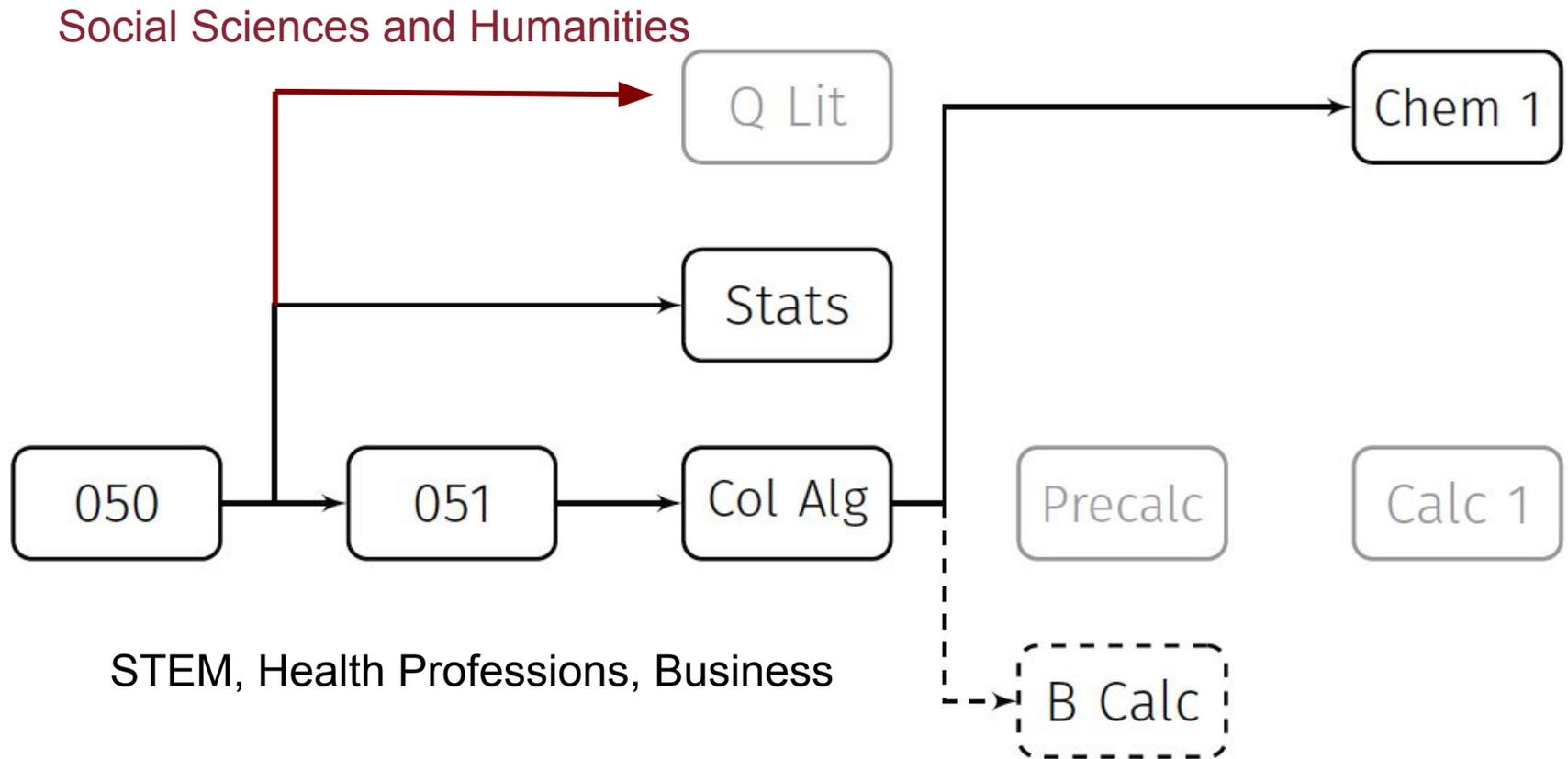




# Agenda

- Creation of the FastTrack & the Math MOOC
- Overview of the Program
- Exploration of Results

# Pathways



# FastTrack: Program History & Goals

Summer Bridge for those who place into developmental math as incoming Freshman

<b>Student Benefit</b>	<b>System Benefit</b>
<ul style="list-style-type: none"><li>● Shorten Time to Degree (STEM accessible)</li><li>● Reduce Cost to Student</li></ul>	<ul style="list-style-type: none"><li>● Improve Retention</li><li>● Reduce Remedial Course Enrollment</li></ul>

# Pilot FastTrack

Cohort model for new Freshmen that placed into Developmental Courses (Summer 2012)

Components:

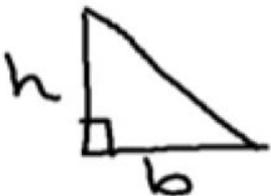
- 6-week Online Class ([Google Site](#))
- One Week On Campus
- Wisconsin Math Placement Exam
- 37 of 38 students placed in target college math course or better



# Original Learning Object Component

Problem Answer **ChalkTalk** Kahn MoreInfo SelfCheck

A right triangular sail has an area of 165 square feet. The height of the triangular sail is seven feet longer than the base of the sail. What is the height of the sail?



Let  $b = \text{base}$   
 $h = \text{height}$   
 $h = b + 7$

$$A = \frac{1}{2}ab \quad \rightarrow \quad 165 = \frac{1}{2}b(b+7) \cdot 2$$
$$330 = b(b+7)$$
$$330 = b^2 + 7b$$
$$0 = b^2 + 7b - 330$$

$-330 = -10 \cdot 33$   
 $-10 + 33 \neq 7$   
 $-330 = -15 \cdot 22$

Rate, Comment, Submit a Question

# Funding and Expansion

Three year project, funded by a Growth Agenda Grant.

- Originally Focused on Minority, Low Income, First Generation STEM students

Bill & Melinda Gates Foundation

- Expanded the program to open enrollment; allowed for expansion to all college bound

# Original MOOC Team



Maggie McHugh: **Instructor.** Associate Lecturer in the Mathematics Department and Director of the Murphy Learning Center

Jennifer Kosiak: **Math Education Expert.** Professor of Mathematics specializing in Mathematics Education



Jim Sobota: **Inspector 99.** Professor Emeritus, Mathematics Department. Quality Control.



Cari Mathwig Ramseier: **Intelligent Agent.** Academic Technology Services. Key member of the instructional design team.



Bob Hoar: **PI and Director** of the Institute for Innovation of Undergraduate Research and Learning

Robert Allen: **WebWork Expert.** Professor of Mathematics



Many other students, faculty and staff...

# What is a MOOC?

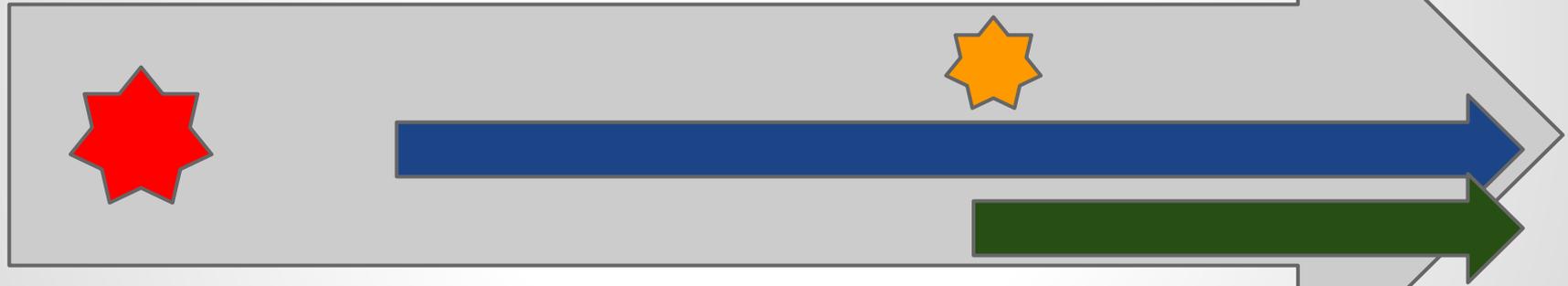


moocalaquintatellaphobia

# FastTrack, Math MOOC, and Beyond

FastTrack,  
Summer 2012  
(Pilot)

FastTrack,  
Summer 2013



College Readiness  
Math MOOC,  
Spring 2013

College Readiness  
Math MOOC,  
Summer 2013



# Instructional Design

- Well designed content that is easily managed
- Keep the human in the process
- Provide timely feedback
- Track everything
- Allow Synchronous and Asynchronous

# Instructional Design

## 6-Week Online Math Program

- 10 math modules (approx. 6 hours per week) with module quizzes.
- “*required*” weekly online review sessions
- weekly email communication with instructor
- optional Live Lectures
- Added In...
  - A Minute of Math Videos
  - WebWork homework system

# Instructional Design

[Module 5: Systems of Linear Equations](#) ▾ 

Jan 19, 2013 3:55 PM

-

Published

Congratulations on finishing Module 4: Graphing Linear Equations.

## Welcome to Module 5: Systems of Linear Equations

Upon completion of Module 5, you will be able to solve systems of equations algebraically and graphically.

The following are components of Module 5. Review all components or only those you feel you need to practice and learn for this module:

- [Systems of Linear Equations Minute of Math](#)
- View the Live Lecture under the content tab.
- Click to learn more:
  - [Solving Systems of Linear Equations](#)
  - [Applications of Systems of Linear Equations](#)
- [WeBWork Homework for Module 5](#)
- [Quiz for Module 5: Systems of Linear Equations](#)

**Need Help?** If you have a question about a problem or concept in Module 5, ask your question on the [Module 5: Systems of Linear Equations](#) discussion area or check out the [schedule for upcoming review sessions](#).

**Note:** In order to access Module 6, you must complete the Module 5 Quiz and achieve at least a 50%. You may take **as many attempts as needed** to achieve that score.

# Math Modules

- Fractions, Decimals, Percents
- Geometry
- Linear Equations, Inequalities, and Absolute Value
- Lines
- Systems of Equations
- Exponents and Radicals
- Polynomial Operations & Functions
- Factoring
- Solving Polynomial Equations
- Rational Expressions

# MOOC - WeBWorK

A new rectangular building is being built on the campus of the University of Wisconsin-La Crosse. The distance to walk around the building is 508 feet. The width  $W$  is 68 feet less than the length  $L$ . What is the length and width of the building?

$$L = \text{[input box]} .$$

$$W = \text{[input box]} .$$

You may find the following helpful with entering answers into WeBWorK.

[WeBWorK Assistance](#)

( Show the student hint after 4 attempts. The current number of attempts is 0. )

**HINT:** You may find the following learning object helpful with this problem.

[Learning Object](#)



**WeBWorK**

# FastTrack Today



## Hybrid

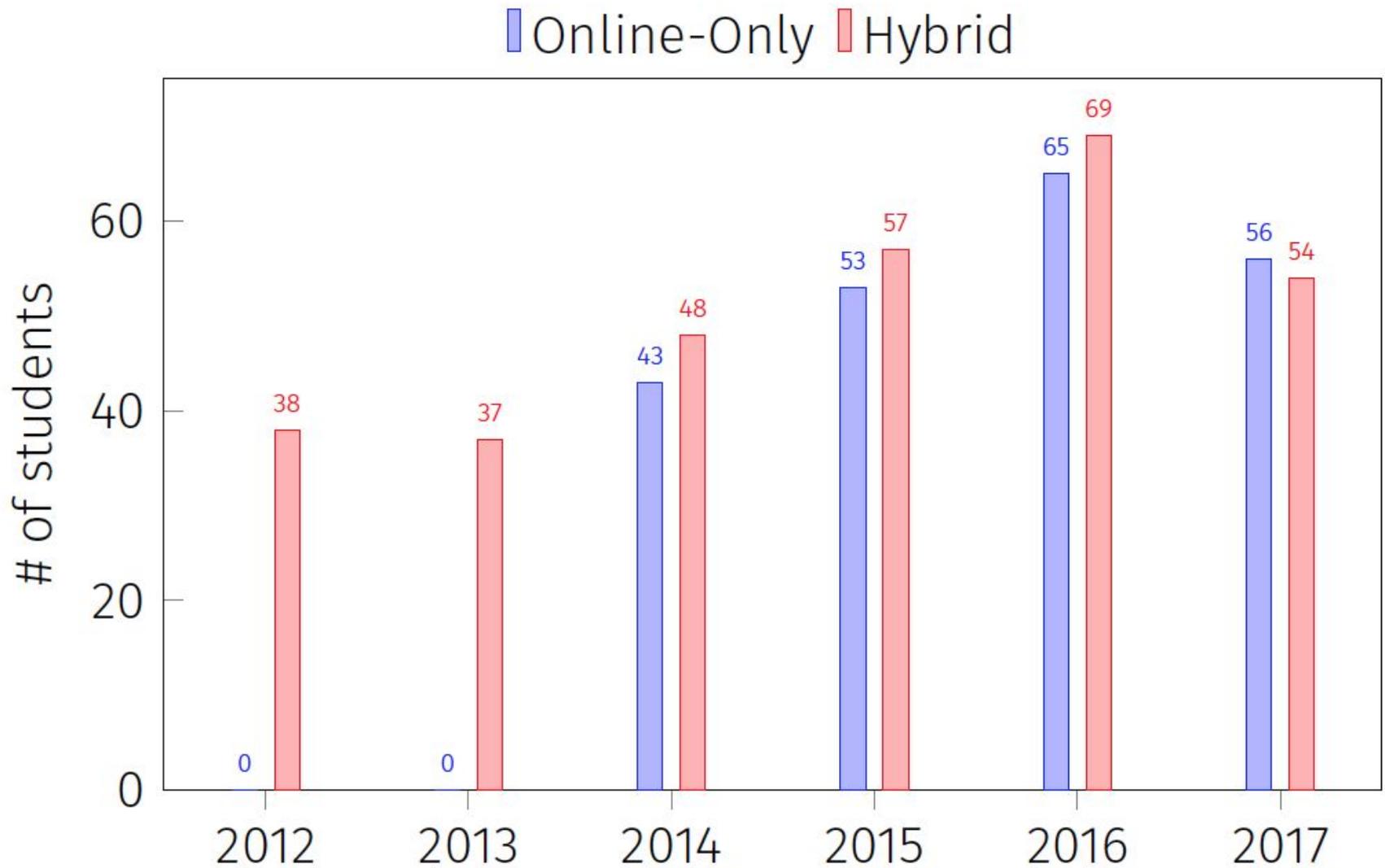
- Original Program
- College Algebra Cohort (2 sections)



## Online Only

- 6 week online
- Unlimited Enrollment
- Placement Test
- 1 Section of College Algebra

# FASTTRACK ENROLLMENT DATA



## Hybrid Cohort

Year	Steady	Forward	Percentage Forward
2012	1	37	97.4%
2013	0	37	100%
2014	0	48	100%
2015	1	56	98.2%
2016	2	67	97.1%
2017	0	54	100%

✓ Reduce  
Remedial Course  
Enrollment

✓ Shorten Time to  
Degree

## Online-Only Cohort

Year	Steady	Forward	Percentage Forward
2012	NA	NA	NA
2013	NA	NA	NA
2014	8	35	81.4%
2015	5	48	90.6%
2016	11	54	83.1%
2017	4	52	92.9%

# Benefits Realized

## Retention Rates (2012-2017)

Student Group	Retention to 2nd Year
Non-FastTrack	81%
FastTrack	84%
All	85%

## 4-year Graduation Rates (2012-2014)

Student Group	Graduate in 4 years
Non-FastTrack	35%
FastTrack	41%
All	42%

✓ Improve Retention

# Benefits Realized

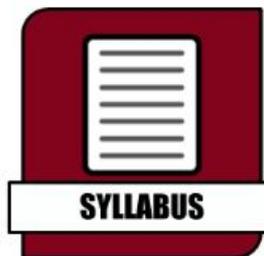
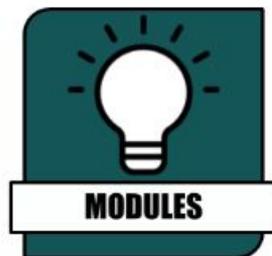
# FastTrack Today



## Welcome!

The College Readiness Math MOOC (Massive Open Online Course) is a self-paced online program designed to enhance your mathematics skills needed to be successful in college mathematics. The course consists of 10 mathematics modules that focus on the areas of algebra and geometry.

To begin the Math MOOC, select the Modules icon below. Review the Welcome and Introduction link. Watch the Overview Video. Take the Diagnostic Pre-Test. After the pre-test, you can begin Module 1: Fractions, Percents, and Ratios.



# Questions?

Request Log-in:

<http://uwlacrosse.catalog.instructure.com/browse/off-campus-collaborations/courses/lac-math-mooc>.

Email Me: [jkosiak@uwlax.edu](mailto:jkosiak@uwlax.edu)