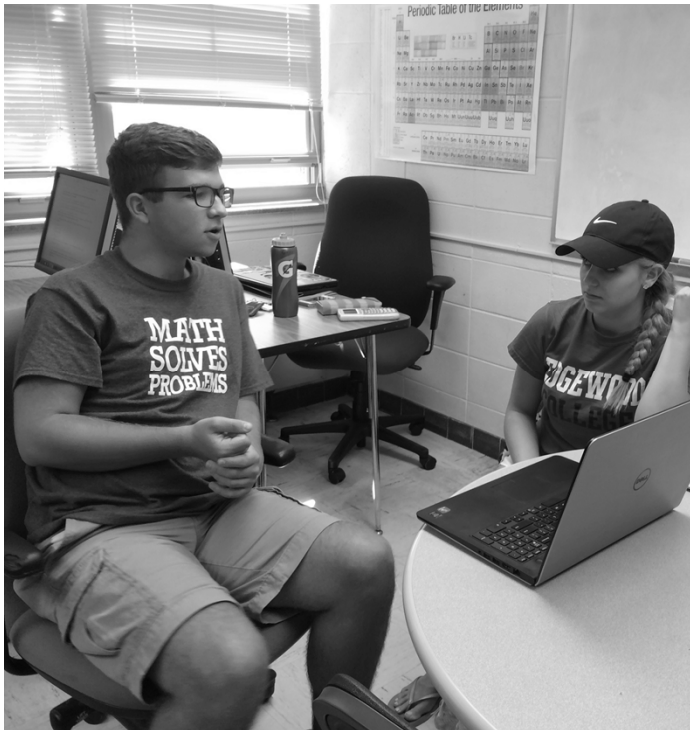
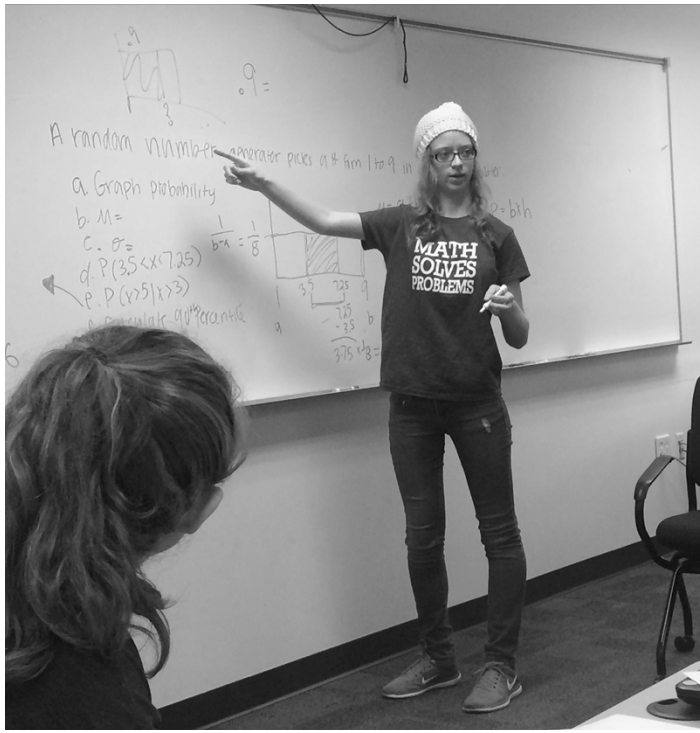




Math Solves Problems

Edgewood College Karen Ball Director of Academic Success


Edgewood College
• Founded in 1927
• Located in Madison, Wisconsin
• Total undergraduate enrollment is about 1300
• Average GPA is 3.4
• Average ACT is 23

Problem

About 30% of our incoming freshman were placing into our developmental math course.

Students who took the developmental math course were still behind their peers when they entered their required math course.

Students who did not pass the developmental math course were required to take another semester of developmental math.

Students were……

Not happy.

Not engaged.

And not successful.

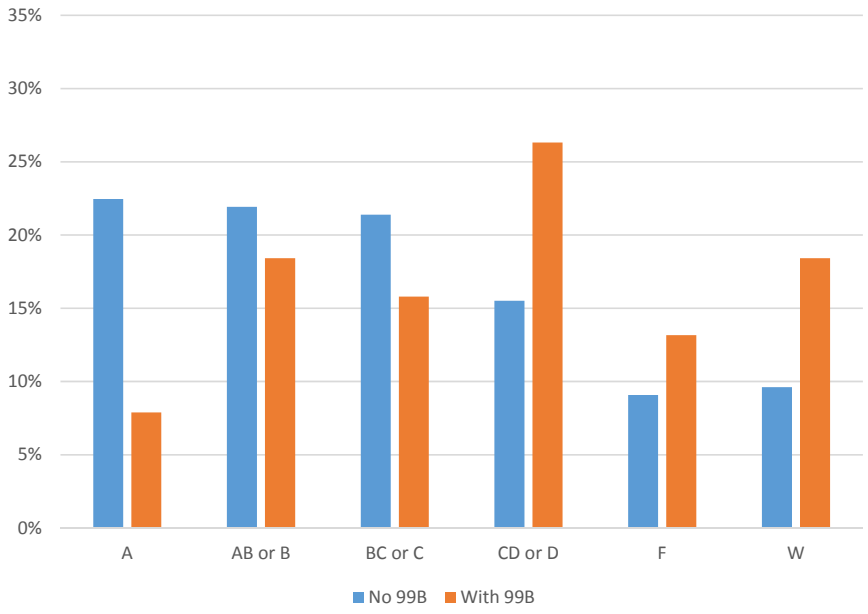
Idea

The second semester of developmental math would be offered in a co-requisite form.

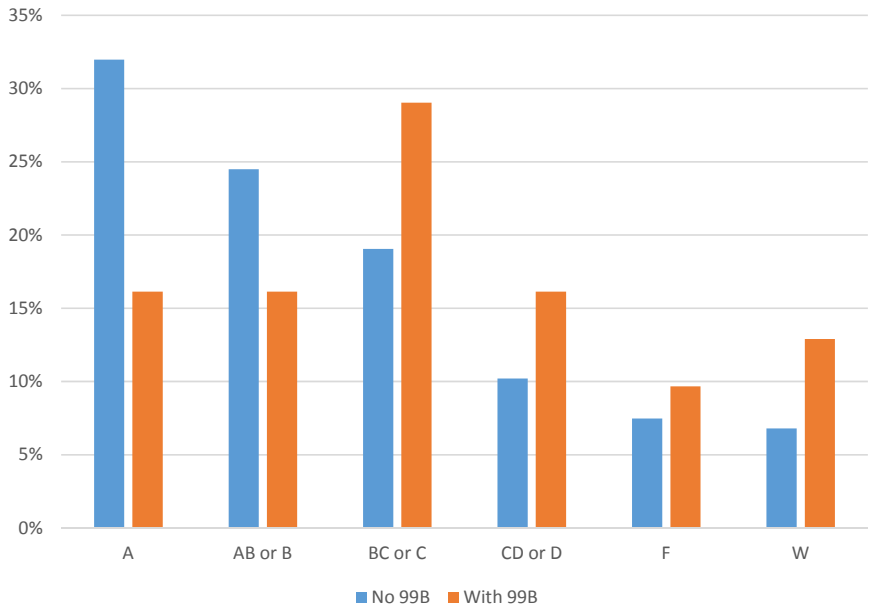
After three semesters of success with this model we changed the placement levels so 75% of our students who were in the developmental model went directly into the corequisite course.

How are we doing?

Fall 2015



Fall 2017



Students are……

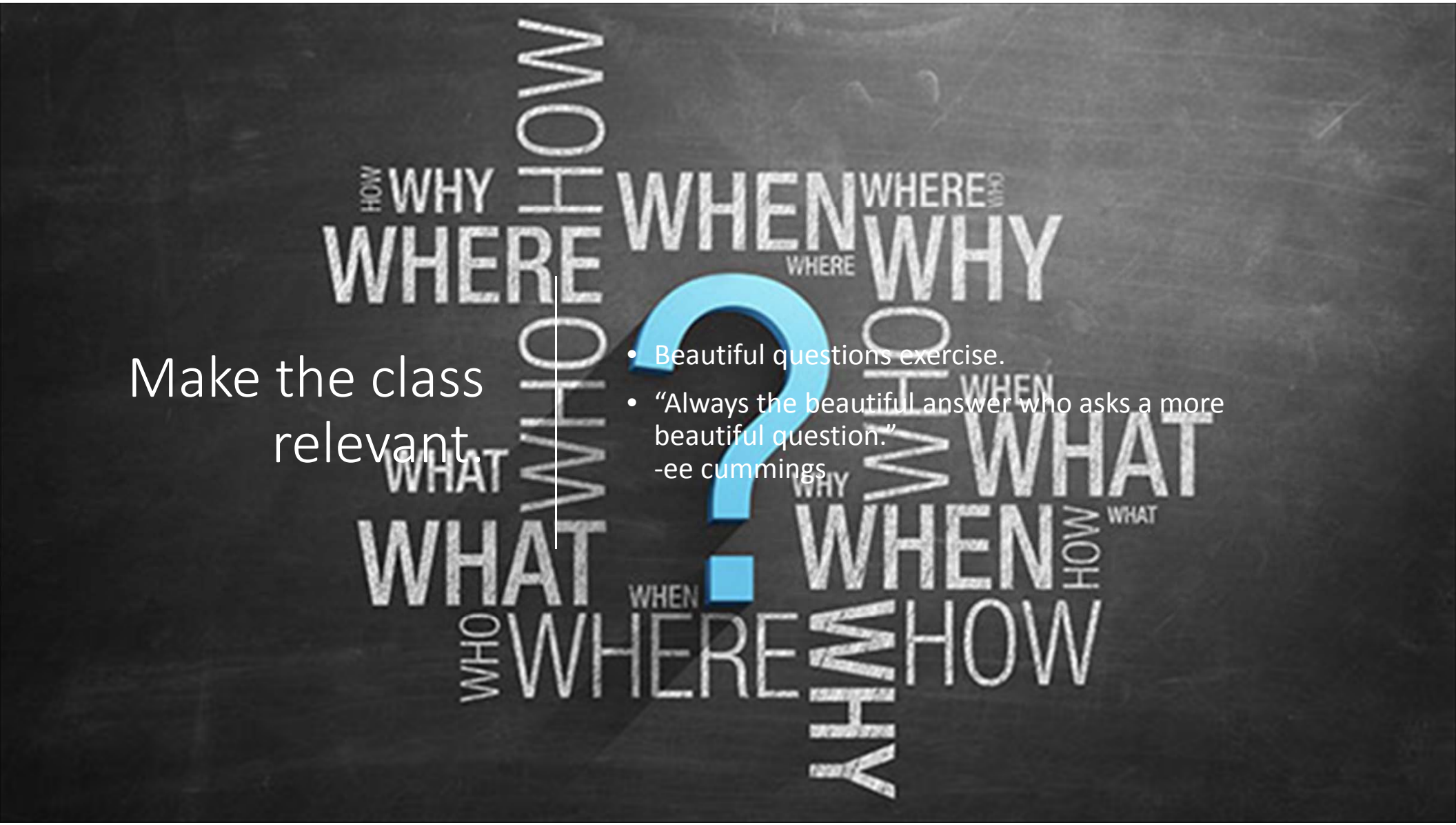
Happy.

Engaged.

And successful.

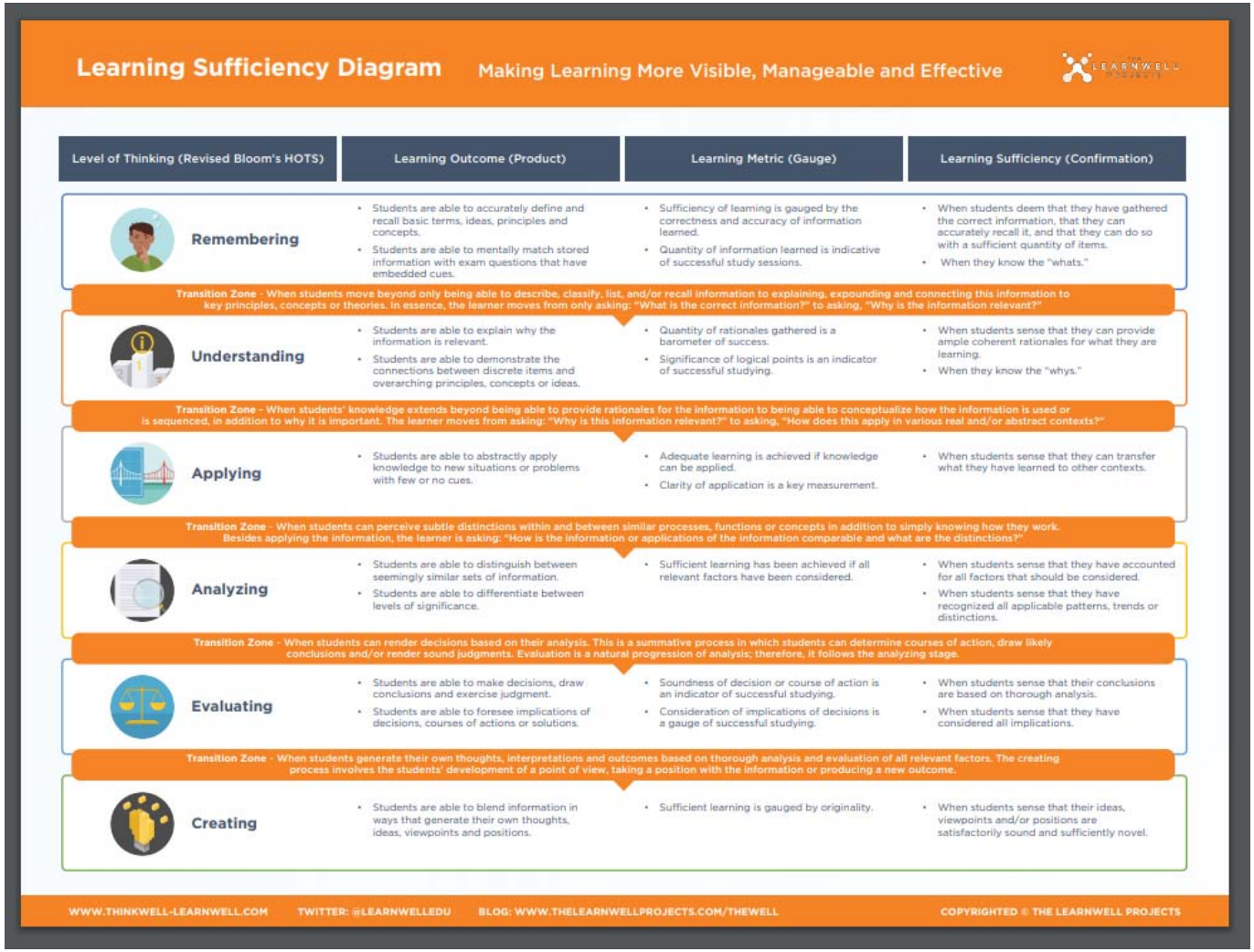
Step number one….you must believe this.

Make the class relevant.



- Beautiful questions exercise.
- "Always the beautiful answer who asks a more beautiful question."
  -ee cummings

Learning about Learning



Learning Sufficiency Diagram

Making Learning More Visible, Manageable and Effective

Level of Thinking (Revised Bloom's HOTS)	Learning Outcome (Product)	Learning Metric (Gauge)	Learning Sufficiency (Confirmation)
Remembering	• Students are able to accurately define and recall basic terms, ideas, principles and concepts. • Students are able to mentally match stored information with exam questions that have embedded cues.	• Sufficiency of learning is gauged by the correctness and accuracy of information learned. • Quantity of information learned is indicative of successful study sessions.	• When students deem that they have gathered the correct information, that they can accurately recall it, and that they can do so with a sufficient quantity of items. • When they know the "whats."
Transition Zone - When students move beyond only being able to describe, classify, list, and/or recall information to explaining, expounding and connecting this information to key principles, concepts or theories. In essence, the learner moves from only asking: "What is the correct information?" to asking, "Why is the information relevant?"			
Understanding	• Students are able to explain why the information is relevant. • Students are able to demonstrate the connections between discrete items and overarching principles, concepts or ideas.	• Quantity of rationales gathered is a barometer of success. • Significance of logical points is an indicator of successful studying.	• When students sense that they can provide ample coherent rationales for what they are learning. • When they know the "whys."
Transition Zone - When students' knowledge extends beyond being able to provide rationales for the information to being able to conceptualize how the information is used or is sequenced, in addition to why it is important. The learner moves from asking: "Why is this information relevant?" to asking, "How does this apply in various real and/or abstract contexts?"			
Applying	• Students are able to abstractly apply knowledge to new situations or problems with few or no cues.	• Adequate learning is achieved if knowledge can be applied. • Clarity of application is a key measurement.	• When students sense that they can transfer what they have learned to other contexts.
Transition Zone - When students can perceive subtle distinctions within and between similar processes, functions or concepts in addition to simply knowing how they work. Besides applying the information, the learner is asking: "How is the information or applications of the information comparable and what are the distinctions?"			
Analyzing	• Students are able to distinguish between seemingly similar sets of information. • Students are able to differentiate between levels of significance.	• Sufficient learning has been achieved if all relevant factors have been considered.	• When students sense that they have accounted for all factors that should be considered. • When students sense that they have recognized all applicable patterns, trends or distinctions.
Transition Zone - When students can render decisions based on their analysis. This is a summative process in which students can determine courses of action, draw likely conclusions and/or render sound judgments. Evaluation is a natural progression of analysis; therefore, it follows the analyzing stage.			
Evaluating	• Students are able to make decisions, draw conclusions and exercise judgment. • Students are able to foresee implications of decisions, courses of actions or solutions.	• Soundness of decision or course of action is an indicator of successful studying. • Consideration of implications of decisions is a gauge of successful studying.	• When students sense that their conclusions are based on thorough analysis. • When students sense that they have considered all implications.
Transition Zone - When students generate their own thoughts, interpretations and outcomes based on thorough analysis and evaluation of all relevant factors. The creating process involves the students' development of a point of view, taking a position with the information or producing a new outcome.			
Creating	• Students are able to blend information in ways that generate their own thoughts, ideas, viewpoints and positions.	• Sufficient learning is gauged by originality.	• When students sense that their ideas, viewpoints and/or positions are satisfactorily sound and sufficiently novel.

WWW.THINKWELL-LEARNWELL.COM TWITTER: @LEARNWELLEDU BLOG: WWW.THELEARNWELLPROJECTS.COM/THEWELL

Collect 1-2-3

COLLECT 1-2-3

Collecting Information about:_____

	What was it?	What did you learn?
1 **Textbook**	*Where in your textbook did you read about it?*	
2 **Articles/other readings**	*Name of article or website:*	
	Name of article or website:	
3 **Videos**		

Attendance

Math 99 Point Sheet

Name: ______________________________ Class: **Math 99B**

		Use this space to complete the daily writing task. *(1 point)*
Date		
Attend & on-time *(1 point)* You initial here:		
Participation *(1 point)* I initial here:		
Classwork/homework *Points will vary*		
Total daily points:		
Date		
Attend & on-time *(1 point)* You initial here:		
Participation *(1 point)* I initial here:		
Classwork/homework *Points will vary*		
Total daily points:		
Date		
Attend & on-time *(1 point)* You initial here:		
Participation *(1 point)* I initial here:		
Classwork/homework *Points will vary*		
Total daily points:		
Date		
Attend & on-time *(1 point)* You initial here:		
Participation *(1 point)* I initial here:		
Classwork/homework *Points will vary*		
Total daily points:		

Assessment

- Assessment is happening all of the time.
- For faculty this requires constant modifications to the content.
- The flip side of this is no grading.
- Example, use a value line.

Questions

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