Student Self-Assessment: Guiding Student Preparation, Deepening Reading Comprehension through Course Design

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

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"I Assume(,) You can Read: READI Reading Comprehension and Online Student Success in An Open Enrollment Institution"

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"I Assume(,) You can Read: READI Reading Comprehension and Online Student Success in An Open Enrollment Institution"

- The relationship between student reading comprehension and online success.
- Ways that institutions can help students with limited reading comprehension meeting their academic potential.

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 Finding to Improve Support

How well students do?
Online vs. On-Ground

Spring 2007			
Grades	Online	On-Ground	Differences
A	33.8%	28.9%	4.9%
B	21.6%	24.3%	-2.8%
C	10.4%	16.5%	-6.1%
D	2.8%	4.5%	-1.7%
Failed (F, W, N)	31.5%	24.5%	7.0%

Grades: Online vs. On-Ground

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

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

- 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

Fall 2005

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

Fall 2008

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.

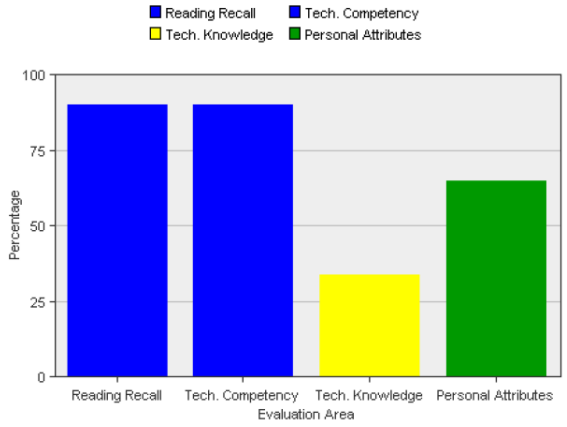
Fall 2008 – Introduced READI test in Advising/Registration for Spring 2009 online students.

Student Self-Assessment

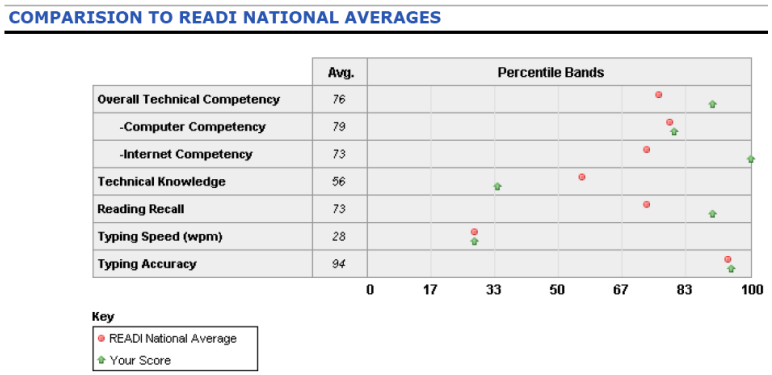
- A Self-diagnostic tool that assesses students' likelihood for success in learning online: Strengths and Weaknesses
  - Students take the test online at their convenience
  - 30-40 minutes to complete
  - Questions/Tasks
  - **Personal attributes**: motivation, self-discipline, and time management
  - **Learning styles**: predominant learning style
  - **Technical competency**: skills and knowledge
  - **Reading comprehension:** speed and comprehension
  - **Typing:** speed and accuracy

Report of a READI Test

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



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



- **Detailed breakdown scores with explanations**
- **Resources to provide help for improvement**

Chart: Ranges of Readiness

Section	Version	Fail	Question
Personal Information	Standard	n/a	n/a
Personal Attributes	Higher Education	(70)	(85)
Learning Styles	Higher Education	(30)	(65)
Reading Rate & Recall	10th Grade Lev	(30)	(65)
Technical Competency	Higher Education	(80)	(90)
Technical Knowledge	Higher Education	(50)	(75)
Typing Speed & Accuracy	Higher Education	(30)	(65)

(Smartermeasure.com, 2008)

READI 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.
Distributed flyers on campuses.
Published an article in student newspaper.

Built into the first step of Online Orientation.
Integrated to course requirement: English, Psychology
All online course – a web link to READI web page

Distance Learning Staff
- Monitored test summary results.
- Sent to students three forms of email: Incomplete, Failed, Questionable

READI Implementation – Summary Table

Semesters	# of Students Taking READI	# of Online Students Taken READI	# of Online Students	Percentage of Online Students Taking READI
Spring '09	411	399	900	44.3%
Summer '09	326	364	584	62.3%
Fall '09	317	657	1043	63.0%
Spring '10	358	747	1139	65.6%
Total	1412	2167	3666	58.8%

Data Analyses

- Research Question
  - Whether READI scores relate to students' grades in online courses?
    - Personal Attributes, Reading Comprehension, Technology Knowledge/Skills, Learning Style, Typing Speed
- Correlation Study
  - Correlation between the READI scores and the final grades

Correlations - Spring '09 and Summer '09

Semesters	Number of Cases	Personal Attributes	Reading Comprehension	Technology Knowledge	Technology Competency	Learning Styles
Spring '09	**386**	Significant at 0.01				
Summer '09	**342**	Significant at 0.01				

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 help focuses on technology - how to use technology, how to navigate the course, and troubleshooting, but it is Student's Responsibility to complete the work.

Registered Students: Success tips

Online orientation – Step 3

On-campus orientation

MxCC Distance Learning Facebook

Information package

Continuing the implementation of student self-assessment.

Correlation Study - Four Semesters

Semesters	Number of Cases	Personal Attributes	Reading Comprehension	Technology Knowledge	Technology Competency	Learning Styles
Spring '09	386	Yes = 0.00	Near = 0.07		Near = 0.07	
Summer '09	342	Yes = 0.03				Near = .007
Fall '09	619	Yes = 0.00		Yes = 0.02		
Spring '10	715	Yes = 0.01				
Overall	2062	Yes = 0.00			Yes = 0.03	

Statistically significant correlation - Personal Attributes , Technology Competency

Personal Attributes consistently play a major role in student success.
Technology Competency affects student success.

Grade Comparison after READI

Differences	Sp '09	Sum '09	Fall '09	Sp '10
A	6.9	-2.1	12.3	5.1
B	-3.6	-4.8	-7.2	-3.0
C	-15.1	2.5	-5.3	-2.7
D	-1.4	2	-3	-0.2
Failed (F, W, N)	3.7	3.1	4.9	2.5

After READI was implemented, 3% - 5% more students failed in online courses than in on-ground courses. Fewer online students failed when READI was implemented.

Differences	Sp'07	Sum '07	Fall '07	Sp '08	Sum '08	Fall '08
A	4.9	-5.7	7.7	3.5	-4.6	8.7
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What is Next?

Find ways to help more students to succeed.

--- 3% - 5% more students failed in online courses than in on-ground courses.

Student Self-Assessment: Guiding Student Preparation and Deepening Reading Comprehension through Course Design

"I Assume(,) You Can Read: READI Reading Rate and Recall and Online Student Success in An Open Enrollment Institution"

Research Questions

- General Research Question:
  - What are the implicit assumptions community college faculty make about the reading skill of first semester college students, what is the actual reading skill of first semester college students, and what are the implications of any false assumptions? Do these assumptions and their implications change between a traditional brick and mortar class and an online class?
- Specific Research Question (this presentation):
  - What is the relationship between reading rate and recall as portrayed by READI and student success in online courses?

What Is the READI Reading Rate/Recall Test?

- The READI test measures student **reading rate** and student **reading recall.**
- Test administrators may choose from several different passages of varying difficulty.
- The test is not intended to be deep or comprehensive; it intends to assess only those skills students will most often need in online classes (efficiency and recall).

Grade Level	Topic	Flesh-Kincaid Grade Level	Flesh Reading Ease	Number of Words
8	Pencils	8.3	59	471
9	Cell Phones	9.8	52.4	510
10	Neil Armstrong	10.1	53.8	635
11	Information Literacy	11.5	38.7	414
12	Batteries	12.9	42.8	652
13	Contact Lenses	13	40	720

(readi.info, 2010)

Assessment and Outcome

- After reading a short passage, students answer 10 literal, multiple choice questions about the passage.
- Students who "fail" or score "questionable" on this portion of the READI are recommended for reading remediation.
- Students are still allowed to enroll in online classes as long as their Accuplacer (intake) reading score shows they meet appropriate prereqs.

Strengths and Weaknesses of READI Reading Rate/Recall

Strengths

- The test does assess a student's reading speed.
- The test does assess a student's reading recall.
- The test is a good measure of the reading skills needed to succeed on online reading quizzes.

Weaknesses

- The test does not assess student capacity to make inferences (application).
- The test does not assess student capacity to respond to a reading (analyze).
- The test does not assess student capacity to interpret information (evaluation).

As the name of the test implies, the READI Recall and Rate test measures a student's ability to **understand and remember**, not their ability to **apply, analyze, or evaluate.**

Rate, Recall and Thinking

- As the "New Bloom's Taxonomy" (Pusateri et. al 93) demonstrates, rate and recall are low levels of thinking and not measures of deep comprehension.
- If a significant number of students who struggle with reading and recall fail an online class, it's possible that a more sensitive reading instrument would determine that other failing students are struggling with higher orders of reading.

Looking at MxCC's Data

- In this presentation we'll examine one set of data:
  - What percentage of students who failed or scored questionable on READI reading did not pass online courses?
- In other words, this data will demonstrate the **percentage of struggling readers who did not pass online courses** between Spring 2009 and Spring 2010.
- The hypothesis is not that student failure is necessarily rooted in reading, but that reading is likely a contributing factor to student failure.

Spring 2009 Results

21% of students who struggle to read did not pass their online course.

- In Spring 2009, 230 students failed or scored questionable on READI reading.
- Of those struggling readers, 49 (21%) did not pass their online courses.

Summer 2009 Results

15% of students who struggled to read did not pass their online course.

- In Summer 2009, 46 students failed or scored questionable on READI reading.
- 7 students (15%) who failed or scored questionable on READI reading did not pass their online courses.

Fall 2009 Results

80% of students who struggled to read did not pass their online course.

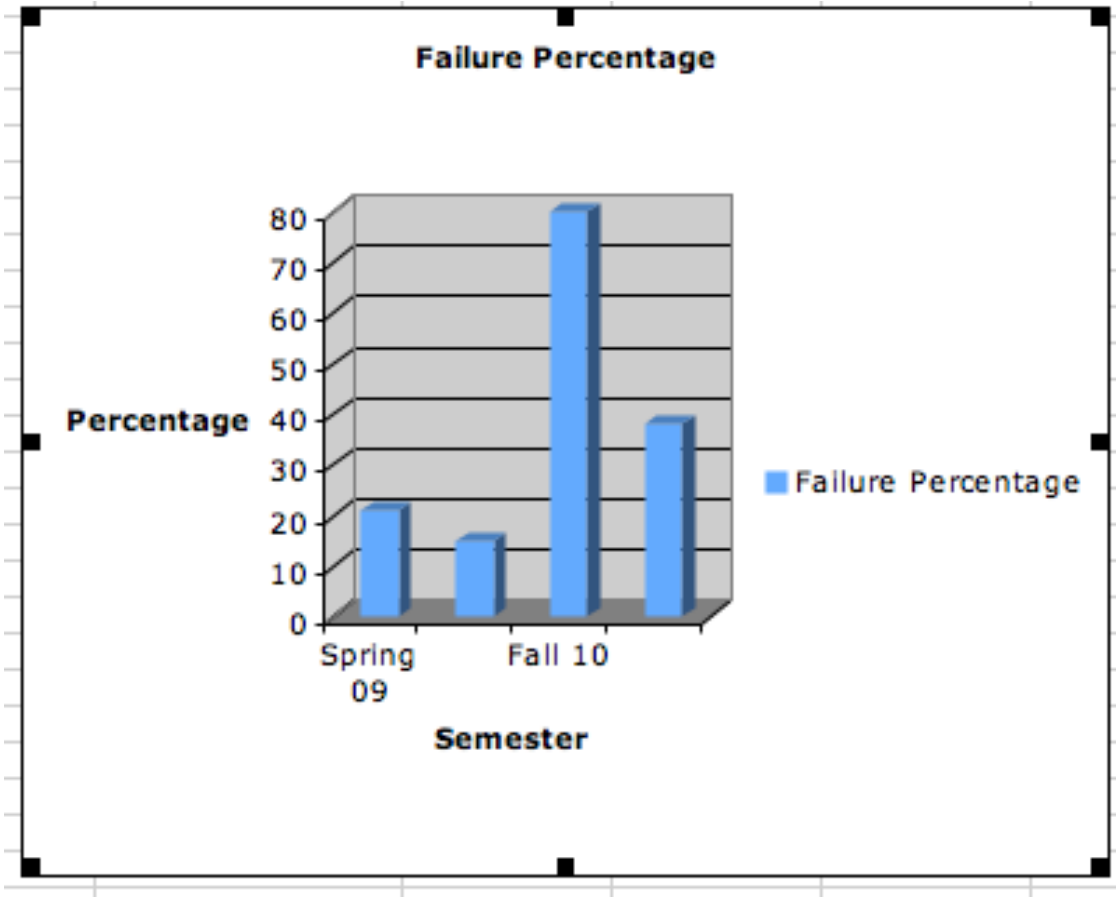
- In Fall 2009, 35 students failed or scored questionable on READI reading.
- 28 of those students (80%) did not pass their online classes.

Spring 2010 Results

38% of students who struggled to read did not pass their online course.

- In Spring 2010, 69 students failed or scored questionable on READI reading.
- 26 of those students (38%) did not pass their online courses.

% of READI Reading Failures Failing an Online Class



Over four semesters, 29% of students who failed or scored questionable on READI Reading failed to pass online classes.

How the Numbers Have Shifted

- The total numbers are skewed by the Spring '09 semester, which saw 61% of all READI reading failures.
- If Spring '09 is excluded, we see that **41% of all students who failed or scored questionable on READI reading did not pass online classes** (rather than the 29% if that semester is included).
- In Fall '09, MxCC introduced new reading prerequisites which altered the pool of students taking READI. These students should have been more reading prepared.
- If we look at only the two semesters since the new reading prereq was put in place, we see that the number of students who failed READI reading has been stable. However, 52% of students who failed or scored questionable on READI reading failed online courses.

- **Most simply: As the total number of test takers became more proficient, READI Reading and Recall has become a more accurate predictor of online course failure.**

Implications

- Student failure is generally caused by a series of entangled reasons.
- We can't disentangle student motivation (a leading cause of student failure in an online class) from student reading skill because motivation may positively or negatively impact that skill.
- It seems clear from these first four semesters of data collection, however, that **if a student struggles with reading recall, there's an almost 30% chance (or greater, depending on the student body) they'll fail their online class.**
- If a student fails a class because they're not invested, that's one thing.
- But what if our students are failing classes because they can't meet our implicit expectations of their reading level? Whose problem is that, and what do we do about it?

Strategies: Online Classes for Struggling Readers

- ✓ "California's Experience with Distance Education for Adult Basic Learners" (Porter, 2004)

- Although many initially doubted that online modules would be successful for struggling readers, Porter found that online classes for beginning readers were as effective as traditional classes (and sometimes more effective) *as long as course material was appropriate to student reading level.*

Strategies: Online Classes for Struggling Readers

- ✓ "Student Success in Face-To-Face and Distance Teleclass Environments: A matter of contact?" (Deka and McMurry, 2004)
- Deka and McMurry found that reading comprehension and "scholastic competence" were the greatest indicators of student success online.
- They also found that student-initiated contact played a near significant role in student success online.

Strategies: Online Classes for Struggling Readers

- ✓ “Tech Talk: Developing Online Reading Courses” (Caverly and McDonald, 2000).
- Caverly and McDonald argue that while more advanced readers benefit from the inquiry model of education generally found in post-secondary environments, struggling readers need explicit reading skill instruction from their content area faculty.

Strategies: Online Classes for Struggling Readers

- ✓ "E-Learning for adult literacy, language and numeracy" (Davis and Fletcher, 2010).
- The number one recommendation of Davis and Fletcher is that reading tutors receive the professional development necessary to implement e-learning. This could justifiably be inverted to the recommendation that faculty teaching online classes should receive the necessary professional development to assist students with reading deficits.

The Struggling Reader Is More Likely to Succeed in an Online Class When …

- ✓ The implicit expectation of reading level matches the student's actual reading level.
- ✓ If a student's reading level does not match the instructor's implicit expectation …
- ✓ … then the instructor must create an environment where the student feels comfortable contacting that instructor.
- ✓ If a student is in a class that demands higher level reading skills than they posses, it is imperative that the instructor is trained to provide some explicit reading instruction/reading strategies.
- ✓ If this is not possible, institutions should have reading tutoring readily available -- both on ground and online. This tutoring should span the student's entire college career.

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Next Questions

1. What is the relationship between more sensitive reading assessments (such as the Accuplacer) and student success in online classes?
2. Does student reading level impact online, hybrid and on ground performance differently? If so, how so?
3. What is the overall performance of students with low reading skills over their college careers? Is this different between online students and on ground students?

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