

Successful Redesigns
Proof and Process in
the Algebra Sequence

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Comparison of Results on Intermediate Algebra Common Final

Cohort

	Final Exam Mean		# of Test Takers	
	Redesign	Traditional	Redesign	Traditional
Fall 2009	77.3%	71.8%	195	184
Spring 2010	72.5%	61.7%	183	150
Fall 2010	68.9%	64.4%	187	156
Spring 2011	70.9%	62.5%	220	156

Percentage passing the common final among Cohort

			# of Test Takers	
	Redesign	Traditional	Redesign	Traditional
Fall 2009	76.9%	58.7%	195	184
Spring 2010	60.7%	39.3%	183	150
Fall 2010	48.1%	43.6%	187	156
Spring 2011	59.5%	31.4%	220	156

Comparison of Results on Intermediate Algebra Common Final

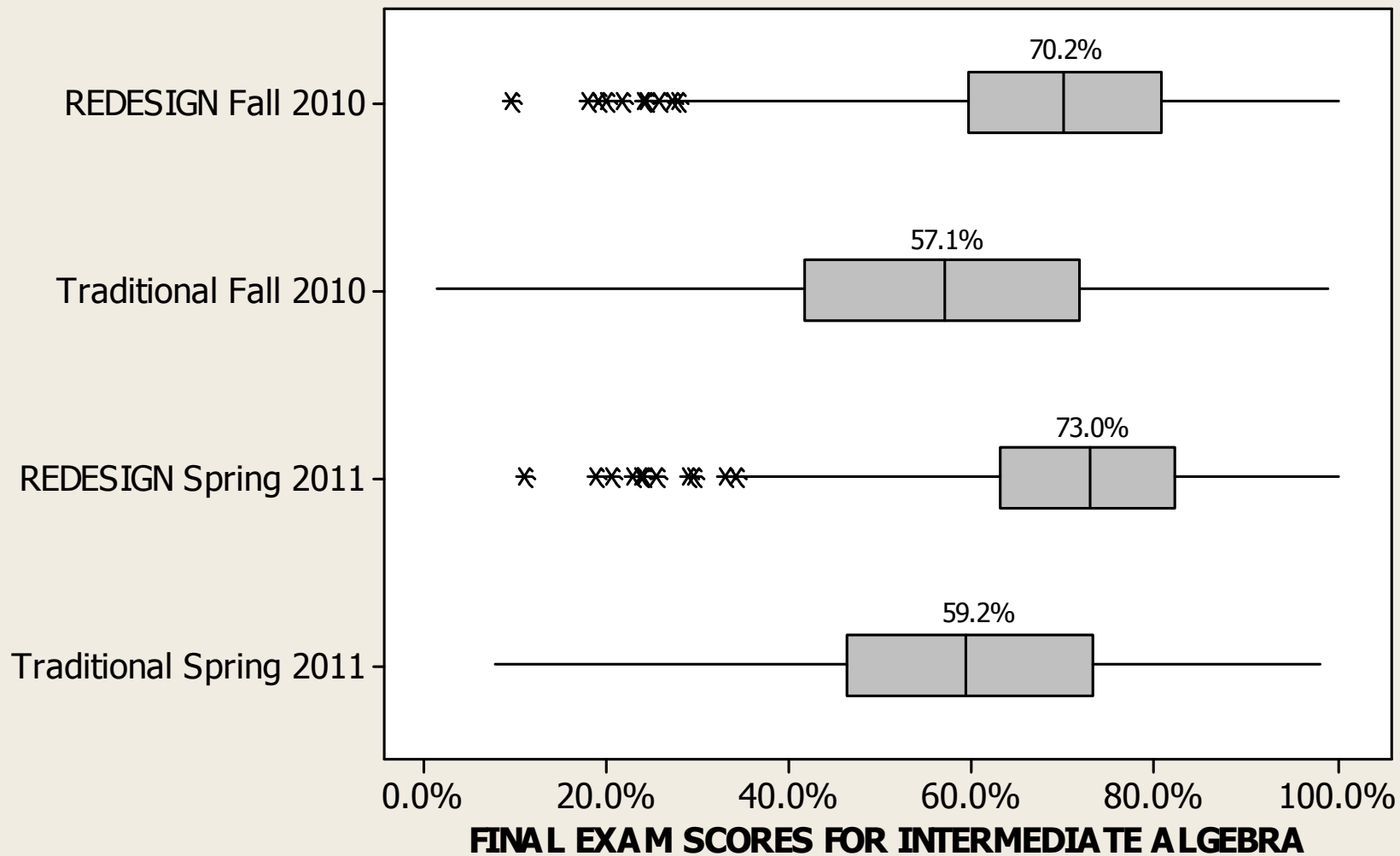
All Students Taking Intermediate Algebra

	Final Exam Mean		# of Test Takers	
	Redesign	Traditional	Redesign	Traditional
Fall 2009	77.5%	68.1%	222	1122
Spring 2010	72.5%	58.2%	183	723
Fall 2010	69.6%	57.1%	441	978
Spring 2011	72.0%	58.6%	450	475

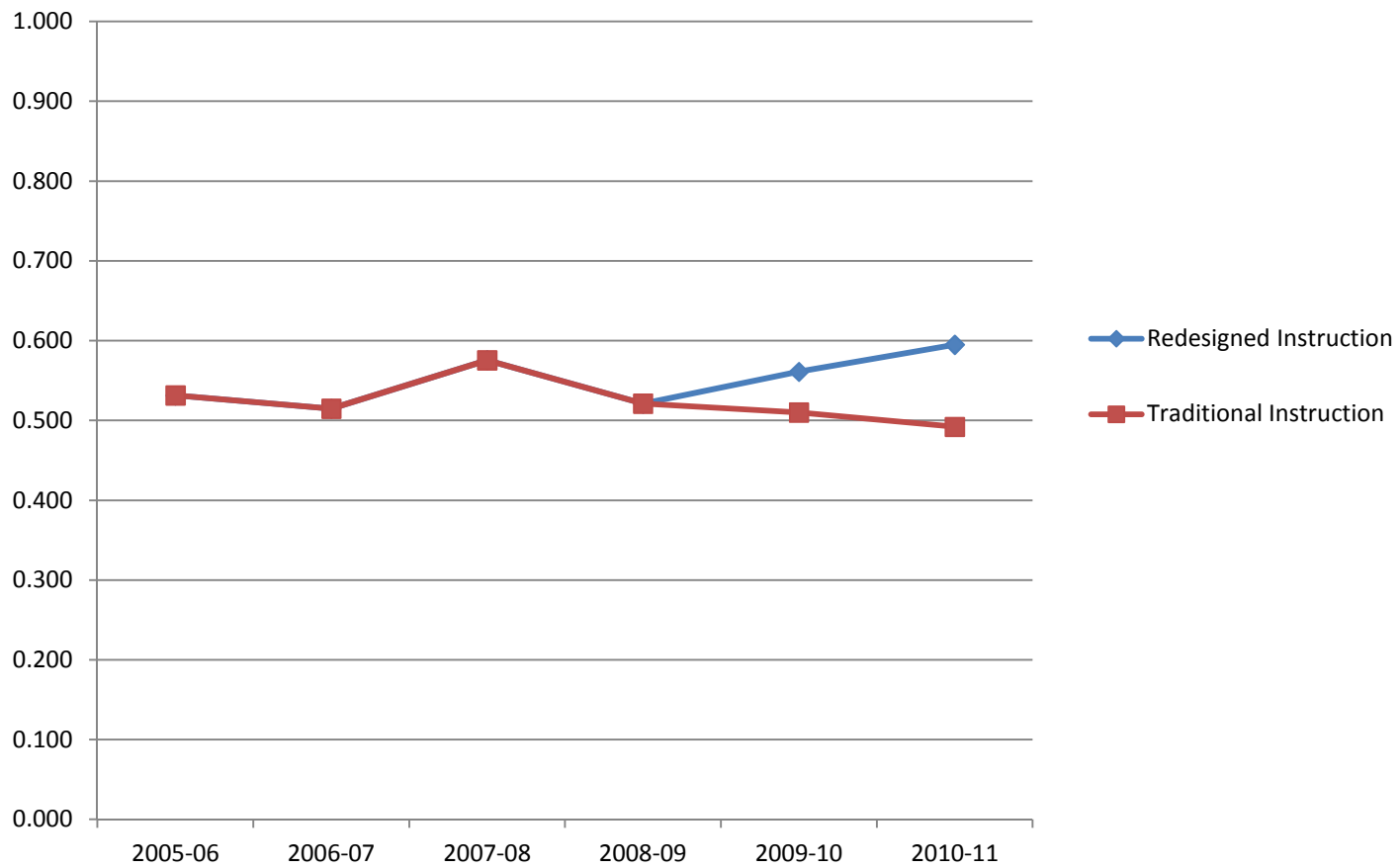
Percentage passing the final among all students taking Intermediate Algebra

	Percentage Passing		# of Test Takers	
	Redesign	Traditional	Redesign	Traditional
Fall 2009	77.5%	49.2%	222	1122
Spring 2010	60.7%	28.8%	183	723
Fall 2010	51.0%	28.4%	441	978
Spring 2011	60.2%	28.5%	450	475

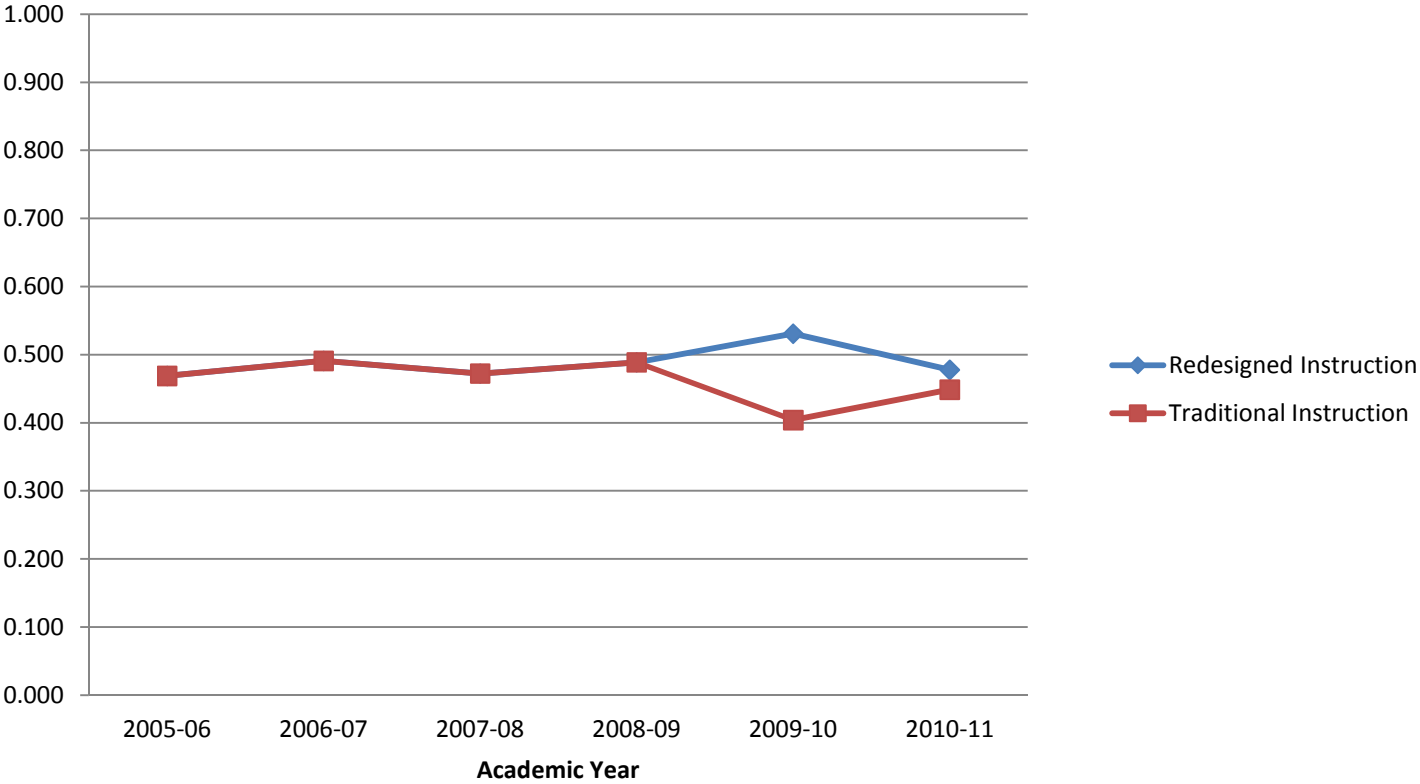
Comparison of Final Exam Scores for Redesign and Traditional Classes



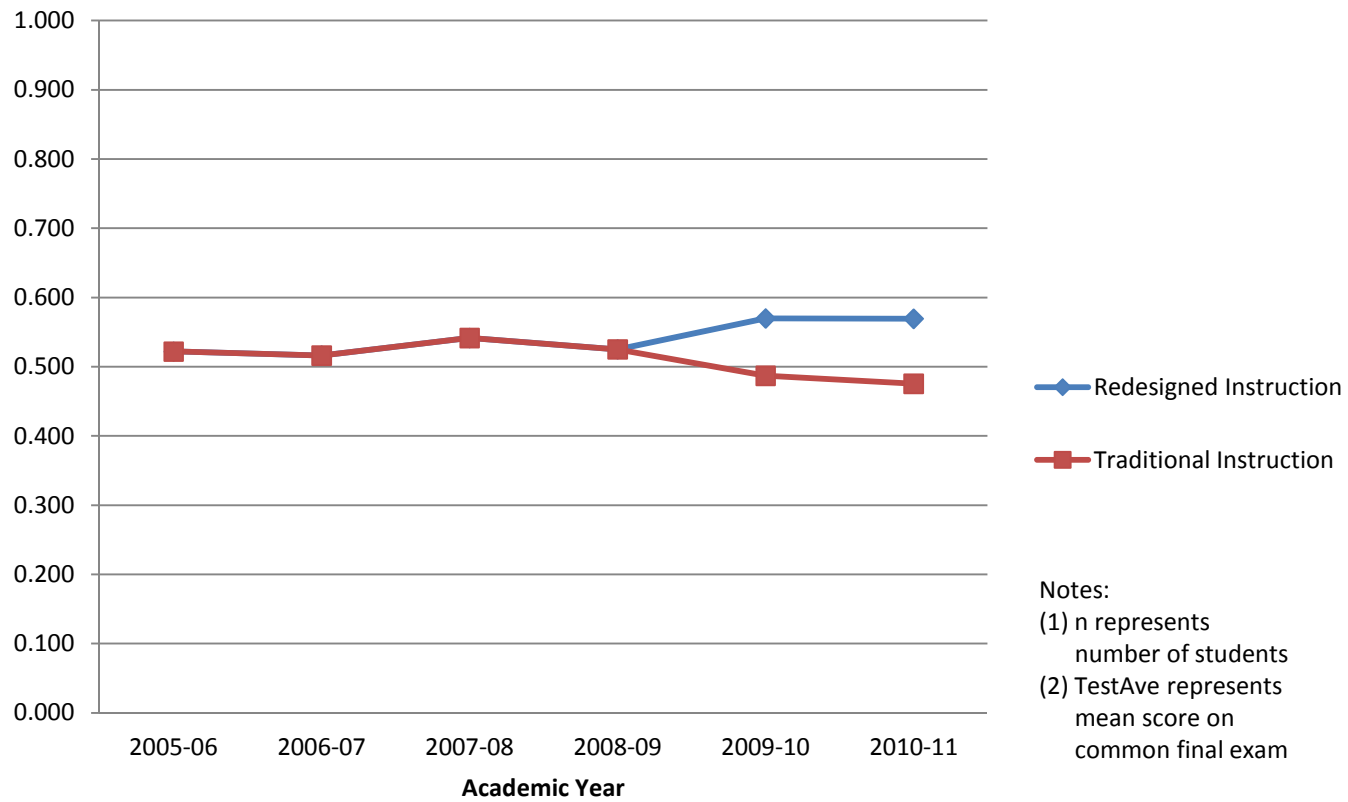
MAT1033 Fall Term Success Rates



MAT1033 Spring Term Success Rates



MAT1033 Success Rates



Success Rates by Term in Intermediate Algebra

	Redesign	Traditional
Fall 2009	0.561	0.510
Fall 2010	0.595	0.492

	Redesign	Traditional
Spring 2010	0.531	0.404
Spring 2011	0.478	0.449

Comparison of Results on College Algebra Common Final

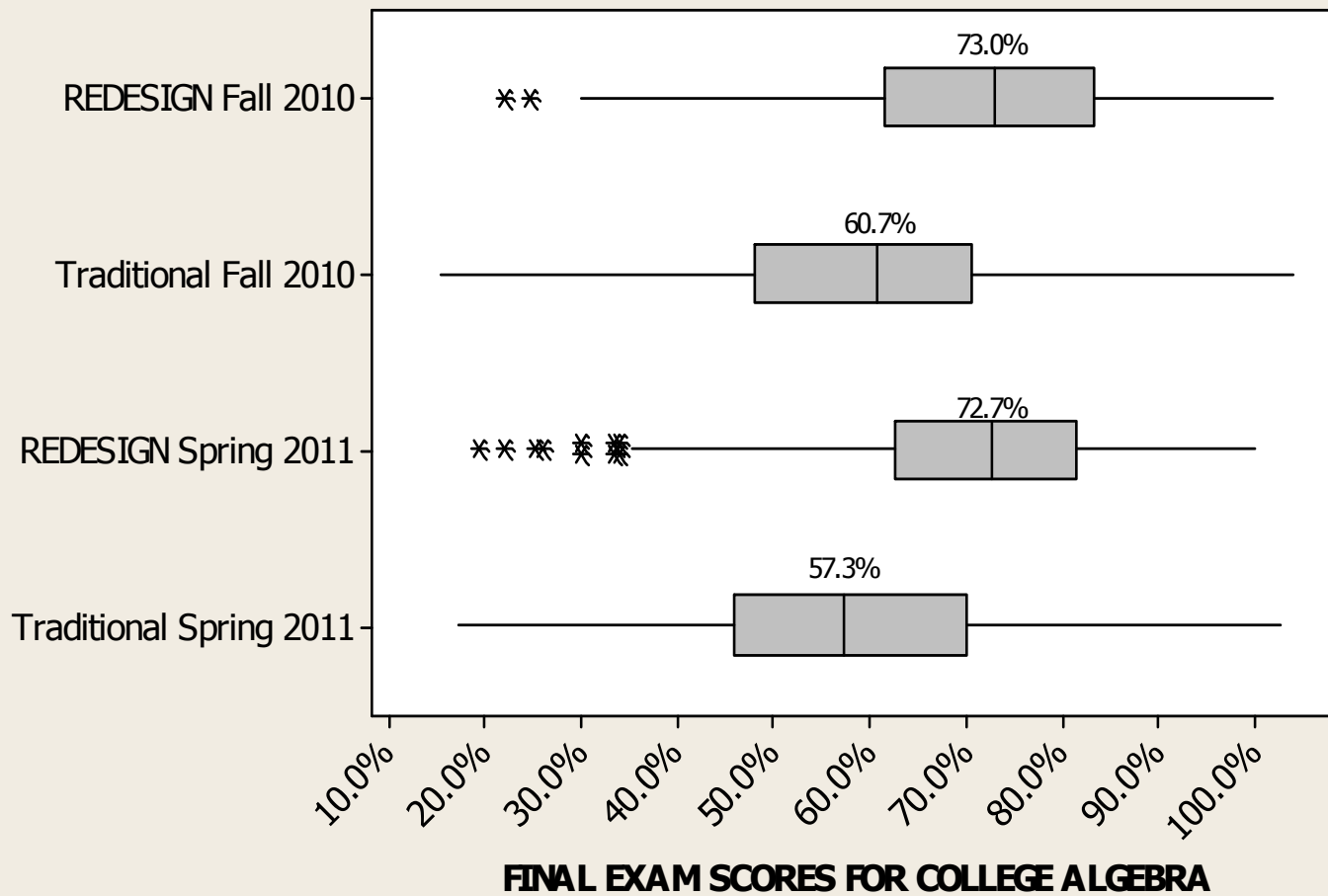
Mean Scores

	Final Exam Mean		# of Test Takers	
	Redesign	Traditional	Redesign	Traditional
Fall 2010	71.7%	59.2%	245	742
Spring 2011	71.0%	58.1%	464	647

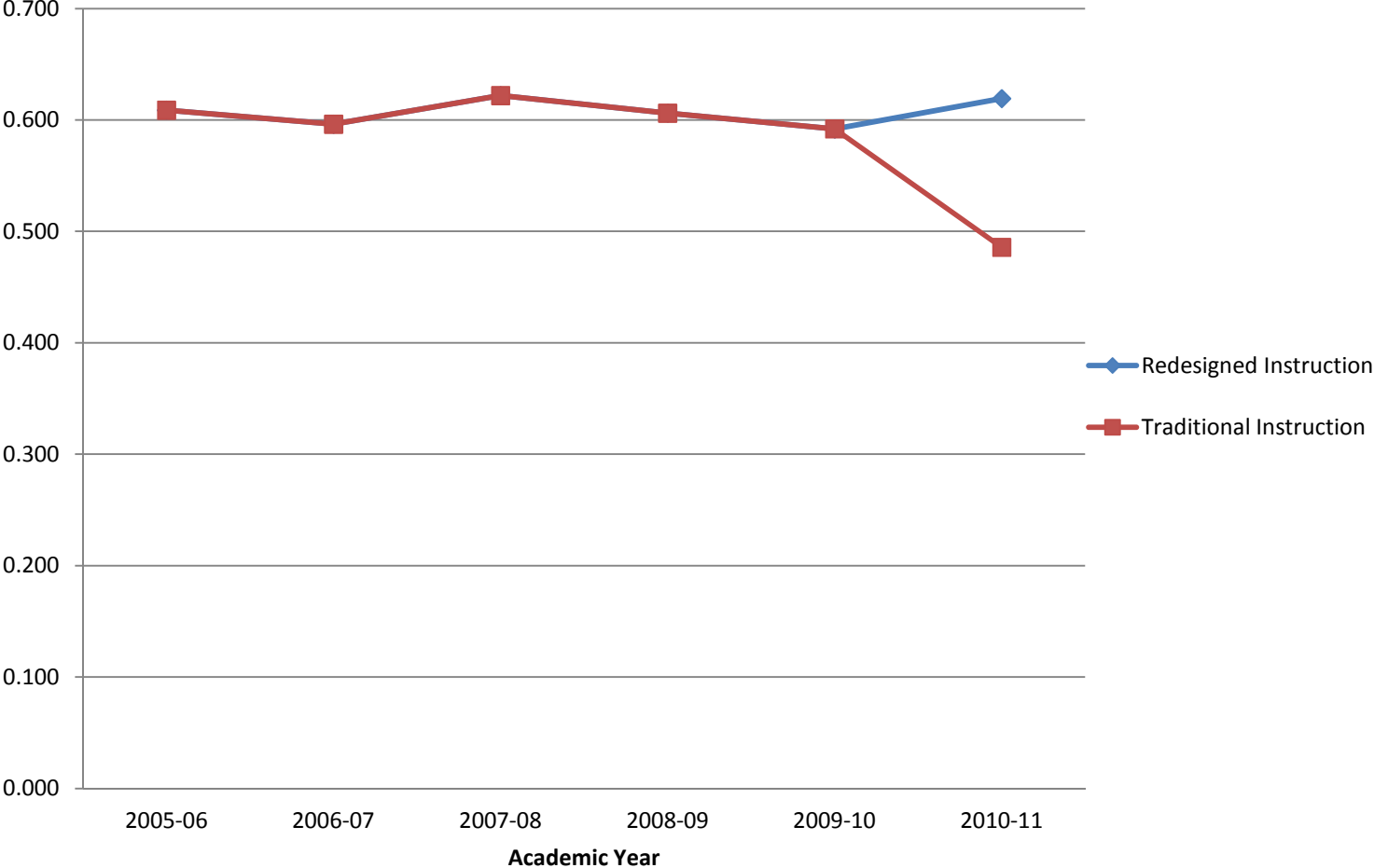
Percentage Passing

			# of Test Takers	
	Redesign	Traditional	Redesign	Traditional
Fall 2010	59.96%	26.89%	245	742
Spring 2011	58.6%	25.3%	464	647

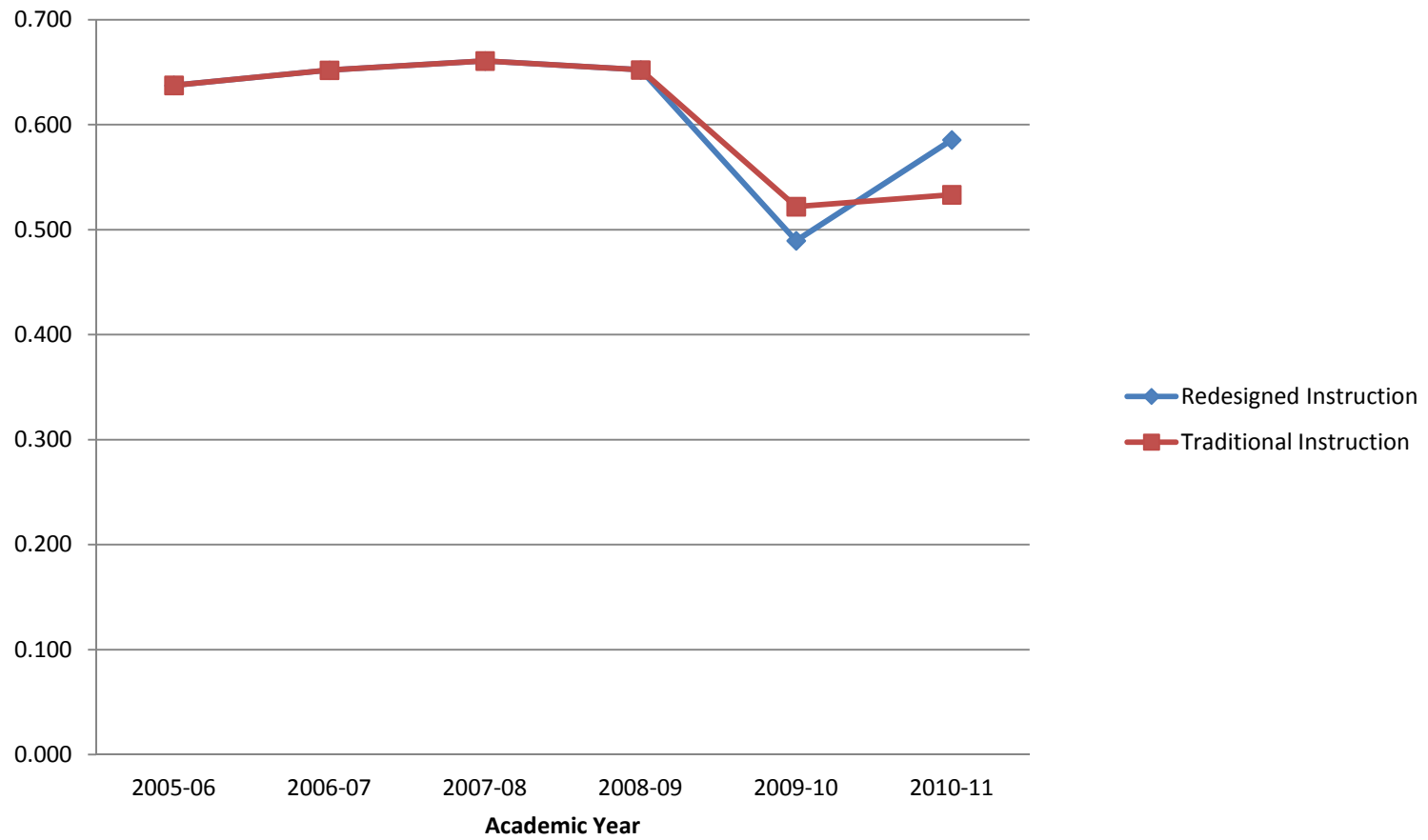
Comparison for Final Exam Scores for Redesign and Traditional Classes



MAC1105 Fall Term Success Rates



MAC1105 Spring Term Success Rates



Success Rates by term in College Algebra

	Redesign	Traditional
Spring 2010	0.490	0.522
Spring 2011	0.585	0.533

	Redesign	Traditional
Fall 2010	0.619	0.486

College Algebra Redesign Components

- **Common Final Exam**
 - *Multiple choice 50%*
 - *Free response 50%*
 - Requires work shown
 - Writing about mathematics
 - Graded by a team of instructors

College Algebra Redesign Components

- Common Grading Scale

- *Proctored Tests:* = 50%

- *Common Final Exam:* = 25%

- *Online Assessments:* = 10%

- *Projects & Activities:* = 10%

- *Other (instructor choice):* = 5%

- The “other” 5% may be added to any another category except for the final exam, OR may be used for a new category, as determined by the individual instructor. Most instructors are adding the 5% to the Online assessments category.)

College Algebra Redesign Components

- **Common Topical / Sectional Coverage**
 - *Uniform topical/sectional coverage as determined by the College Algebra Redesign Team (CART)*
 - *Additional topics are allowed at instructor discretion*
 - *Applicable reading assignments and homework exercises selected by CART*

College Algebra Redesign Components

- Emphasis on applications and multiple approaches to problem solving
 - *Critical thinking*
 - *Writing and interpreting*
 - *Using Rule of Four*
 - *Integrating topics with constant review*

College Algebra Redesign Components

- Real World introductions to major topics
 - *Brief discussion or class activity*
 - *Pool of possible introductions provided for instructors*

College Algebra Redesign Components

- **Group Activities and Projects**

- ***In-class Activities:*** *At least 8 throughout course of semester*

- Collaborative activities may be selected from a pool or personally developed. The activities may be graded or non-graded. Activities may be defined as group/partner activities completed during class time with emphasis on problem solving, modeling, applications and/or use of the Rule of Four. Activities should NOT be skills-based.

- ***Projects:*** *At least 3 throughout course of semester*

- The projects may be selected from a pool or personally developed. Projects may be defined as out-of-class, individual/partner/group activities with emphasis on applications, modeling and interpreting data and/or use of the Rule of Four. Projects should provide opportunity for some writing about Mathematics.

College Algebra Redesign Components

- Common Online Assessments (homework and quizzes)
 - *Online homework should allow for multiple attempts with “helps” allowed*
 - *Online quizzes should allow for 2 – 3 attempts with best attempt recorded for grade; no “helps” allowed (60 minutes per attempt)*
 - *Custom questions have been developed and added to the common course*
 - *Assessments have been created by CART, but instructors may modify in minor ways at their discretion*

Intermediate Algebra Redesign Components

- Emporium (Studio)
- Standardization:
 - *Common Course Syllabus*
 - *Common Homework Assignments*
 - *Common Quizzes*
 - *Staggered but Common Due Dates*
 - *Common Exams including Final*
 - *Common Grading Scale*
- Opportunity for Multiple Attempts (Mastery)
- Required Attendance:
 - *Focus Group*
 - *Studio (Students don't do optional!)*
- If we can get them to do the work, they will most likely be successful.

Intermediate Algebra

Survey Questions	Percentage that Agree
Overall, I am satisfied with the Math Studio experience.	83.9%
Overall, I have enjoyed the course so far.	75.5%
The way the class is set up helps me stay on task with learning the course material.	79.2%
Overall, I feel this course is helping me improve my study habits.	74.3%
Overall, my attitude towards Mathematics is now more positive.	65.8%
I would recommend a studio class to my friends.	77.6%

N=322

College Algebra

Survey Questions	Percentage that Agree
The group activities completed in help me understand the course material.	89.3%
The assigned projects help me understand the course material.	79.2%
This course has helped me to see how Math is used in the real world.	69.7%
The way this class is set up helps me stay on task with learning the course material.	79.7%
Overall, I fell this course is helping me to learn Math.	84.1%
Overall, I feel this course is helping me improve my Math study habits.	69.9%
Overall, this course has improved my attitude towards Math.	58.7%

N=383

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