring '10</td>
<td>715</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer '10</td>
<td>413</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall '10</td>
<td>678</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>3228</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Near = 0.08</td>
</tr>
</tbody>
</table>

- Statistically significant correlation is **Personal Attributes** in 3228 cases
- **Personal Attributes** consistently play a major role in student success.
- **Technology Knowledge/Competency, Learning Style, and Reading Comprehension** affect student success.
Comparison - Failed Online Students

Percentage of Failed Online Students Before and After SmarterMeasure Implementation

SmarterMeasure - Implemented from Spring 2009 – Fall 2010

<table>
<thead>
<tr>
<th>Years</th>
<th>Spring</th>
<th>Summer</th>
<th>Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2010</td>
<td>24.6%</td>
<td>13.6%</td>
<td>27.9%</td>
</tr>
<tr>
<td>Year 2009</td>
<td>27.0%</td>
<td>13.5%</td>
<td>28.7%</td>
</tr>
<tr>
<td>Year 2008</td>
<td>31.3%</td>
<td>16.3%</td>
<td>33.5%</td>
</tr>
<tr>
<td>Year 2007</td>
<td>31.5%</td>
<td>23.3%</td>
<td>33.4%</td>
</tr>
</tbody>
</table>
After SmarterMeasure was implemented, 3% - 5% more students failed in online courses than in on-ground courses. Fewer online students failed when SmarterMeasure was implemented.
What is Next?

Find ways to help more students.
--- 3% - 5% more students failed in online courses than in on-ground courses.

- Personal attributes is a big player in online success
  - Highly emphasize personal attributes in advising and orientation
  - Rewrite Success tips: Study Strategies and Technical tips

- Identify online courses with high failing rates and look into the possible reasons: design, teaching, student readiness.

- Reading comprehension affects student grade (McNulty, 2010)
  - Assist poor readers who take online courses
    - Tutorials on how to interpret test results.
    - Online Orientation
      - Text-based -> a human-like tutorial – screen captures, voices, interactive – self-test
    - Course Design
      - Develop more presentations with professor’s voice in online courses.
Special Thanks

Terry McNulty
Assistant Professor of English

Sandra Couture
Educational Technology Specialist

Middlesex Community College
Middletown, Connecticut
References
