

# **Assessment, Achievement and Accountability: An Exercise in ... What?**

**“If everyone is thinking the same thing,  
someone’s not thinking!”**

**George S. Patton, Jr., General, AUS**

# Abstract

Assessment, achievement and accountability go hand in hand. Assessment must be used to propagate change and improve student outcomes. Measurements of achievement judiciously applied provide direction to improve student outcomes. Accountability must come from within all tiers of academics, i.e., the “system”, faculty, students, administrators and staff. Failure of one criterion guarantees failure of all three.

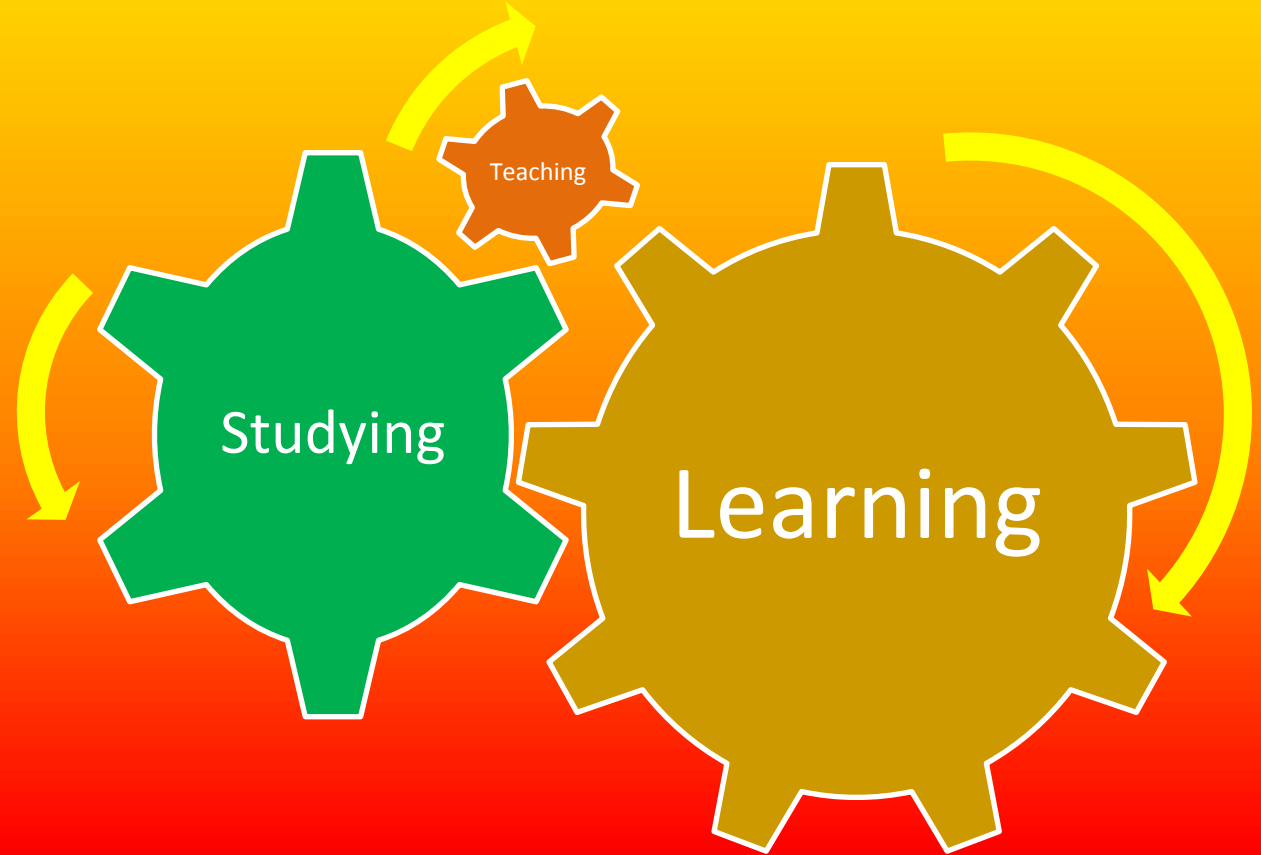
- ✓ Learning outcome: data must take the place of politics in driving academic change and improving student outcomes.
- ✓ Learning outcome: data must be made easily available to drive academic change and improve student outcomes.

Teaching: “[Professional activities] of sharing and explaining a body of knowledge with others.”

<http://www.thefreedictionary.com/teaching>

Studying: “to apply one's mind purposefully to the acquisition of knowledge or understanding of a subject; the practice of reading or writing, [e.g.,] at night, especially by artificial light.”

<http://www.thefreedictionary.com/studying>



Learning: “the cognitive process of acquiring skill or knowledge; the act of internalizing or studying a body of knowledge for purposes of expanding one’s self and society and demonstrating that knowledge.”

<http://www.thefreedictionary.com/learning>

# Assessment

Assessment is “a process of gathering and documenting information about the achievement and skills of an individual or group of individuals ... and using that evidence-based information (data) to improve and increase student achievement for and in future courses.”

# Achievement

Achievement is defined as “something completed or attained successfully”; students complete a course of study in such a manner, and at such a standard, that students are academically back grounded and prepared for their next course[s] or program[s] in their academic endeavors.

# Accountability

Accountability is “the obligation to bear the consequences for failure to [achieve] as expected [or desired].”

<http://www.answers.com/topic/accountability>

# Accountability

*“The very notion that anyone might be opposed to teacher accountability is a stretch. But beware, for the phrase is not what it appears to be. In fact, in this age of urgency about standards, it has become a code phrase for blaming teachers. It means not just that teachers are supposed to be responsive to the needs of students or to provide high-quality instruction but that they must see that their students have high test scores [and course grades]—or else.”*

<http://www.nctm.org/resources/content.aspx?id=7814>

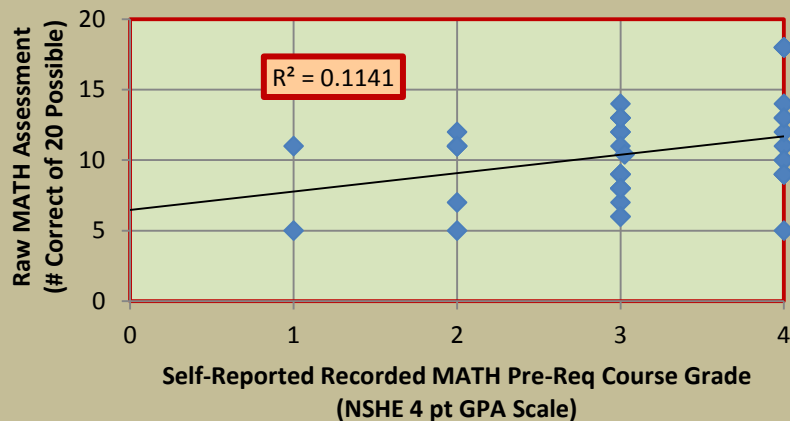
(National Council of Teachers of Mathematics)

# Case Study #1

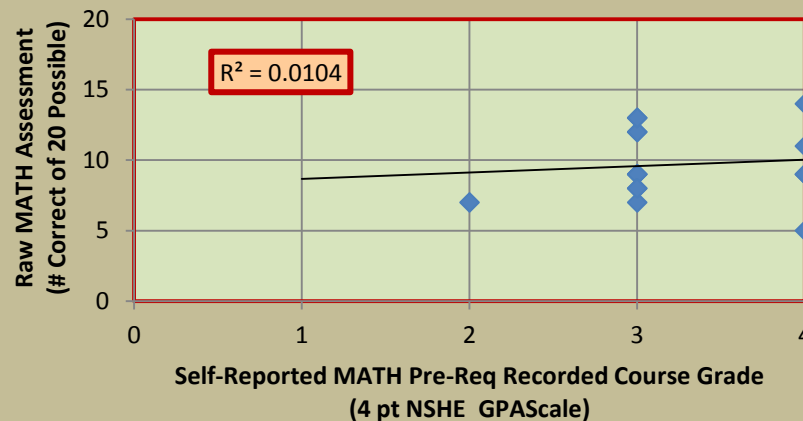


# Assessment: General Chemistry

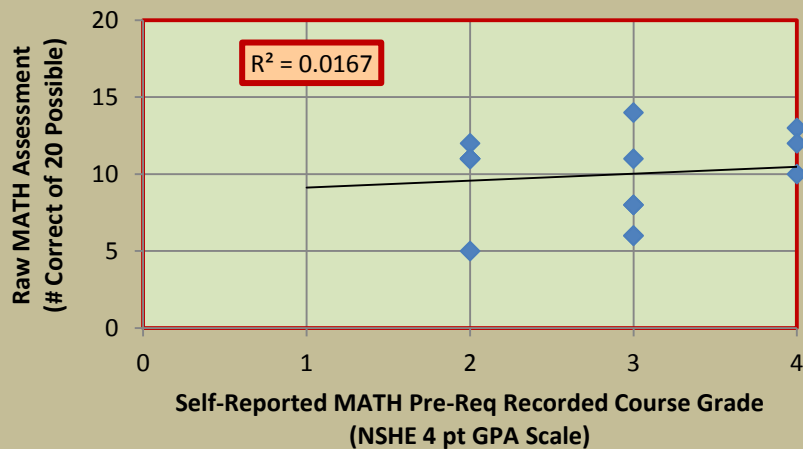
Raw MATH Assessment Score v MATH Pre-Req Grade -- AVG Correct = 10/20



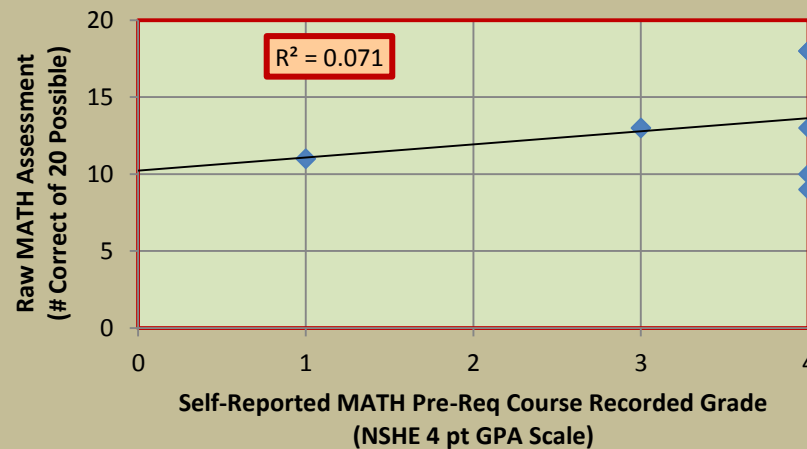
Raw MATH Assessment Score (AVG 9.7/20) v MATH 120 Grade; n=16



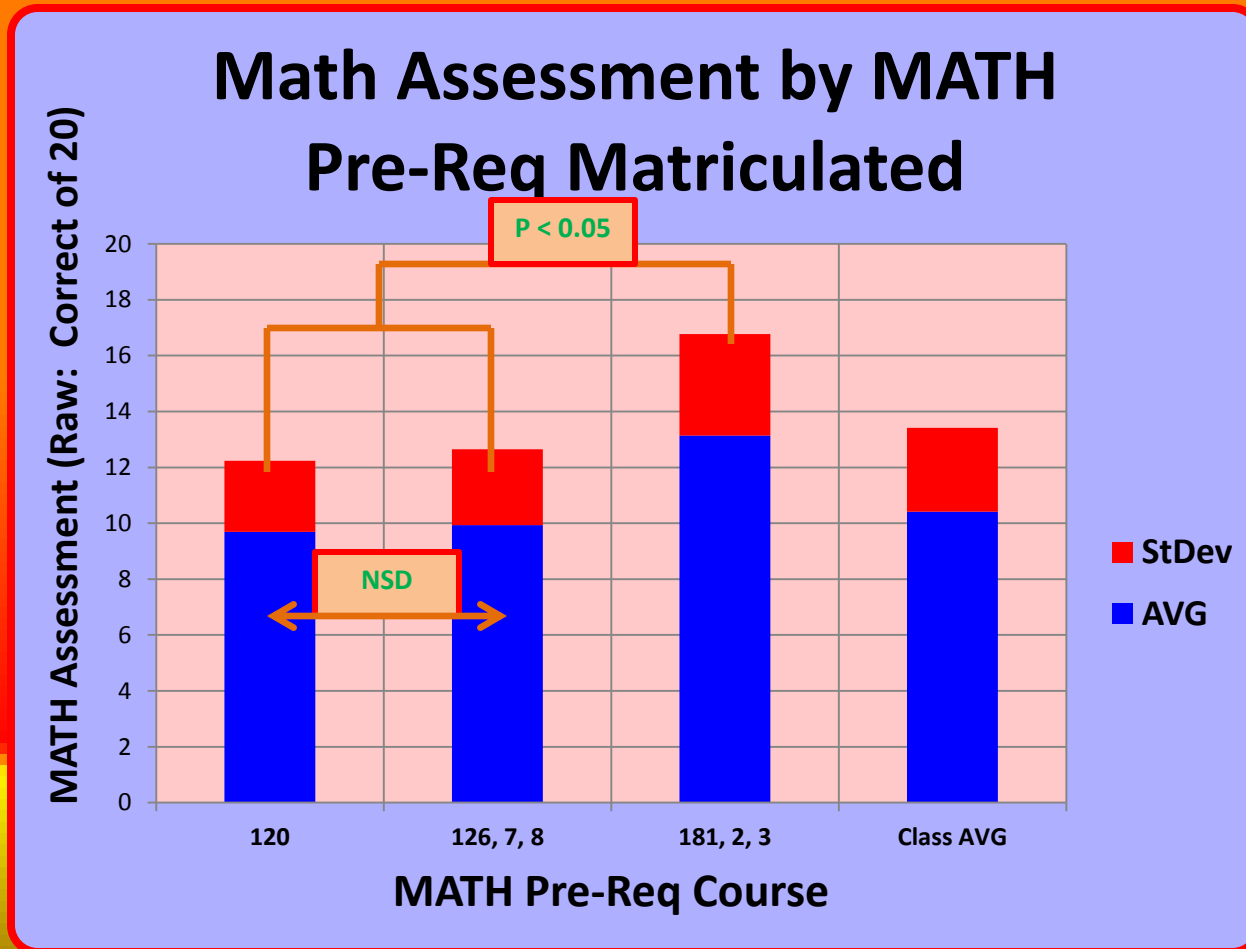
Raw MATH Assessment Score (9.9/20) v MATH 126, 127 or 128 Grade; n=15



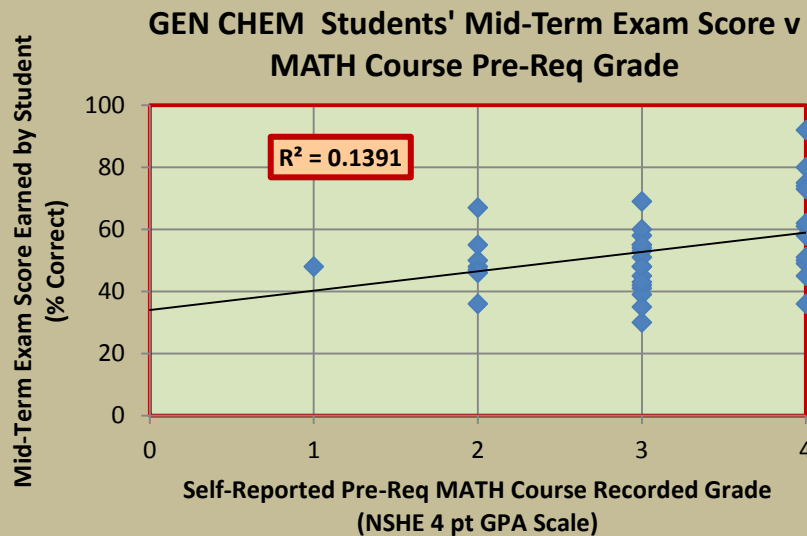
Raw MATH Assessment Score (13.1/20) v MATH 181, 182 or 283 Grade; n=7



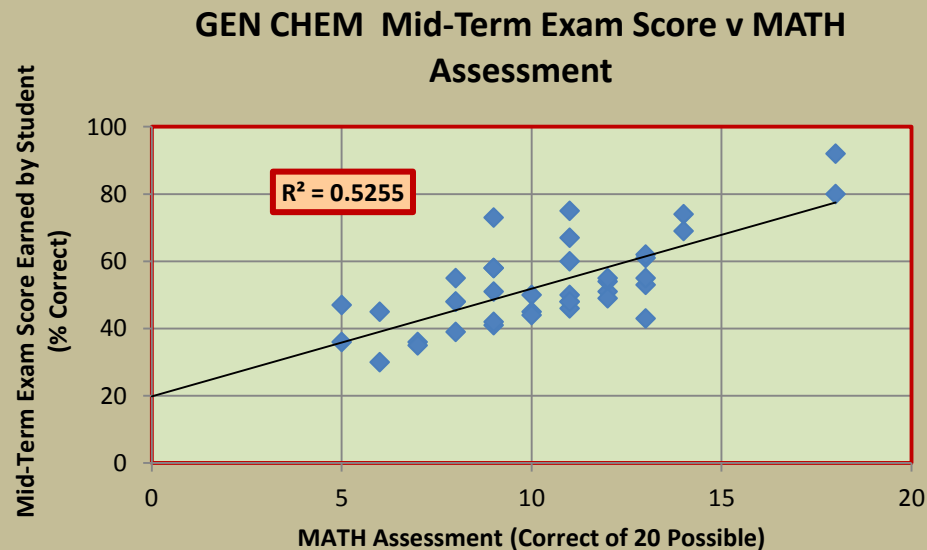
# Assessment: General Chemistry



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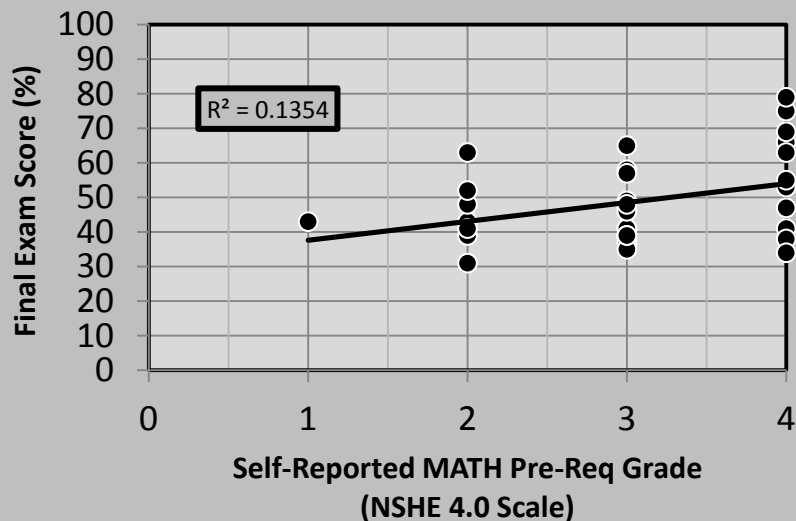


3.8 X Greater Relationship



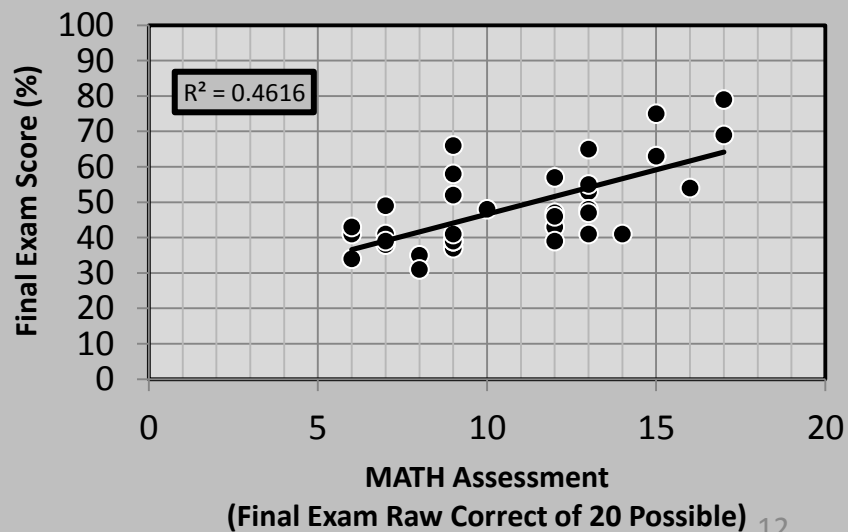
# Assessment: General Chemistry

Final Exam (%) v MATH Pre-Req Grade



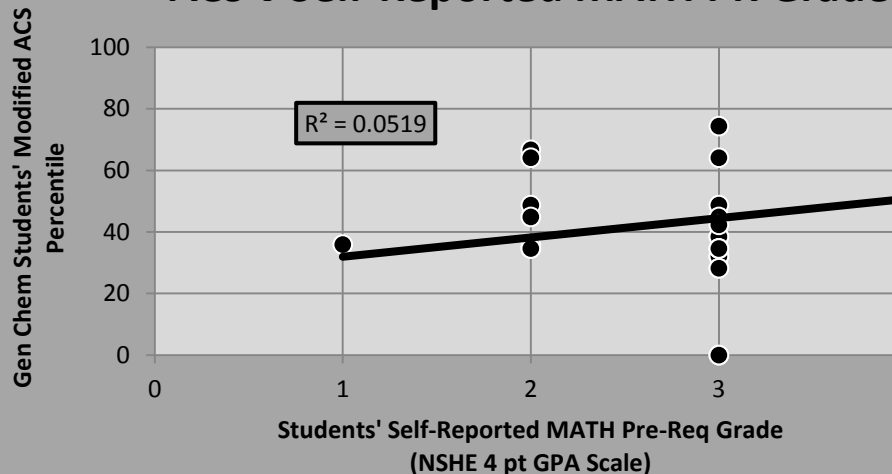
3.4 X Greater Relationship

Final Exam Score (%) v Final Exam MATH Assessment (Raw)



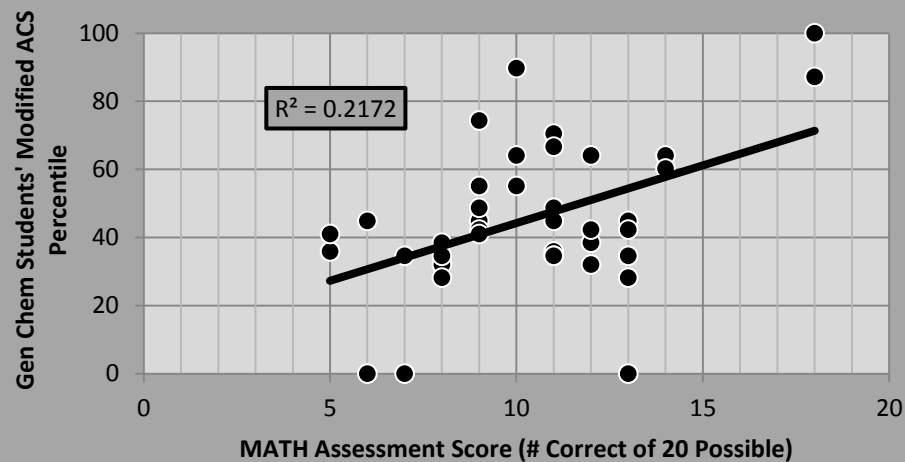
# Assessment: General Chemistry

## ACS v Self-Reported MATH PR Grade



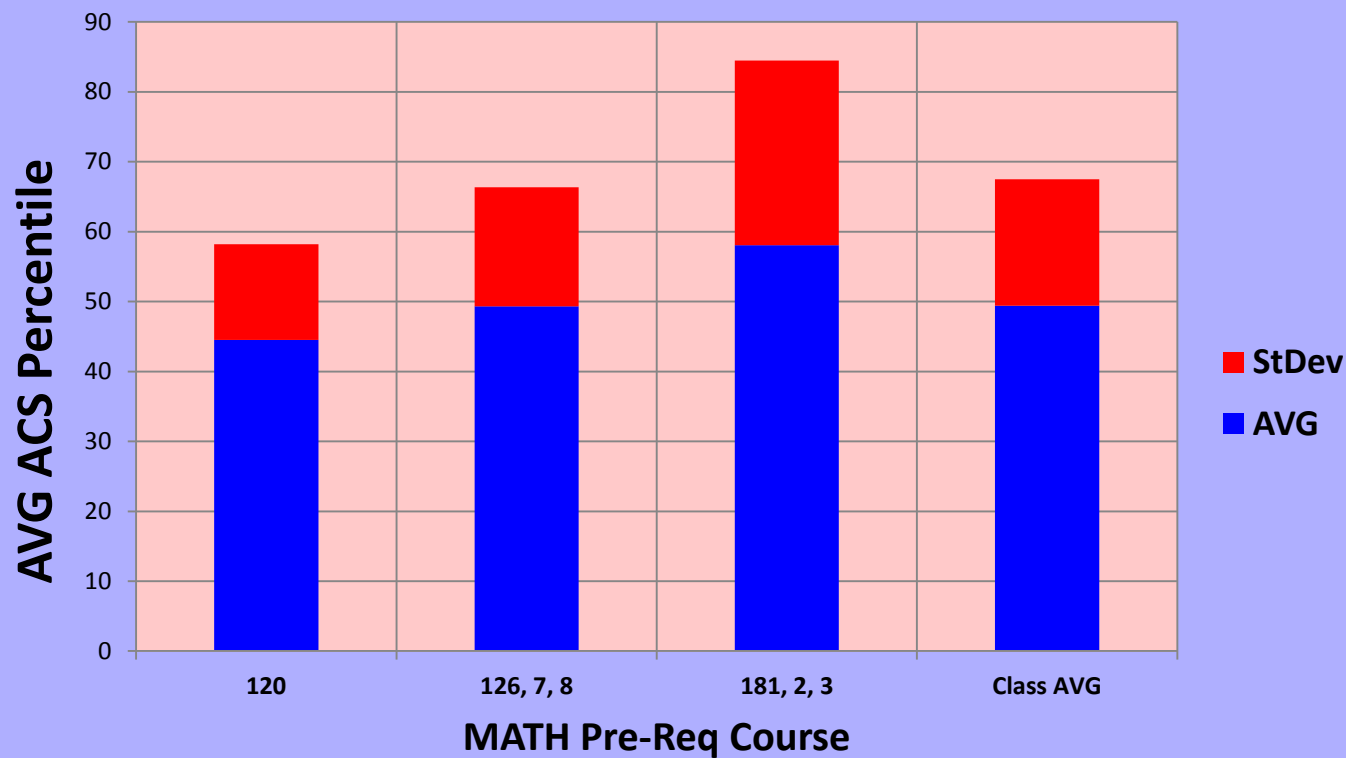
4.185 X Greater  
Relationship

## ACS Score v MATH Assessment Score

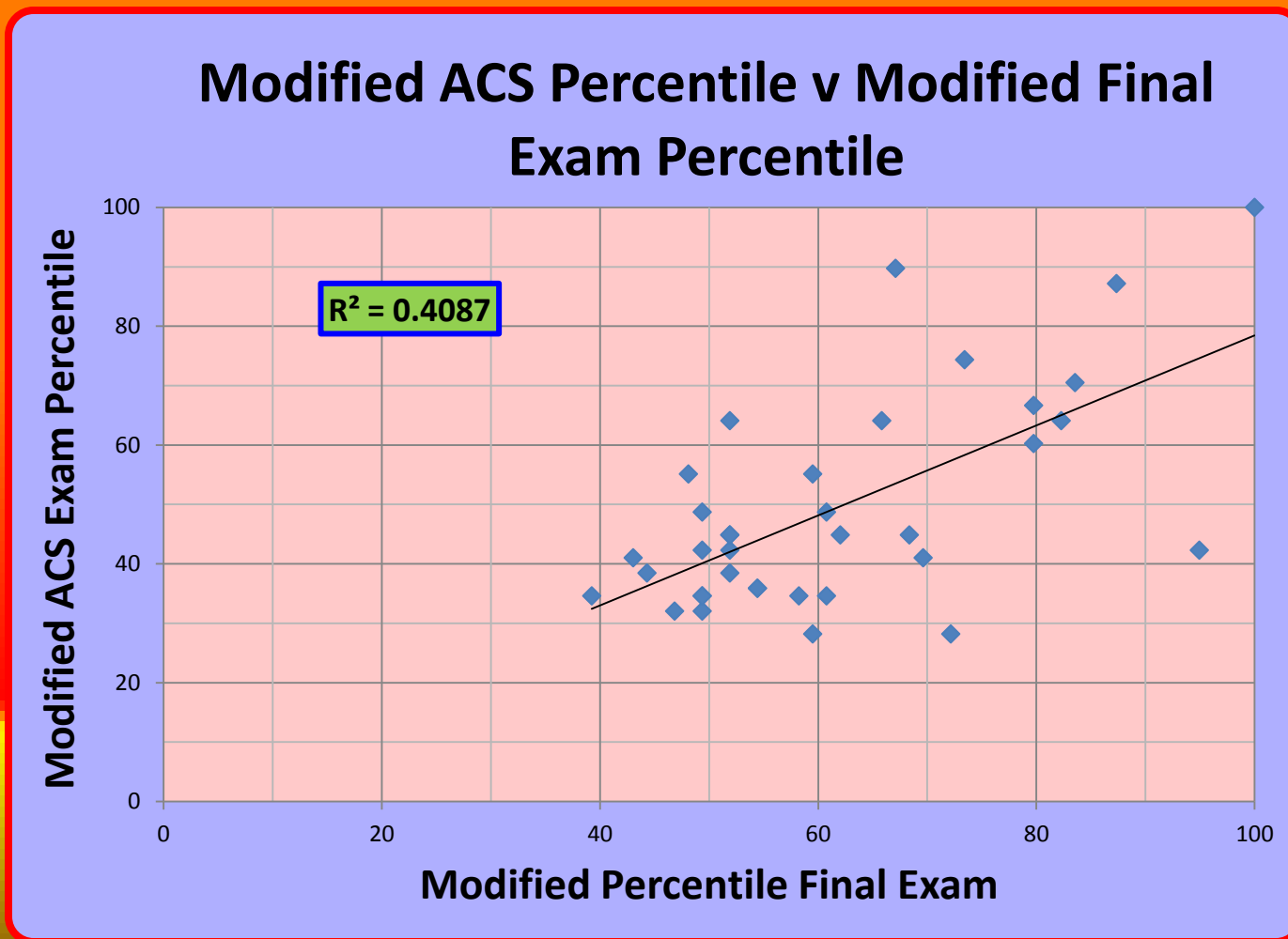


# Assessment: General Chemistry

## ACS Percentile v Matriculated MATH Pre-Req -- NSD

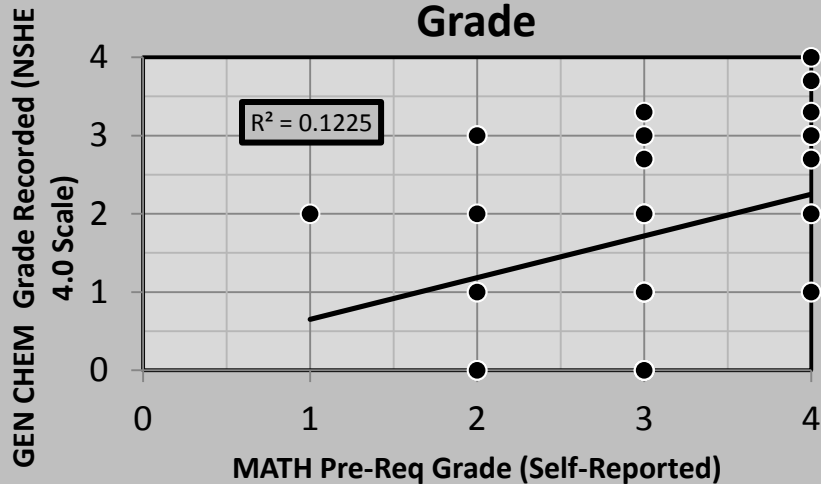


# Assessment: General Chemistry



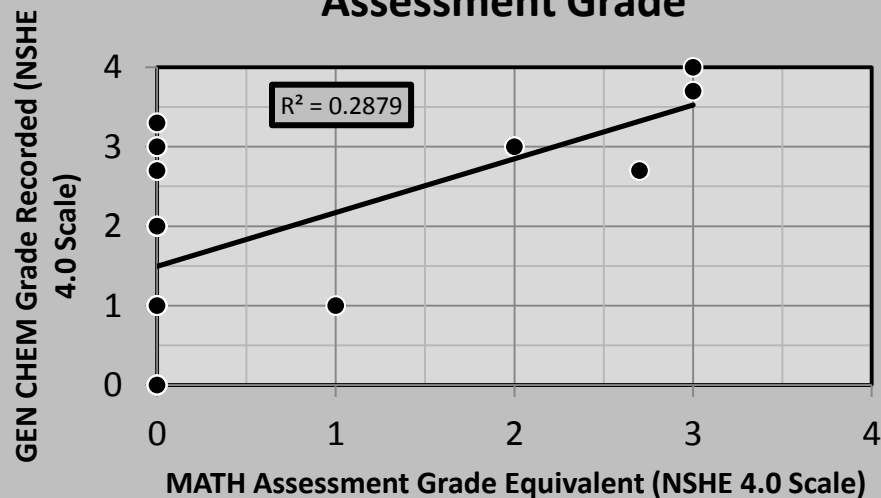
# Assessment: General Chemistry

## GEN CHEM Grade v MATH Pre-Req Grade



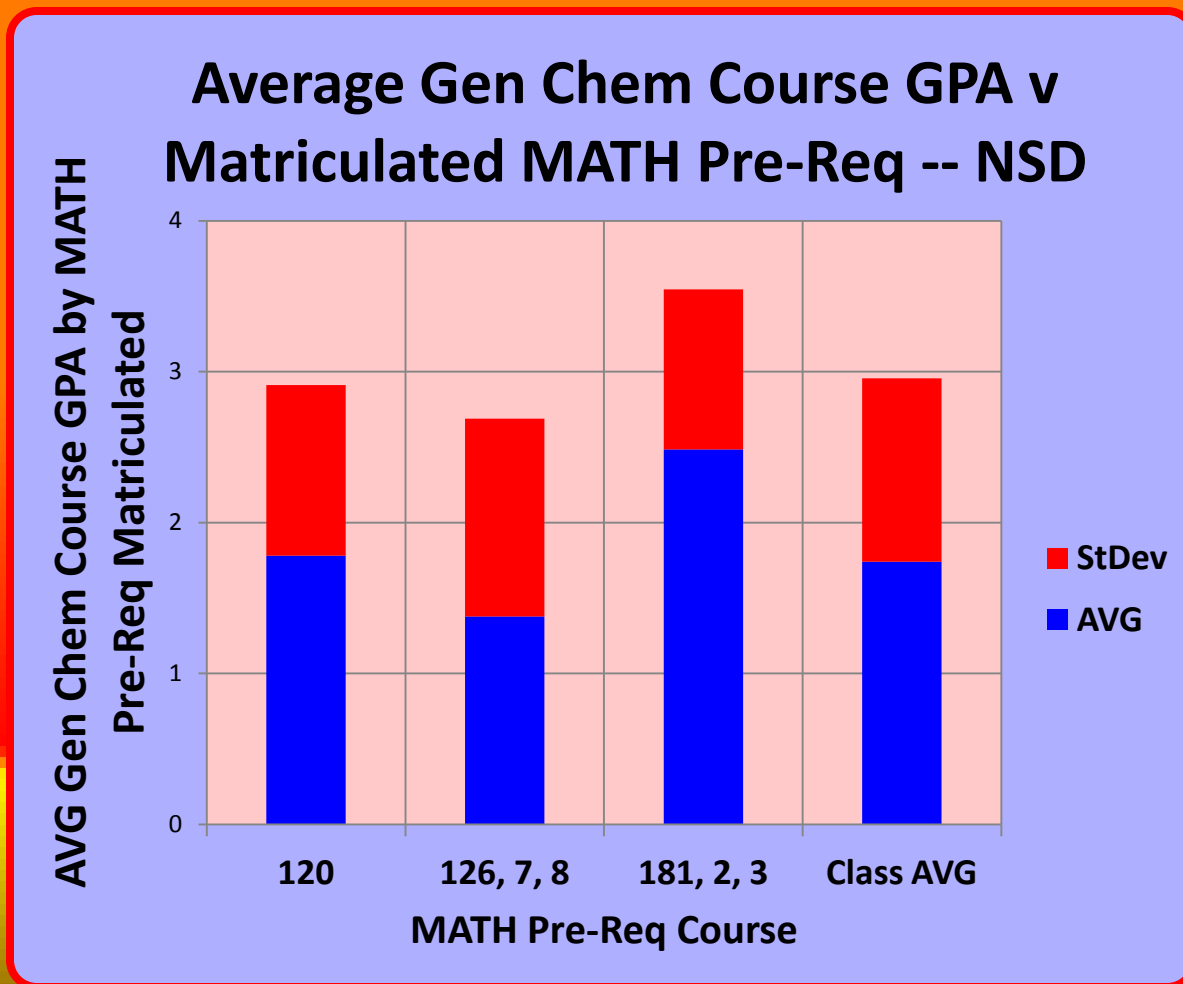
2.4 X Greater  
Relationship

## GEN CHEM Grade v MATH Assessment Grade





# Assessment: General Chemistry



# Group Participation

Assessment – Complete?

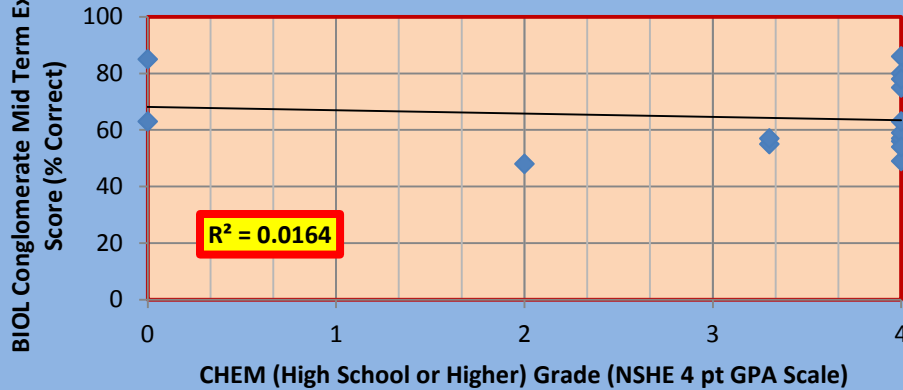
Achievement – How Would YOU determine if Students Have Achieved?

Accountability – How Would YOU Hold Students, Faculty, Administrators Accountable?

# Case Study #2

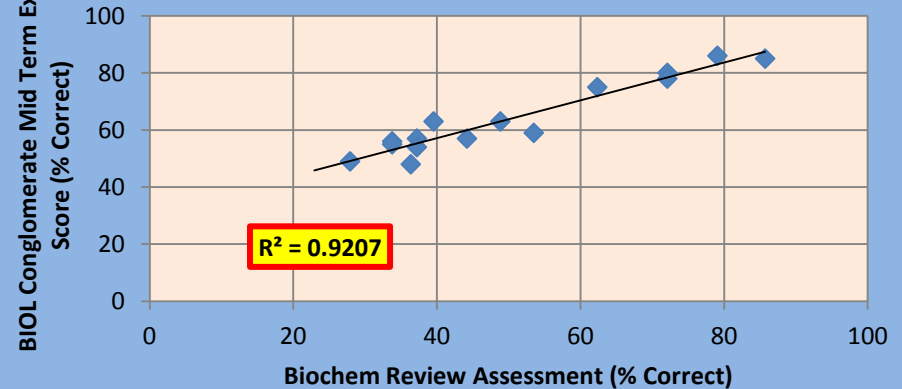
# Assessment: BIOL

## Conglomerate BIOL Mid-Term Exam Score v CHEM Grade

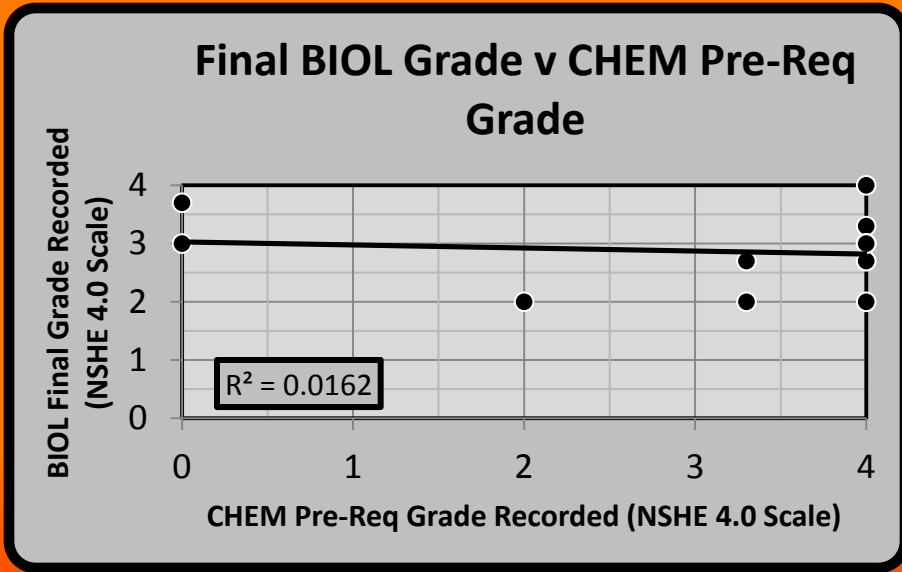


56 X Greater Relationship

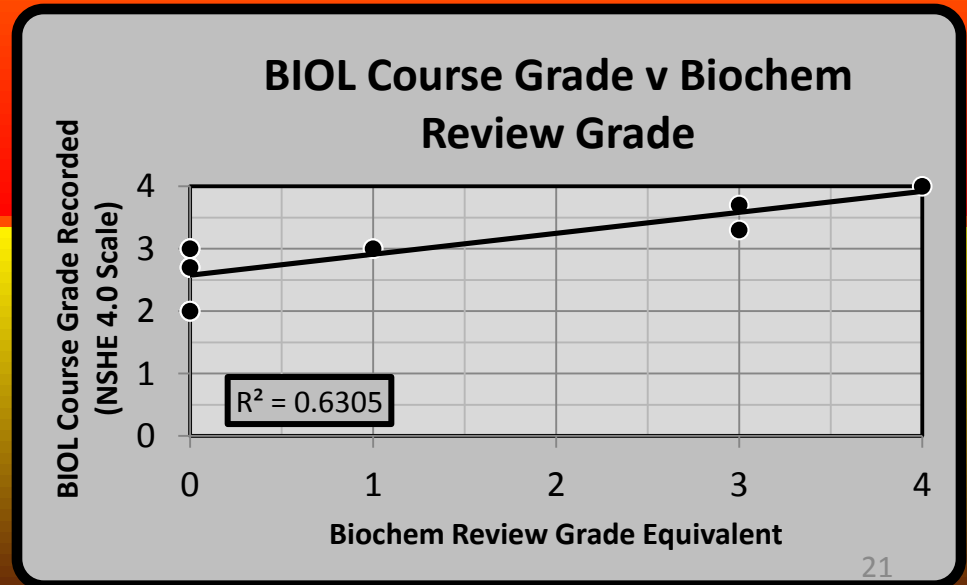
## Conglomerate BIOL Mid-Term Exam Score v Biochem Review



# Assessment: BIOL

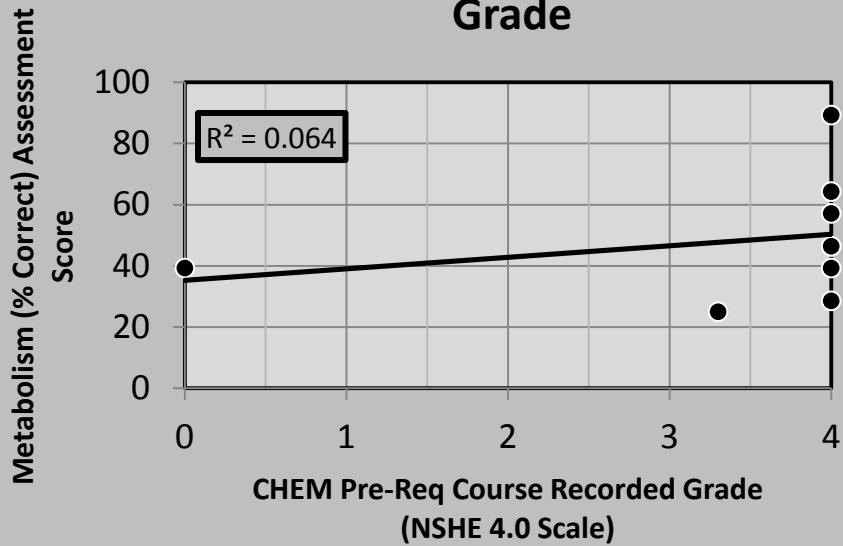


39 X Greater Relationship



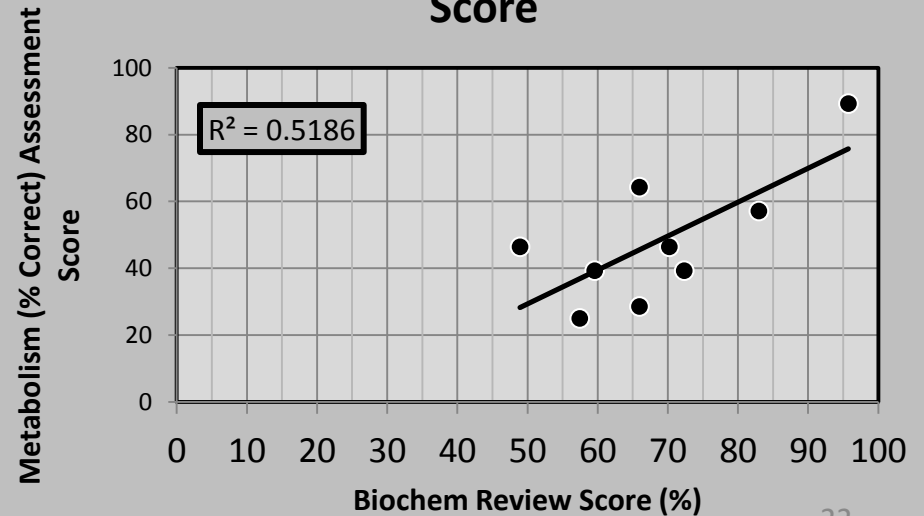
# Assessment: Metabolism

## Metabolism v CHEM Pre-Req Grade



8 X Greater Relationship

## Metabolism v Biochem Review Score



# Group Participation

Assessment – Complete?

Achievement – How Would YOU determine if Students Have Achieved?

Accountability – How Would YOU Hold Students, Faculty, Administrators Accountable?

# Conclusion

What Would YOU Conclude?

Failure of one criterion guarantees failure of all three.

Thank You for Attending and Sharing!