

Developmental Education Update



Board of Trustees Academic and Student Affairs Committee
October 21, 2014

Minnesota State Colleges and Universities

The Minnesota State Colleges and Universities system is an Equal Opportunity employer and educator.

Overview of presentation

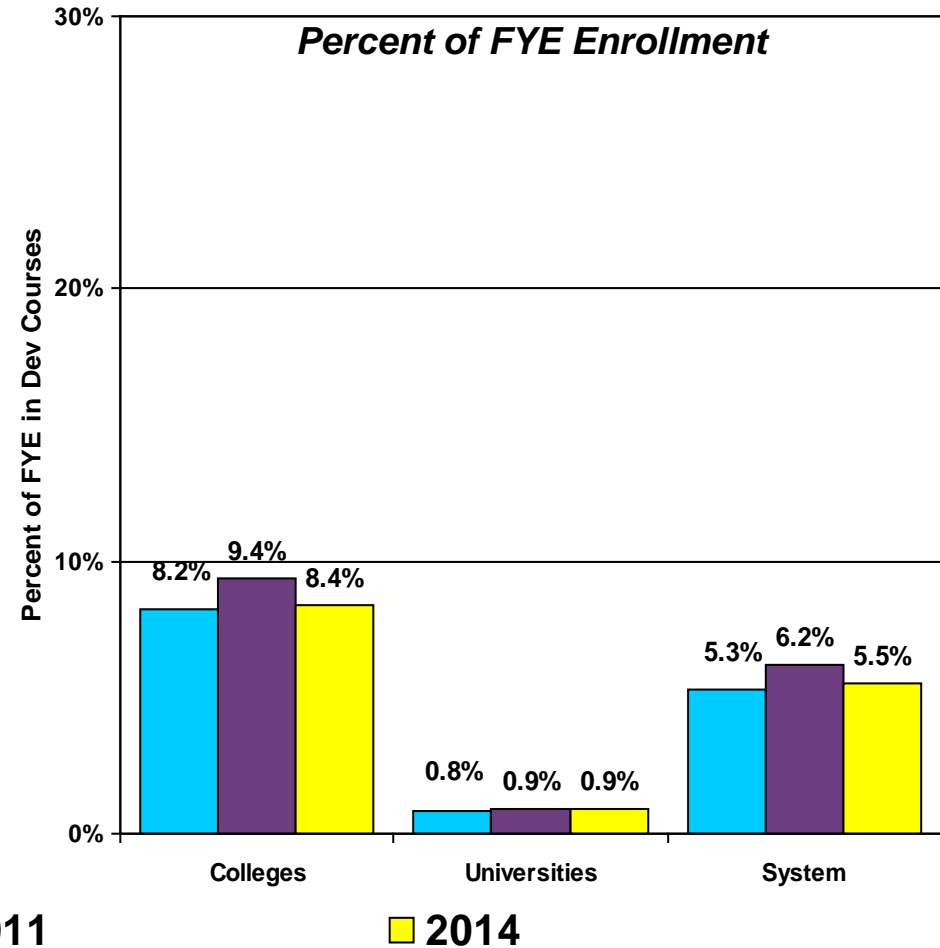
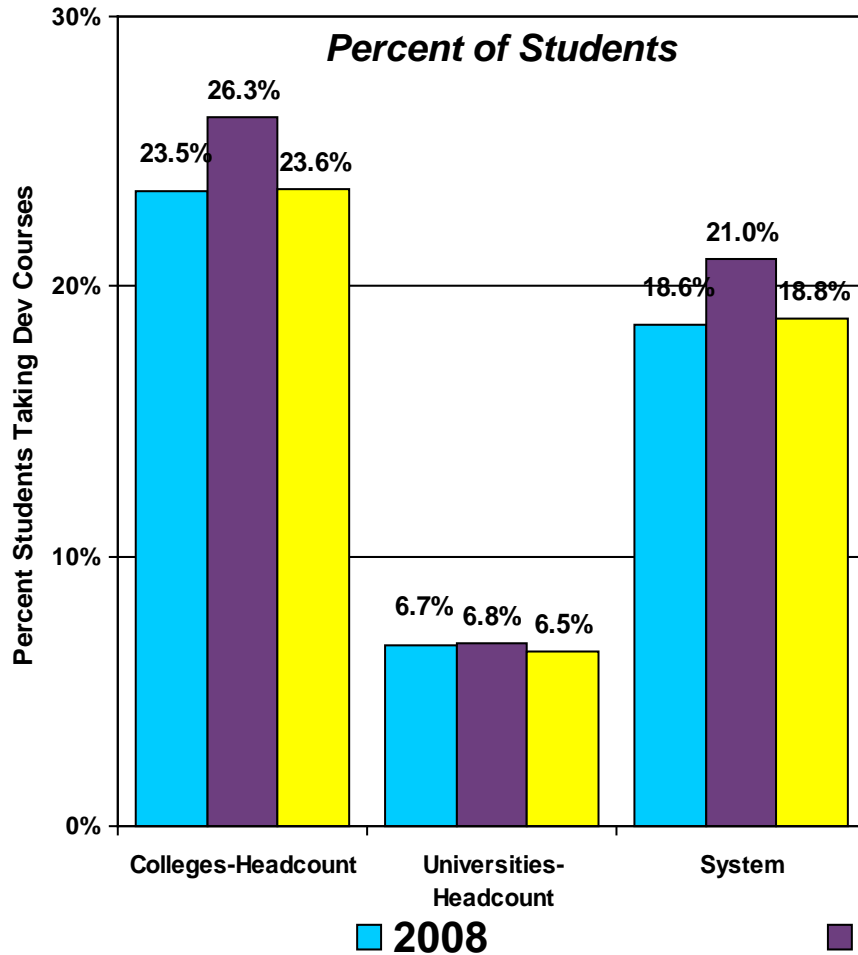
- Overview of developmental education
 - Board policy
 - Enrollment and course content
 - Student readiness for college
- Challenges for developmental education and strategies for redesign
- Campus showcase of effective redesign strategies
 - Supplemental instruction: Century
 - Math redesign and Statway: Normandale
 - Accelerated learning: North Hennepin

Board policy and system procedure

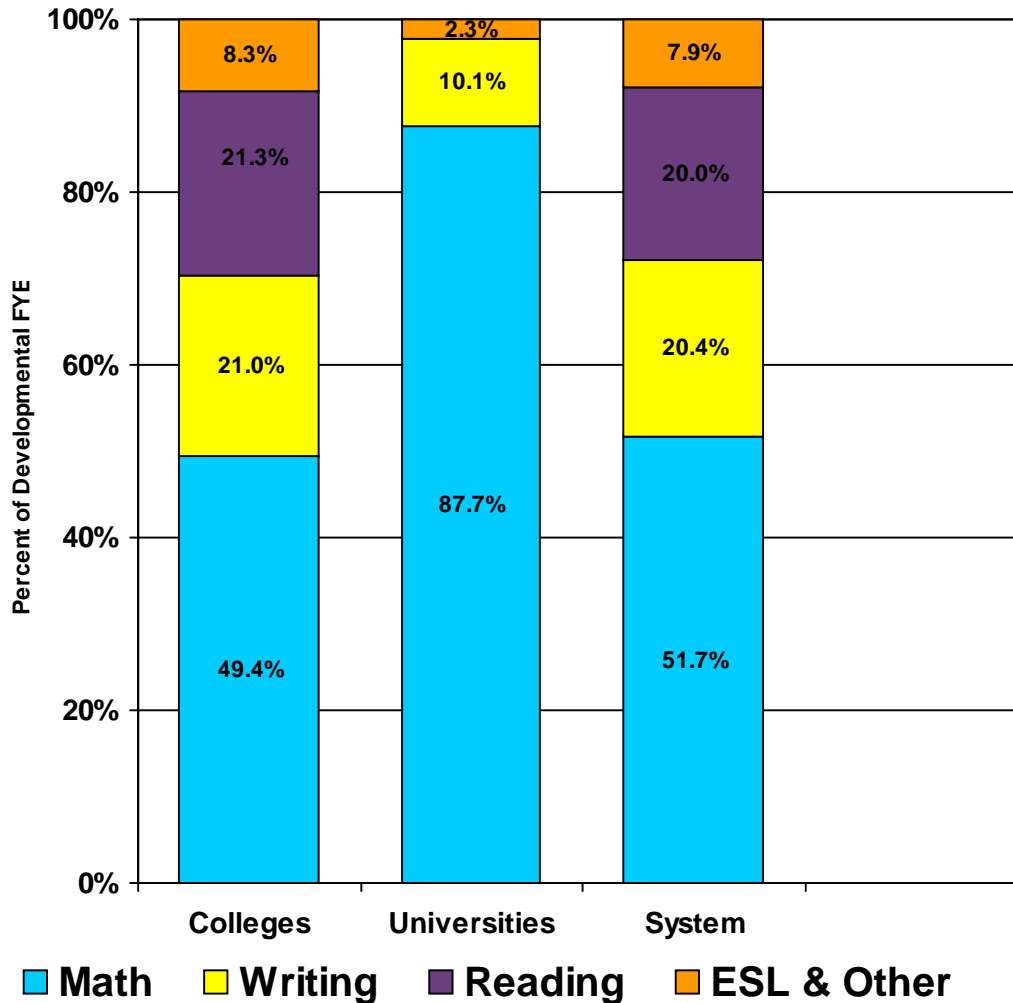
- Board Policy 3.3
 - Requires each institution to have a course placement policy
 - Requires a system endorsed placement instrument
- System Procedure 3.3.1
 - Defines developmental & college-level courses
 - Identifies the system endorsed instrument
 - Provides for exemptions from placement testing for certain students
 - Establishes minimum scores for placement into college level courses



Percent of students and FYE in developmental courses peaked with recessionary enrollment increase



Developmental education courses and FYE enrollment are primarily in Math



Fiscal year 2013 developmental FYE enrollment



Why is effective developmental education important?

- Large numbers of traditional and adult students are not ready for college level courses when they enroll
- Students who are not college ready are less likely to persist in college
- Developmental education and supportive services are essential to help our students achieve the proficiency they need to reach

Secondary/Post-Secondary Re-Alignment

(Strategies to Reduce the Need for Developmental Coursework)

1. Align high school assessment with measures of readiness for post-secondary education.
2. If students are not on track to being ready for post-secondary education, provide targeted support in high school.
3. When high school students are ready for post-secondary education, increase the opportunities to earn post-secondary credits earlier (including post-secondary education options, advanced placement, concurrent enrollment, International Baccalaureate, etc.).
4. Better align students' educational plans with workforce needs.

Developmental education redesign: Minnesota and national context

- Recent research at several of our colleges suggests:
 - Using multiple measures in addition to test scores to place students
 - Focusing on improving student reading skills before math skills
 - Reducing the number of developmental courses to speed student completion
 - Aligning college math courses with program requirements
- National research suggests:
 - Accelerated approaches
 - Student support approaches
 - Contextualized approaches
 - Modularized approaches
 - Early assessments approaches

Developmental education redesign: MnSCU examples

- Supplemental Instruction: Century College
 - Jackie Reichter, Peer Tutor Coordinator
 - Andrea Rystrom, Dean of Student Services
- Mathematics and Statway: Normandale Community College
 - Mark Ahrens, Faculty and Chair of Math and Computer Science Department,
 - Cary Komoto, Dean of STEM
 - Julie Guelich, Vice President of Academic Affairs
- Accelerated Learning Programs: North Hennepin Community College
 - Shirley Johnson, Faculty and Faculty Association President
 - Landon Pirus, Vice President of Student Affairs & Enrollment

CENTURY
COLLEGE



Tutors Linked to Classes Impact on Developmental Education



Andrea Rystrom & Jackie Reichter

Century College

Century College

- ∞ Community and Technical College

- ∞ Location: White Bear Lake, MN
 - Suburb approximately 15 miles from Minneapolis and St. Paul
 - Population: 23,797 according to 2010 census

- ∞ Fall 2013 FTE Enrollment: 3975
- ∞ Fall 2013 Students Enrolled: 10009

- ∞ First Generation (Fed Def.): 58% of new entering students
- ∞ Students of color: 38%
- ∞ Pell Grant Recipients: 69.7%
- ∞ New entering students enrolled in 1,2, or 3 developmental subjects: 56%

What is Tutors Linked to Classes?

- ∞ Based on Supplemental Instruction
- ∞ Student Tutor linked to a Specific Classes
- ∞ Flexible
- ∞ Meet busy community college students where they are at: before, during, and after class

Challenge TLC was designed to address

- ∞ Increase course completion rates, improve retention, positively impact program completion rates, and ultimately improve graduation rates

Institution	Entering Term	Students	Retained (2 nd Fall)	Transferred	Graduated (2 nd Fall)	Success
Century College	Fall 2005	1454	50.3%	13%	3.3%	66.6%
	Fall 2006	1497	51.6%	12.2%	2.5%	66.3%
Colleges	Fall 2005	23,296	48.9%	11.9%	9.2%	69.9%
	Fall 2006	23,802	49.6%	12.6%	8.5%	70.6%

* MNSCU Accountability Dashboard:
Student Success

Target Audience

∞ Participants

- **Developmental Courses** -
 - Reading, English, Math
- **First Year Gateway Courses** – *High Enrollment and High Attrition*
 - English, Math, Communications, Social Sciences
 - Science Courses – Biology, Chemistry and Physics
- **Killer Courses** in Career and Technical Education Programs

Overview of the Program/Infrastructure

☞ Staffing

- Tutor Coordinators: Supervision and Coordination
- Student Tutors

☞ Faculty Involvement:

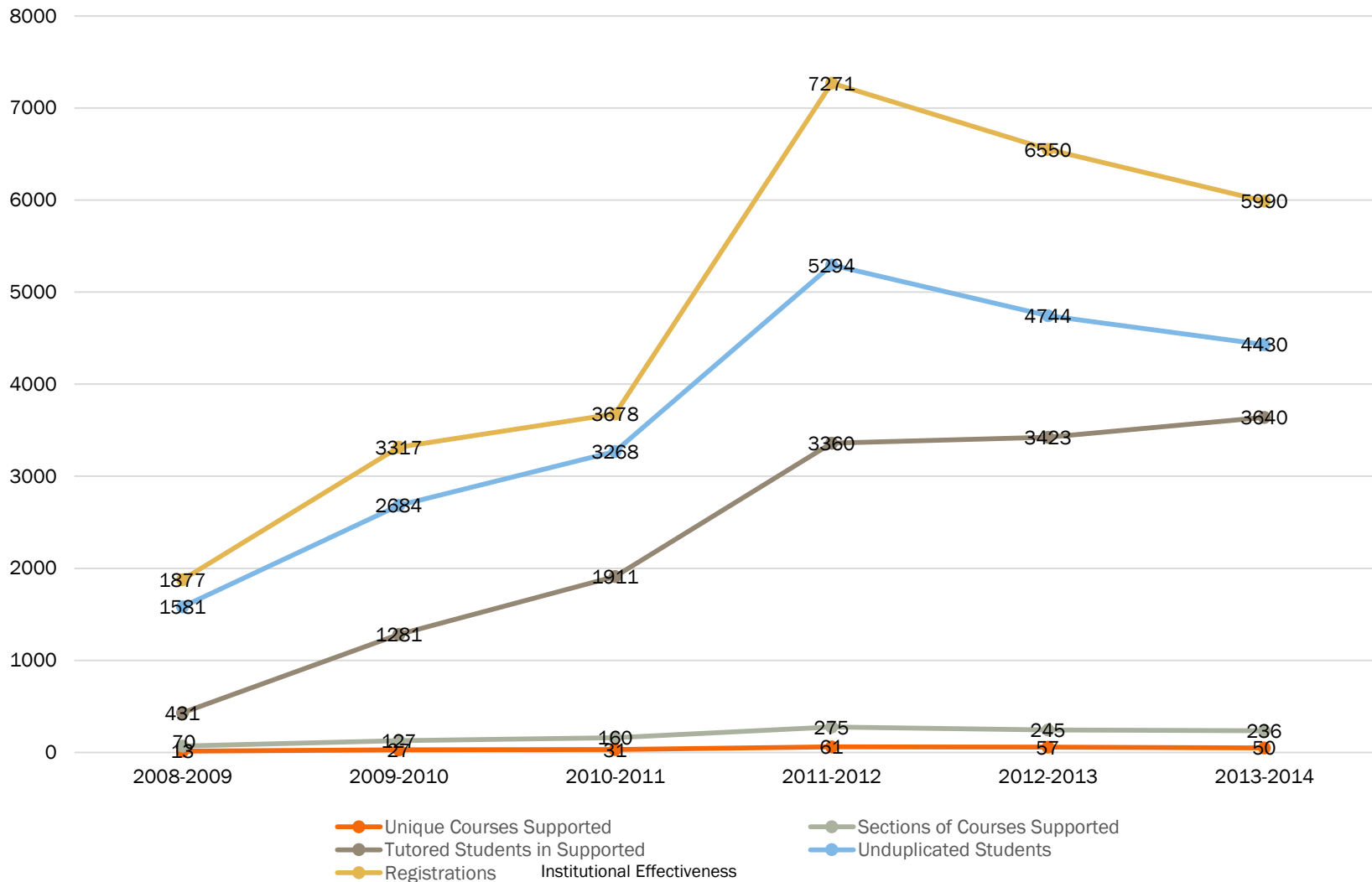
- Academic Mentor
- Resource

☞ Timeline and Process

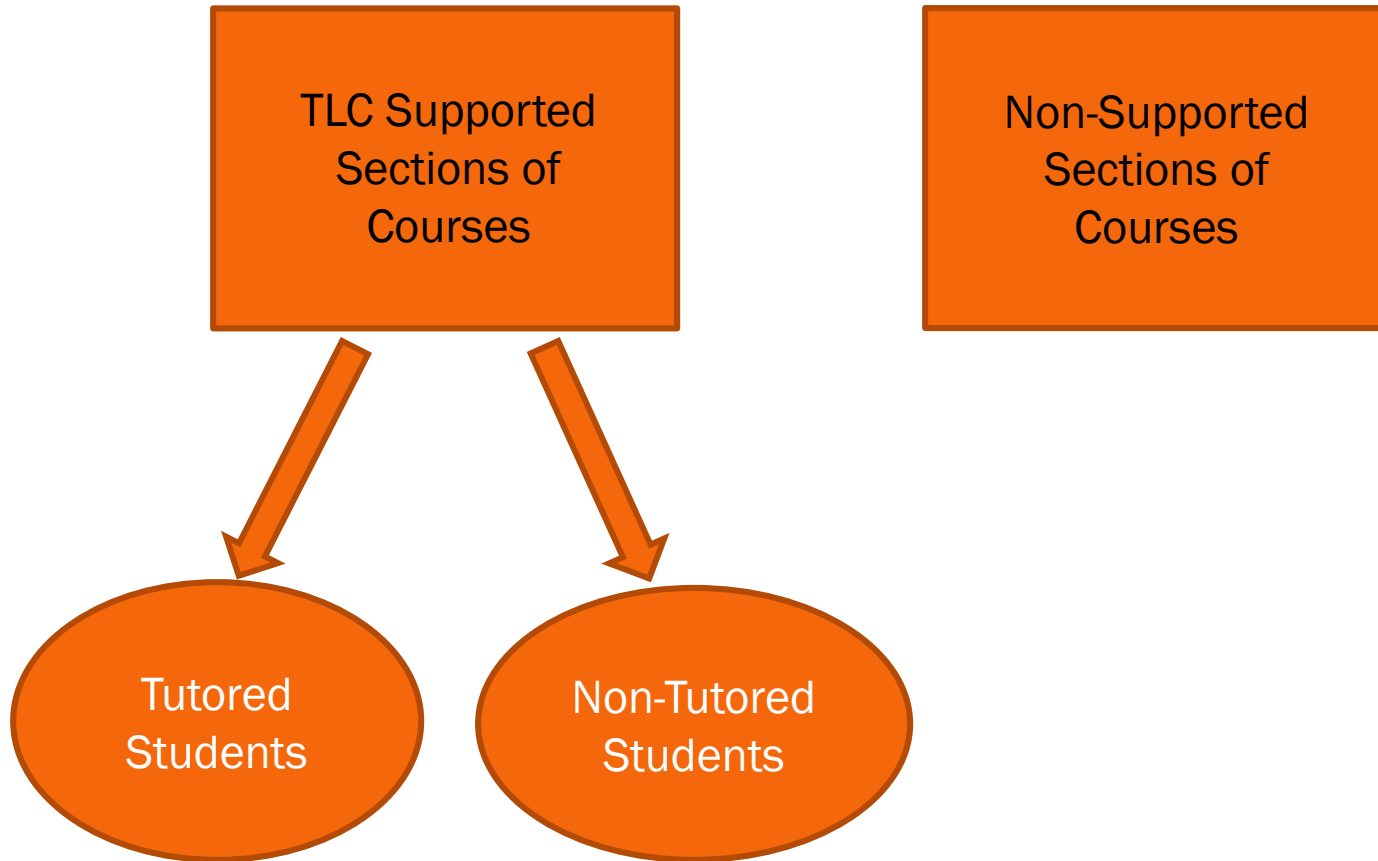
☞ Training

- College Reading and Learning Association (CRLA) and TLC Tutor Specific Training

Tutors Linked to Classes Program Growth: From Program Inception to 2013-2014

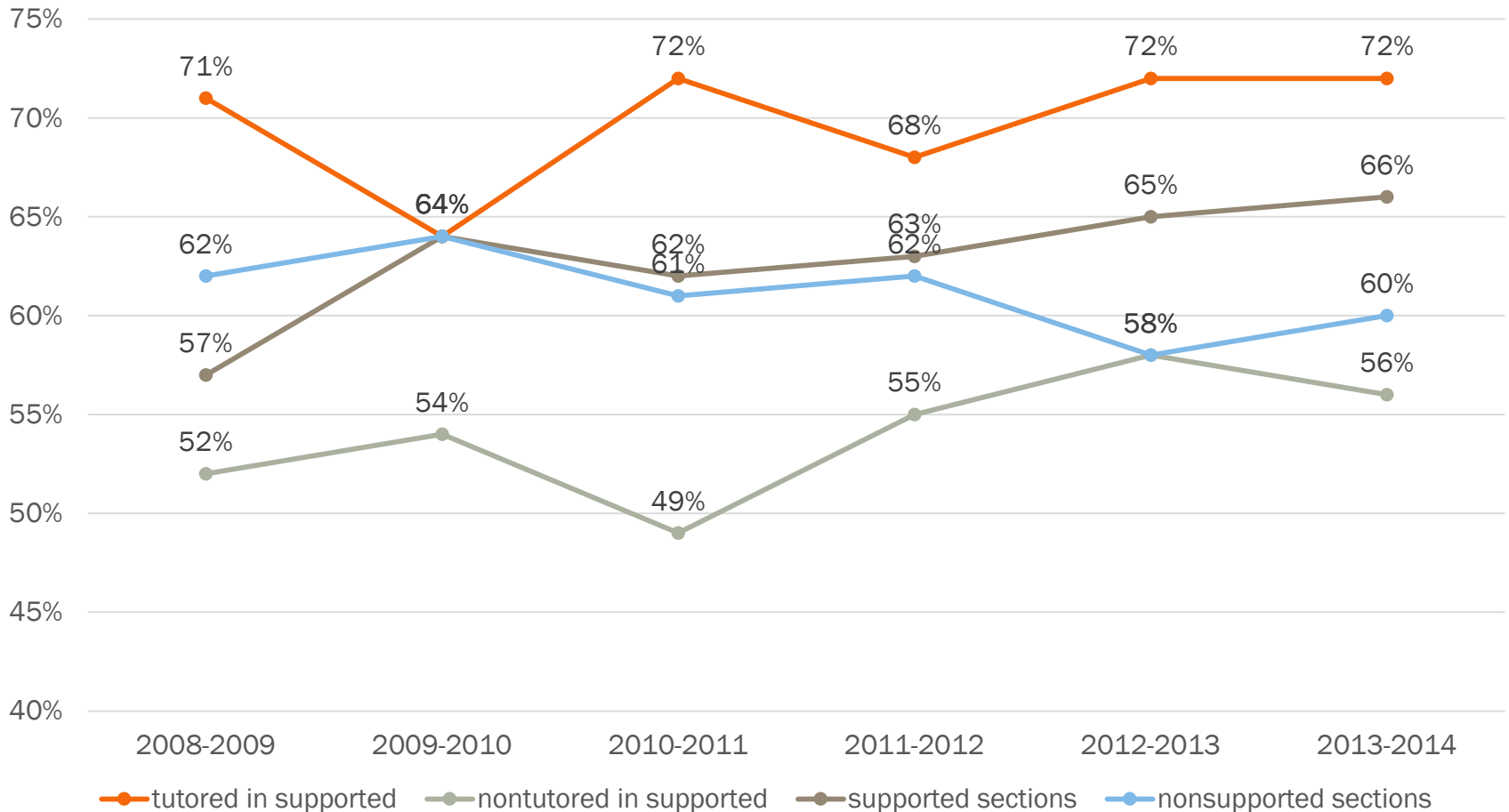


Supported & Non-Supported Sections of Courses



Developmental Success: C or Better Grades

2008-2009 to 2013-2014



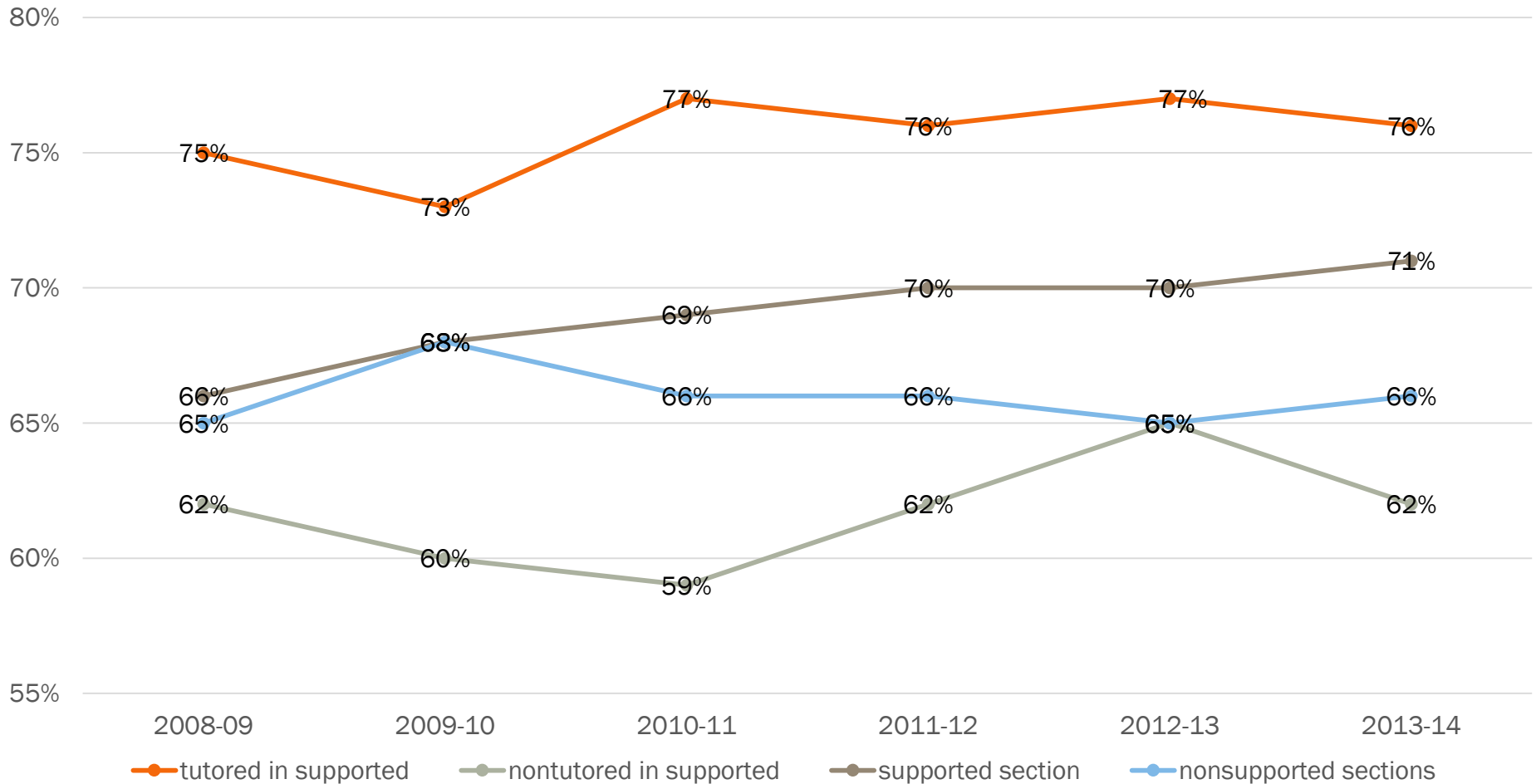
TLC Tutors in Developmental Classes
 2013-2014 At A Glance
 59 Developmental Course Sections

	Supported Section	Nonsupported Sections
Average Term GPA	Fall 2013 2.50	Fall 2013 2.38
	Spring 2014 2.48	Spring 2014 2.19
Average Credit Completion	Fall 2013 73%	Fall 2013 69%
	Spring 2014 70%	Spring 2014 60%
Retention	Fall to Spring 81%	Fall to Spring 78%
	Fall to Fall 2013 57%	Fall to Fall 2013 44%
	Fall to Spring 81%	Fall to Spring 77%



Tutors Linked to Classes: C or Better Grades

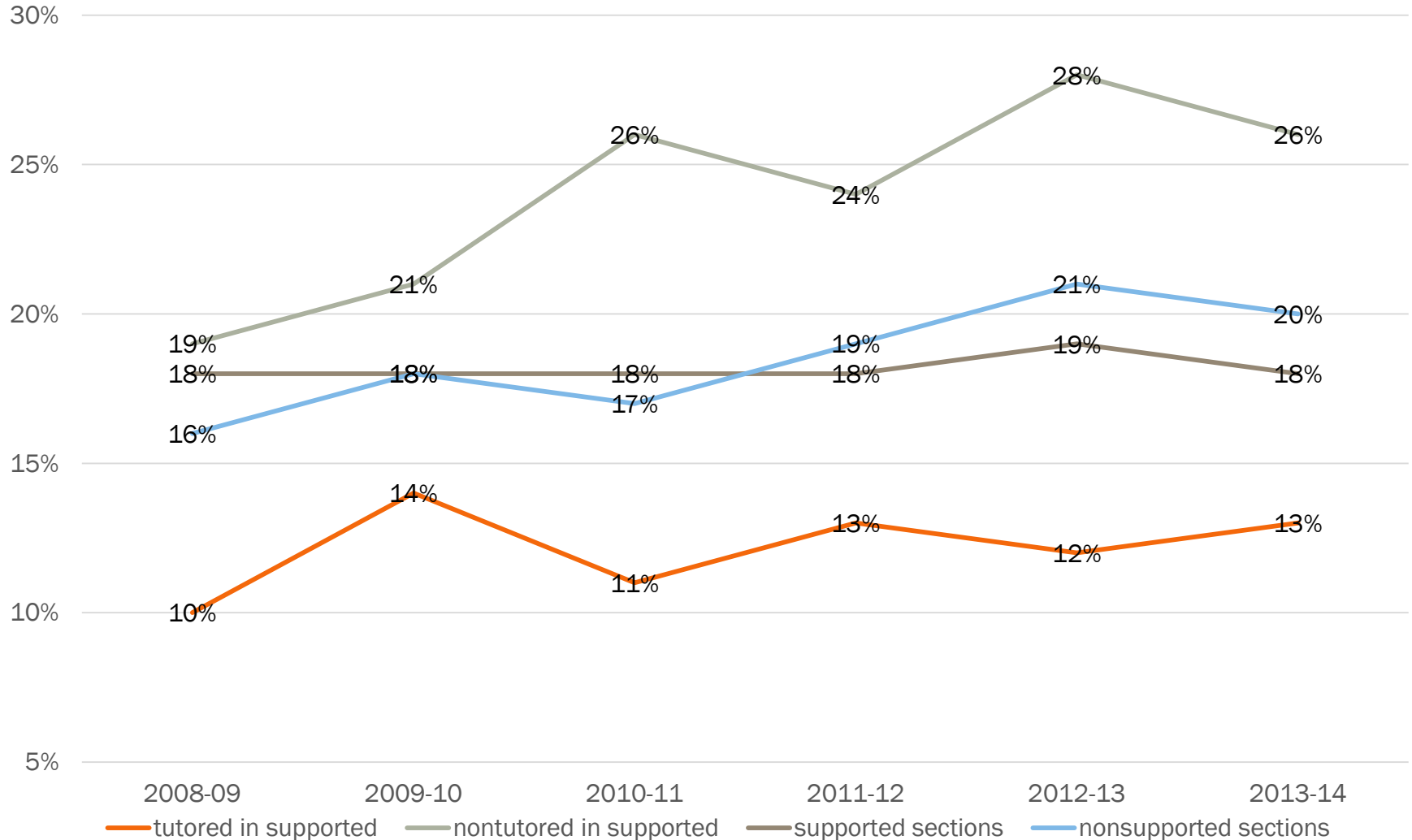
2008-2009 to 2013-2014





Tutors Linked to Classes: Withdrawals

2008-2009 to 2013-2014



Contact Information

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NORMANDALE
COMMUNITY COLLEGE

Mathematics Redesign and Statway Normandale Community College

Presentation to the
Minnesota State Colleges and Universities
Board of Trustees
Academic and Student Affairs Committee
Wednesday, October 22, 2014

Julie Guelich, V.P. Academic Affairs

Cary Komoto, Dean of STEM & Ed

Mark Ahrens, Chair of Math & Computer Sci. Department

Fall 2014 Semester Student Enrollment

Head Count	9,514
Full Time Equivalent	6,233
Female	54%
Male	45%
Students of Color	36%
Students under 20 years old	34%
Students 20 to 24 years old	34%
New Freshman	35%
Returning Freshman	28%
Sophomores	35%

Fall 2014 Enrolled with Accuplacer Scores

Total 2112

ABE	Developmental Math	College Level Math
219 10%	1271 60%	622 30%

Key Studies

MNSCU Grant (2007-2008)

Used Normandale data and program review goals to:

- Remove Basic Mathematics from curriculum
- Introduce Survey of Algebra class to shortened time to reach some college-level math courses
- Introduced a Bridge Course for students placing just under college level in math
- Made changes to developmental courses to encourage participation and improve persistence

Key Studies

Hanover Study (2009)

Used Normandale data for a five year period to study demographic factors in developmental class success.

- **A key stat:** Beginning Algebra to enrollment in a College level math course averaged 5 semesters. **Not** 2 semesters.

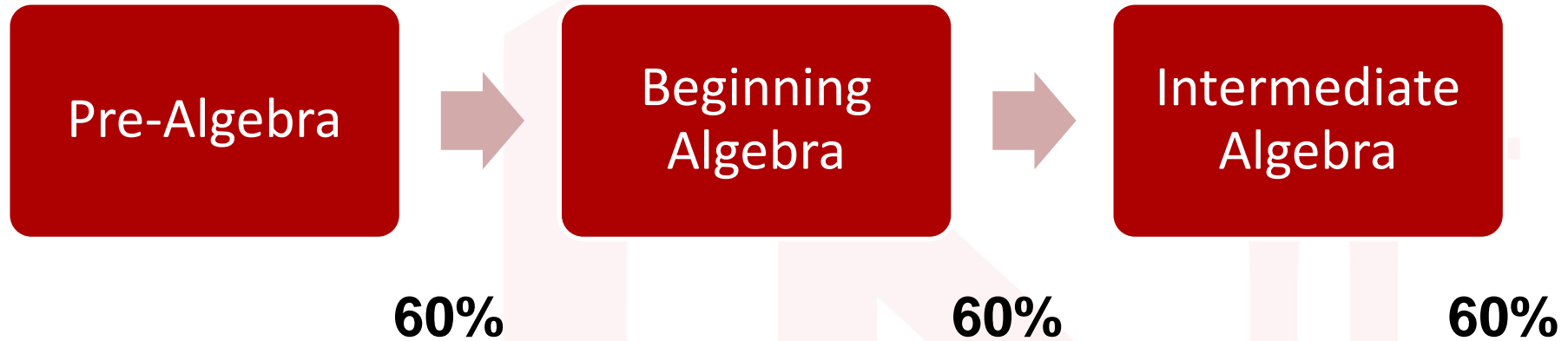
Asmussen Study (2013)

Studied four years of data for Normandale, Inver Hills, and MCTC.

- Confirmed our internal studies that success rates in our developmental math classes is consistently 40% to 45%.



A Problem with Levels



Overall success rate is 22⁰%.

NCAT (National Center for Academic Transformation)

Led to a redesign of all developmental mathematics

- Active learning
- Individualized Assistance
- Ongoing Assessment with Prompt Feedback
- Sufficient time on task and continual monitoring of student progress
- Modularized student learning

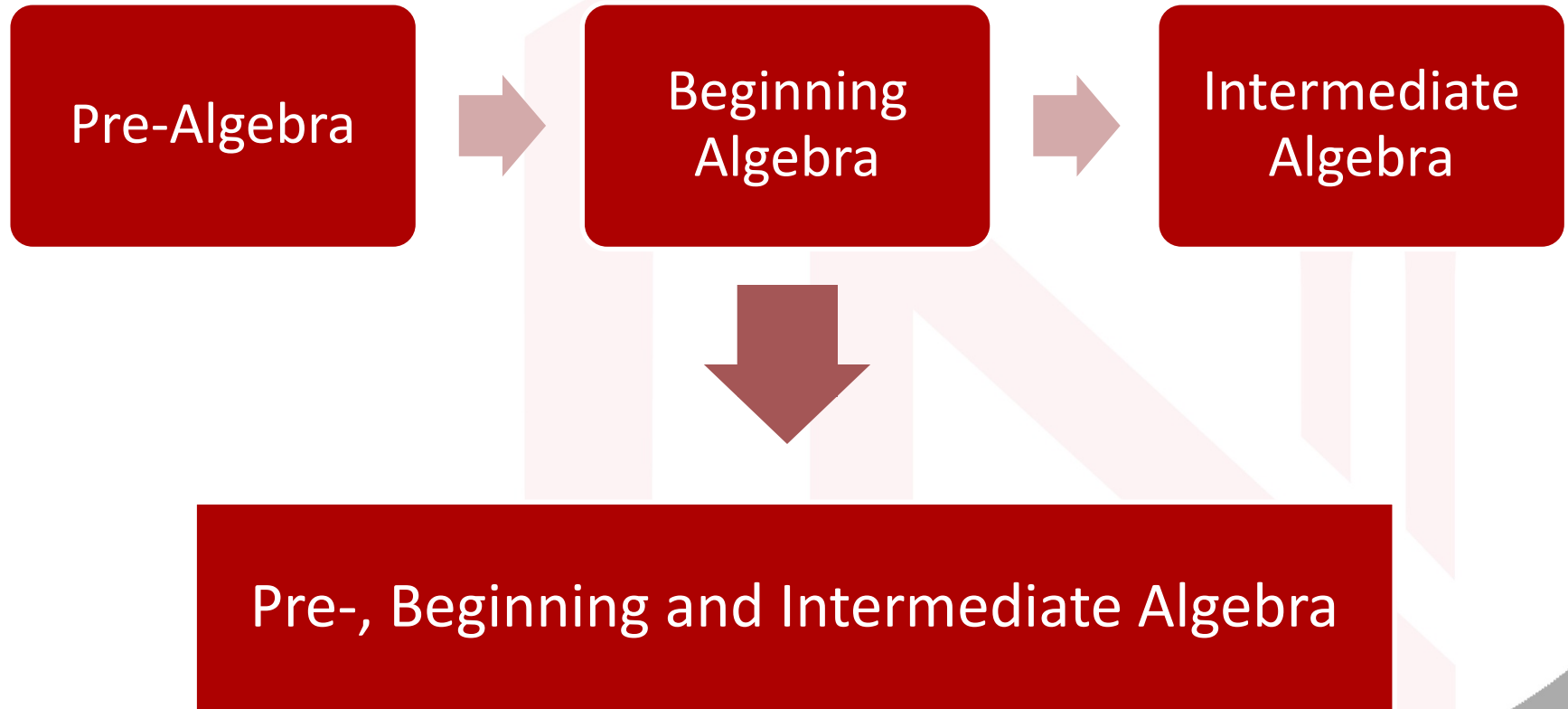
Carnegie Foundation for the Advancement of Teaching

Led to the adoption of the Statway curriculum

- Active learning
- Collaborative group activities with rich content



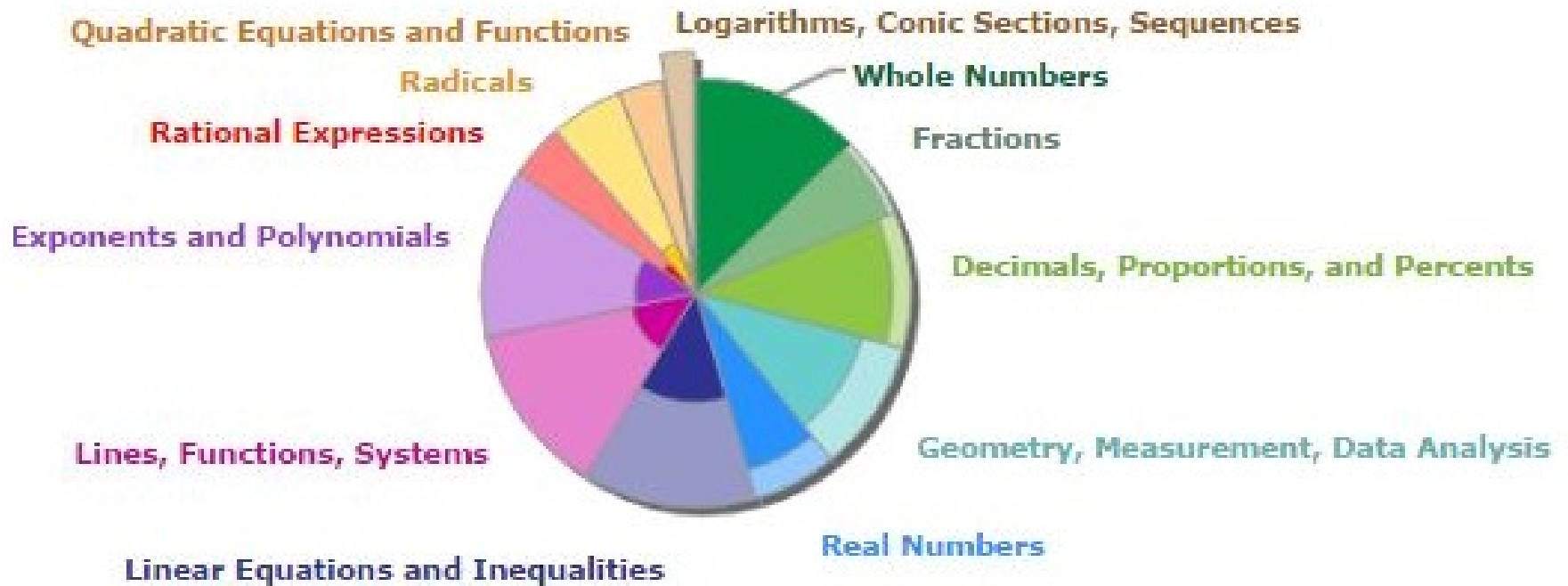
Developmental Math Redesign at Normandale





Fall 2014 - 60x-34 - ALEKS Pie

Course Mastery
(281 of 560 topics)





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COMPUTER
PROBLEMS



Spring 2014 Results

(972 students)

Pre-, Beginning, and Intermediate Algebra

Pre-Algebra

22%

(209 students)

Beginning Algebra

16%

(152 students)

Intermediate
Algebra

26%

(256 students)



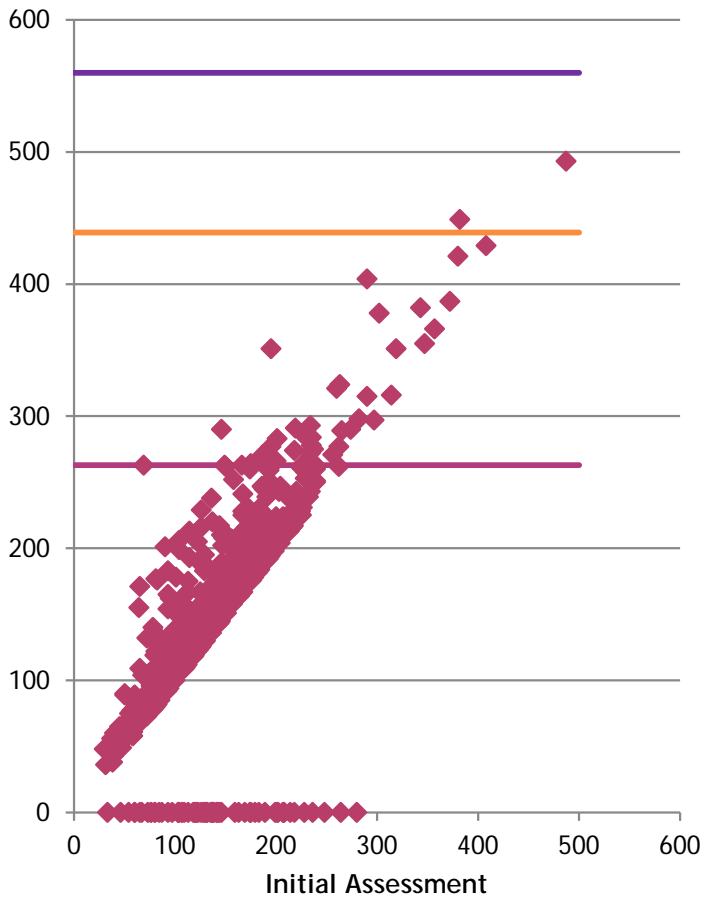
Initial Results on Completing more than one class in a semester

	Pre & Basic	Basic & Intermed.	Pre, Basic, & Intermediate	Basic, Intermediate, & College	Intermediate & College
Fall 2012	36%	11%	2%		1%
Spring 2013	30%	9%	1%	1%	7%

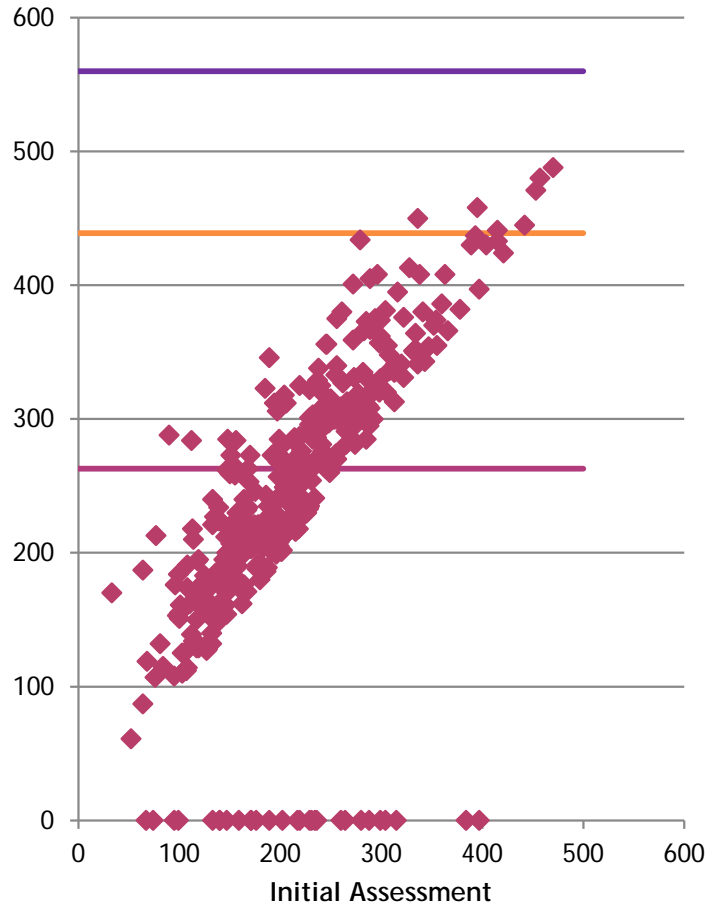
WEEKLY PROGRESSION

SPRING 2014

WEEK 1

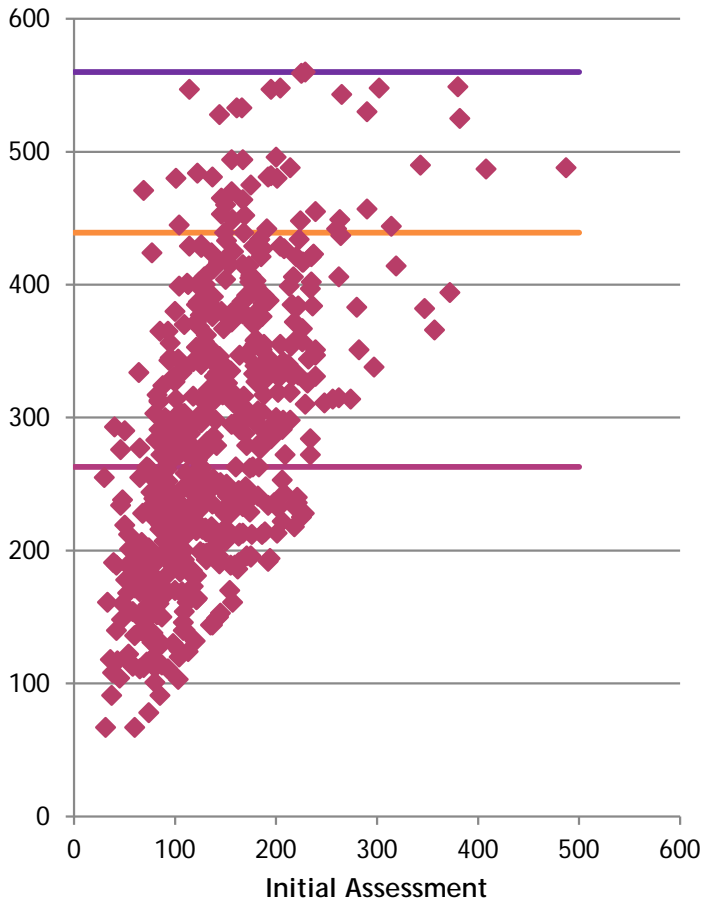


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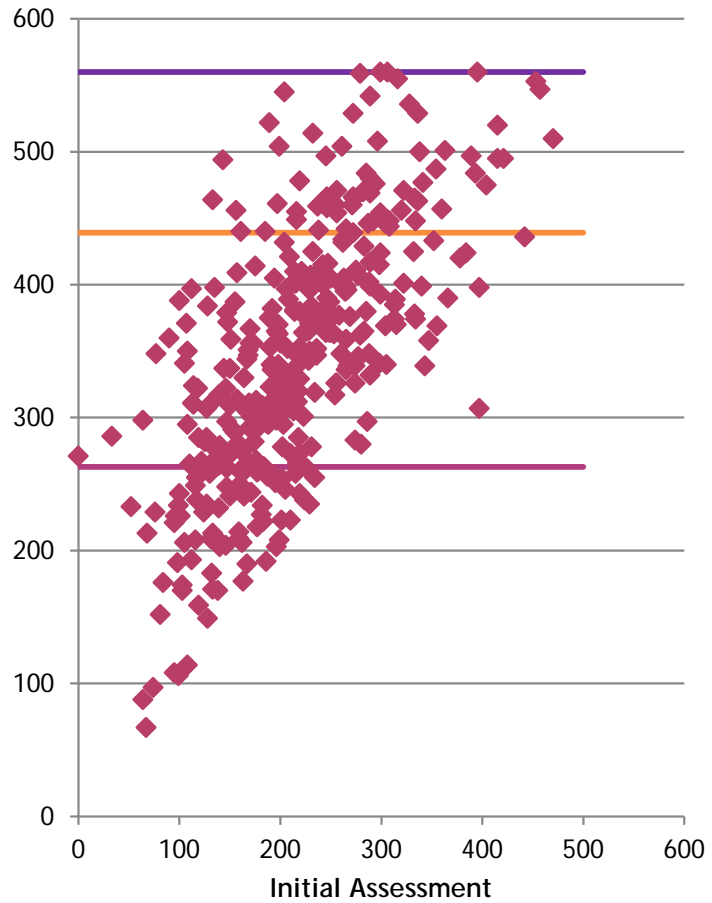


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WEEK 9

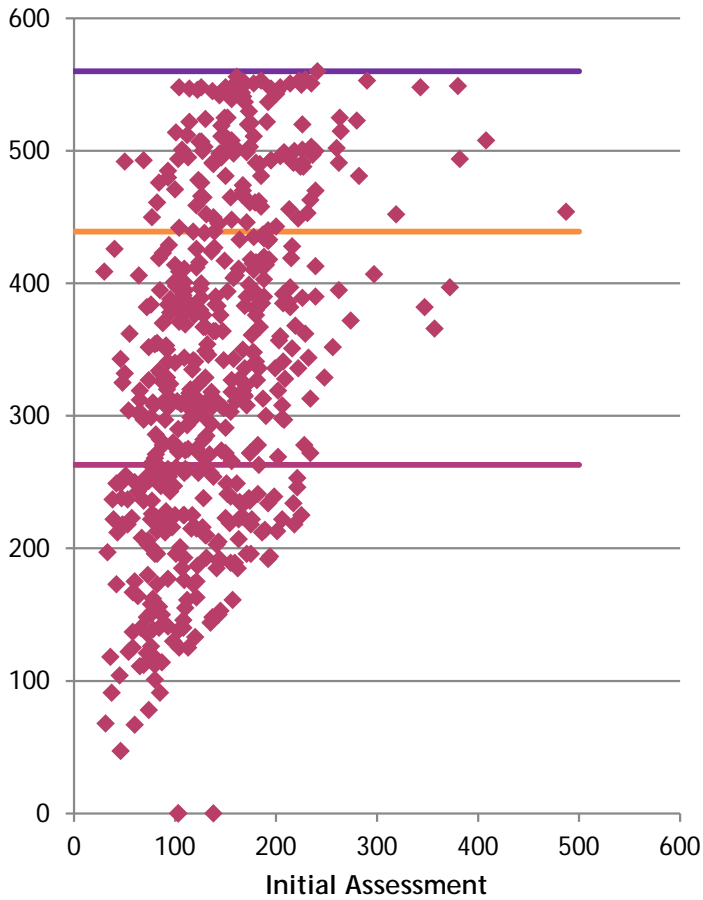


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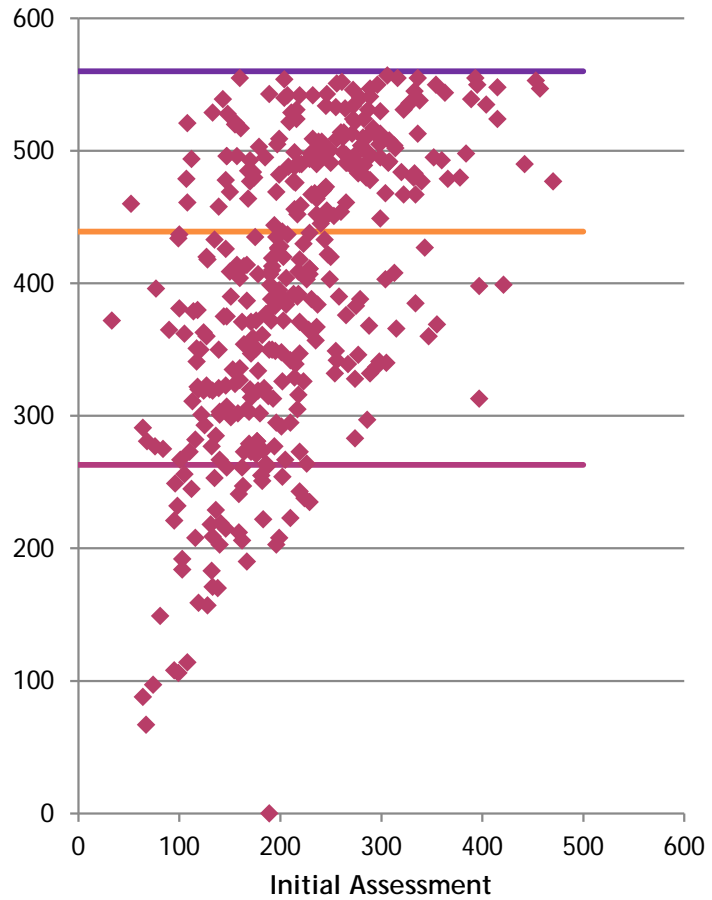


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WEEK 17



601

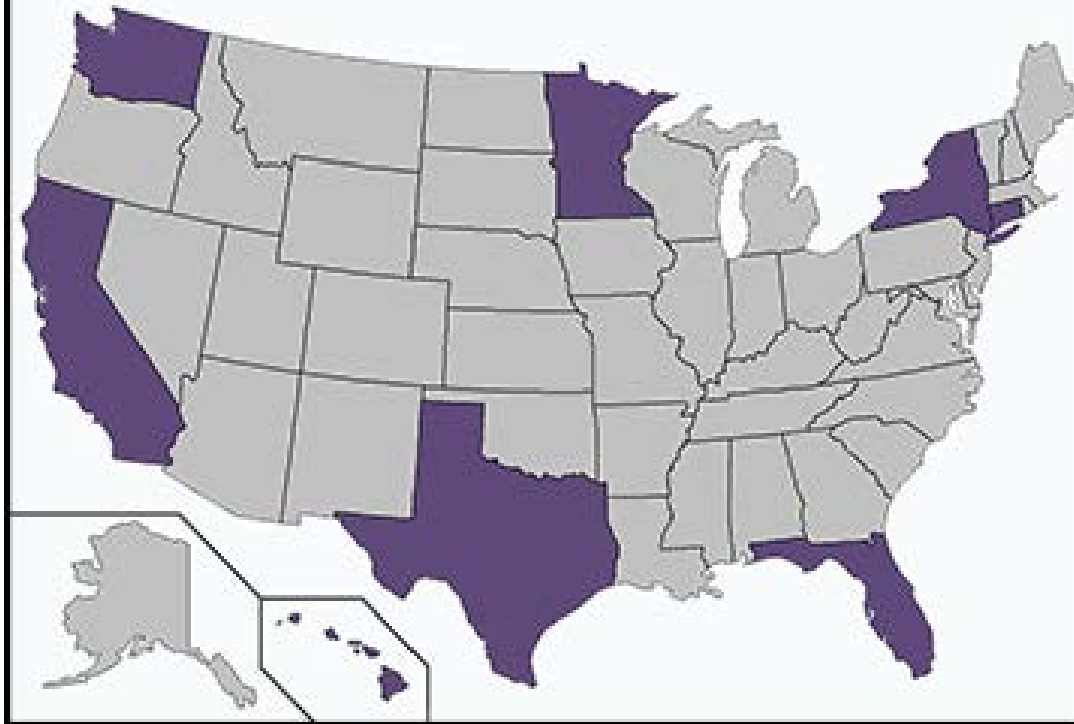


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- Statway® is a 2-term course - 12 modules
- Developmental math and introductory statistics
- Problem-focused class
- Groups of students work cooperatively on activities
- “Productive struggle,” support conceptual understanding rather than procedural learning
- Aspects of student success to provide a holistic learning environment
- Productive Persistence, teaching a "growth" mindset
- Improvement Science, continuous improvement methodology to rapidly improve student learning

STATWAY[®] STATES



28 Institutions in 8 states

In Minnesota:

Minneapolis Community and Technical College, Normandale Community College, and North Hennepin Community College



- **MATH 0990 STATWAY Statistics 1**

- **MATH 1090 STATWAY Statistics 2**

(also at North Hennepin Community College and Minneapolis Community and Technical College)

2013-14 Statway Statistics

MATH 0990 46 of 73 students (63%) were successful

MATH 1090 32 of 51 students (63%) were successful

32 of 73 students (44%) were successful overall

Statway Continual Improvement

Continuous improvement of curriculum and teaching strategies through the Networked Improvement Community (NIC) which connects instructors with the instructors at the 28 institutions teaching STATWAY

Normandale has also added a new instructor and added new scheduling options.

Developmental Education Redesign at NHCC

Shirley Johnson

Faculty President

Academic Development Faculty

Landon K. Pirius

Chief Academic Officer

VP of Student Affairs

North Hennepin Student Success Prediction Model FOR NEW STUDENTS

Term Being Analyzed: **FALL**

[Return to Instructions](#)

Instructions: Use the 8 dropdown boxes in sections I-III to select the appropriate background data for the student, then scroll down to review the results. To change the analysis to a continuing student or a different term, push the blue button, "Return to Instructions".

I. Record Student Characteristics Upon Entry

Gender

Male

Age

Under 21

Race

Black or African American

Family Income

Applied, Eligible for Pell

II. Record College Preparation

Math Placement

MATH 800 Pre-Algebra

Reading Placement

ADEV 952 / ENGL 950

Prior College?

None, First College Since High School

III. Record Registered Credit Hours for First Term

Registered Credits

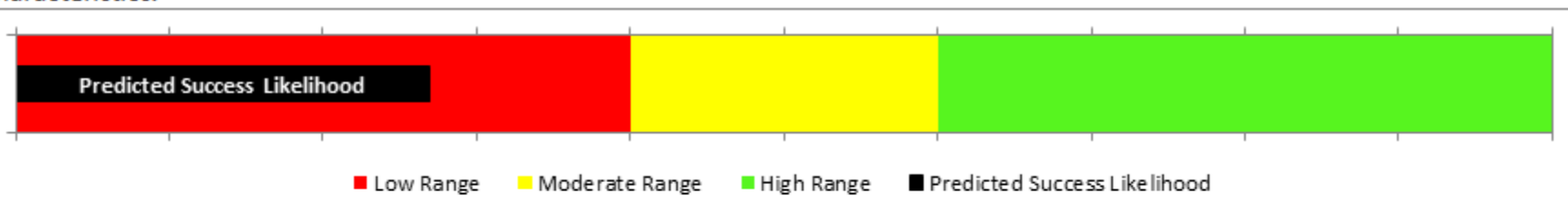
Part Time

Instructions

Select prior college attendance since high school graduation?

RESULTS [Note: Scroll down to examine three different views of predicted success rates for this student.]

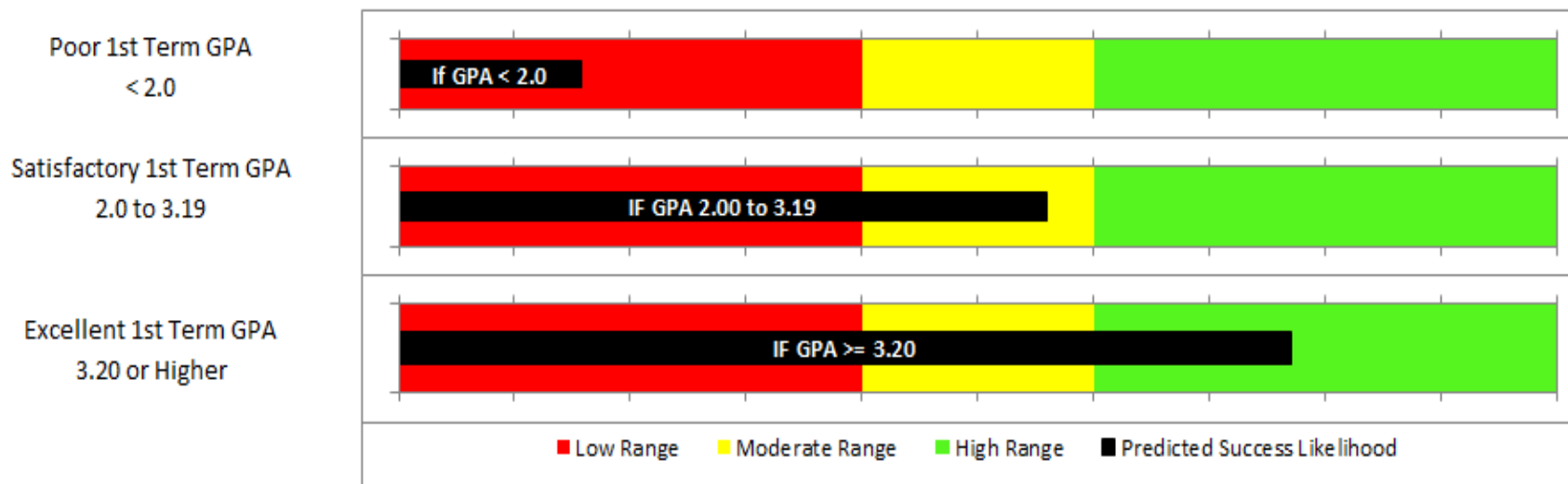
I. Overall Results. *The predicted success likelihood of this student is indicated in the following graphic by the range where the right edge of the black bar ends. The prediction is based on the average success rates exhibited by past North Hennepin students who had similar characteristics.*



- Initially focus on achieving a good GPA in their first term of attendance. A GPA above 2.0 will help get students off to a good start, a GPA of 3.2 will provide them with even higher odds of success.

I. Focus on the First Term

II. Results Based on First Term Academic Performance. *A good academic start is critical to longer term student success. The following charts show how predicted student success rates change based a student's first term grade point average.*



I. Focus on the First Term

- Maintain continuous enrollment in Fall and Spring terms, when possible. Summer enrollments help, but are not essential. Stopping out for a Fall or Spring term, though, puts success at risk.

II. Maintain Continuous Enrollment

- Graduate (no semesters off) = 53%
- Graduate (1 or more semesters off) = 2%

II. Maintain Continuous Enrollment

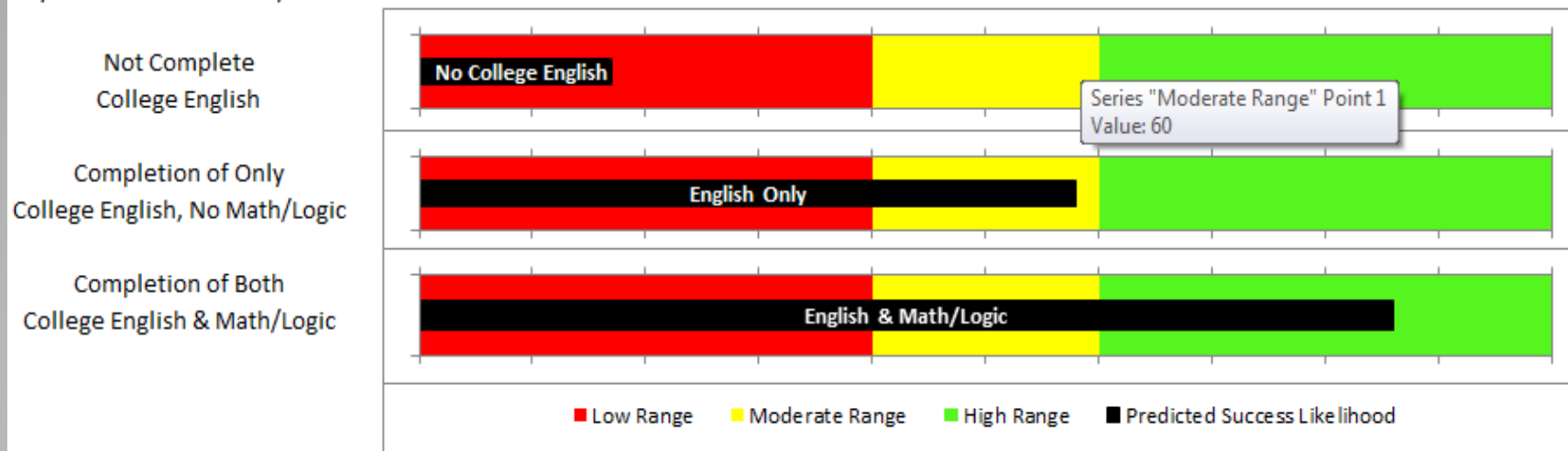
- Concentrate on completing College English. It is an unforgiving gateway course; students have little chance for success without it. If possible, earn an A or B in the course, as these higher grades are related to higher success rates.

III. Complete College English

- Then complete a course that satisfies Minnesota Transfer Curriculum Goal Area 4.

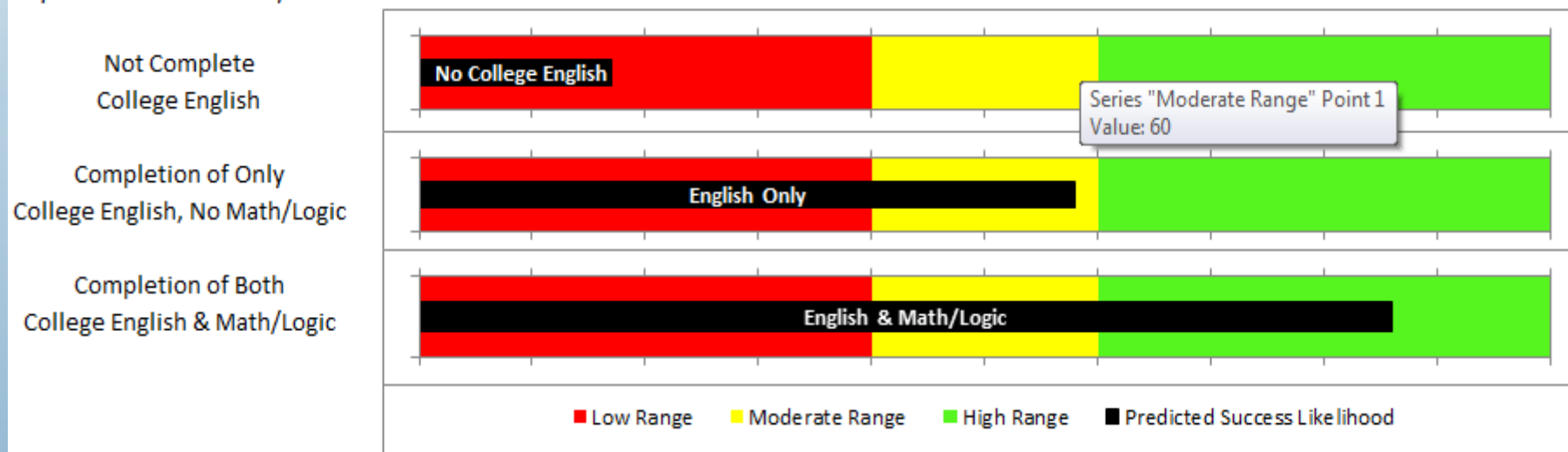
IV. Complete Goal Area 4

III. Results Based on Completion of Gateway Courses in English and Math/Logic. *The important gateway courses for earning an Associate degree are College English and either a College Math or Logic course (MnTC Goal Area 4). Nearly all graduates (except a few Certificate programs) must complete College English. Students interested in earning a STEM-related Associate degree also should complete College Algebra. Students interested in a non-STEM Associate in Arts degree have the option of completing another college-level math course, such as Statistics, or a Philosophy course in Logical Reasoning. Some Associate degrees and most Certificate programs do not require students to complete MnTC Goal Area 4.*



III. Complete College English
IV. Complete Goal Area 4

III. Results Based on Completion of Gateway Courses in English and Math/Logic. *The important gateway courses for earning an Associate degree are College English and either a College Math or Logic course (MnTC Goal Area 4). Nearly all graduates (except a few Certificate programs) must complete College English. Students interested in earning a STEM-related Associate degree also should complete College Algebra. Students interested a non-STEM Associate in Arts degree have the option of completing another college-level math course, such as Statistics, or a Philosophy course in Logical Reasoning. Some Associate degrees and most Certificate programs do not require students to complete MnTC Goal Area 4.*



- What existed
 - 11 credit sequence
 - English 900 – 3 credits
 - English 950 – 4 credits
 - English 1201 – 4 credit college composition
- What motivated the redesign
 - Data
 - Only 14% of those students in English 900 registered for 1201
 - Practicality
 - Anecdotal data indicated that
 - Most students were ready for the next level within the first six weeks of the semester
 - Too many exit points within the current structure

English Model

- Pilot (Two year process)
 - Eliminate 900
 - Combine 950 and 1201
 - 6 credit course
 - 990 – 2 credits of supplemental instruction
 - 1200 – 4 credits of composition
 - Preliminary data
 - 88% retention rate
- Instructional strategies
 - Not a review as much as a preview
 - Use methods to anchor students within the class
 - Subject matter experts
 - Create a cycle of success
 - Leadership roles

Redesign Process

- What existed
 - Three semesters
 - 0940 – Vocabulary
 - 0951- College Reading and Learning Strategies 1
 - 0952 – College Reading and Learning Strategies 2
 - Teaching of reading strategies in the context is an important and *missing* piece in the puzzle that makes up student success
 - Custom text composed of college level textbook chapters
 - 1950 – Reading Texts Critically
 - Spring 2015 – Pilot ADEV 0951 and 0952 Redesign
 - One year sequence
 - Eliminate 0940
 - Combine 0951 and 0952 (6 credits)
 - Fall 2013 - Paired courses
 - Sociology 1010 – ADEV 0952
 - Psychology 1150 – ADEV 0952

Academic Development

- Preliminary Paired Course Data
 - Sociology – 24 students
 - 12.5% ended the semester in academic difficulty
 - 85% in good academic standing
 - Spring
 - 4 students did not return
 - 10% students ended the semester in academic difficulty
 - 90% ended the semester in good academic standing
 - Sociology non-supplemental – 258 students
 - 30% ended the semester in academic difficulty
 - Spring
 - 45 students did not register for Spring 2014
 - 73.2% ended Spring in academic difficulty
 - 60.5% were in good academic standing

Academic Development

Questions and discussion