



Developing Student Habits for Math Success in a Middle School Setting

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Session Outline

- SAMS grant and the Student Attributes
- Why should students do self-assessment?
- Yakima Valley Community College students
- Toppenish Middle School students
- Toppenish High School students
- Teacher challenges



SAMS Grant

- **Student Attributes for Math Success Grant** – Transition Math Project and College Spark
- 5 grants of \$10,000 awarded: ESD 105, Seattle SD, Highline CC, Olympic ESD 114, Renton SD
- Increase student preparation for post-secondary success by supporting implementation of the Student Attributes for Math Success



Student Attributes for Math Success

- Formation of teacher-faculty teams at each site
- Pilot sites will meet (in-person and during monthly webinars) to share, provide feedback, and adjust their activities and evaluation plans.
- Develop knowledge sharing and peer review capabilities using Web 2.0 technology.

<http://studentattributes.wetpaint.com/>



Student Attributes from College Readiness Standards

- Demonstrate intellectual engagement
- Take responsibility for own learning
- Persevere when faced with time-consuming or complex tasks
- Pay attention to detail



Yakima Valley SAMS Grant

- One “Link” team from Yakima Valley Community College (YVCC)
- Toppenish School District – mainly the middle school
- Outcomes
 - Set of classroom conditions to best support the attributes
 - Examples of using reflection and error patterns



Take Responsibility for Own Learning

- Attend nearly every class session and when absent, seek ways to learn the material covered in class.
- Conscientiously prepare work assigned for class.
- *Examine and learn from their errors and seek help when needed.*
- Take advantage of available resources — class time, notes, textbook, assignments, tutoring services, supplemental materials.



Power of Self-Assessment

“After teaching some teachers but not others to implement self-assessment in their 5th and 6th grade math classes, Ross, Hogaboam-Gray, and Rolheiser (2002) found that students in the treatment group outperformed students in the comparison group.”

from Heidi Andrade in *Educational Leadership*, December 2007/January 2008, (65, 4)



Power of Self-Assessment

“Self-evaluation is a potentially powerful technique because of its impact on student performance through enhanced self-efficacy and increased intrinsic motivation.”

Carol Rolheiser

http://www.cdl.org/resource-library/articles/self_eval.php



Power of Self-Assessment

“Evidence about the positive effect of self-evaluation on student performance is particularly convincing for difficult tasks (Maehr & Stallings, 1972; Arter et al., 1994), ... and among high need pupils (Henry, 1994).”

Carol Rolheiser

http://www.cdl.org/resource-library/articles/self_eval.php



Yakima Valley Community College Demographics 2008-09

- 2/3 of the students are under age 30
- About 50% are enrolled full-time
- Student intent: 48% Workforce training;
19% transfer; 33% Adult Basic Education
- 55% are Hispanic or Native American
- 65% are female
- About 50% are unemployed
- More than 70% receive financial aid
- More than 80% are first generation



What do YVCC students do?

- Pre-test of pre-requisite knowledge at beginning of the course
- Exam Preparation Log (started before each chapter covered)
- Exam Analysis or Narrative (at least 1 page)



Toppenish Middle School

- 6th – 8th grade = 713 Total students
- 25 math classes – 6 teachers
- 95% at poverty level
- 60 minutes of math/day
 - 30% of students are benchmark
 - 14% of students are strategic
 - 56% of students are intensive

(averaged across grade level)



What do Toppenish MS students do?

- Posted Learning Target
- Planners
- Pre-Post Assessments
- Graph Results
- Narratives
- Post-Test Skills Reflection



Posted Learning Target

- Related to performance expectations
- Communicated, not just posted
- Recorded in math journal or learning log
 - Learning log replaces YVCC exam preparation log.



Planners

- Issued to every student
- A-H-D = Activity – Homework – Due date
- Completed for each subject, each day
- Advisory teacher monitors



Pre-Post Assessments

- Pre-quiz, quiz
 - Up to 5 quizzes per unit
 - Narrative to correct mistakes
 - Can re-take
- Unit test
 - Pre & test
 - Narrative to correct mistakes
 - No retakes



Exam Analysis

- Narratives
- Post-Test Skills Reflection



Graph Results

- Pre-Quiz & Quiz
 - Pre-Test & Test
 - Parent signature and/or initials
 - Why graph?
- *When students see their own growth, they are motivated to try harder and do better.*
6th grade teacher



What do Toppenish HS Students Do?

- Learning Target – Trigonometry Example
- Learning Logs – similar to Middle School
- Exam Analysis
 - Test Corrections and Math Lab
 - Item Analysis for each Unit Test



Possible Teacher Challenges

- Where does this fit in the “sea” of options?
 - Self Efficacy Pre- and Post-test
 - How does teacher fidelity to district initiatives affect the “math attitude” of his/her students?
- What does “consistency” look like from one grade level to the next?
- Is this worth the time it takes?



Questions?



Student Attributes for Math Success Wiki:

<http://studentattributes.wetpaint.com/>

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Thank you!