

Learning Something New Matters

*Del Siegle, Susan Dulong Langley, D. Betsy
McCoach, Ashley Carpenter, Kenneth J. Wright,
Kelly Kearney, & Sarah D. Newton*

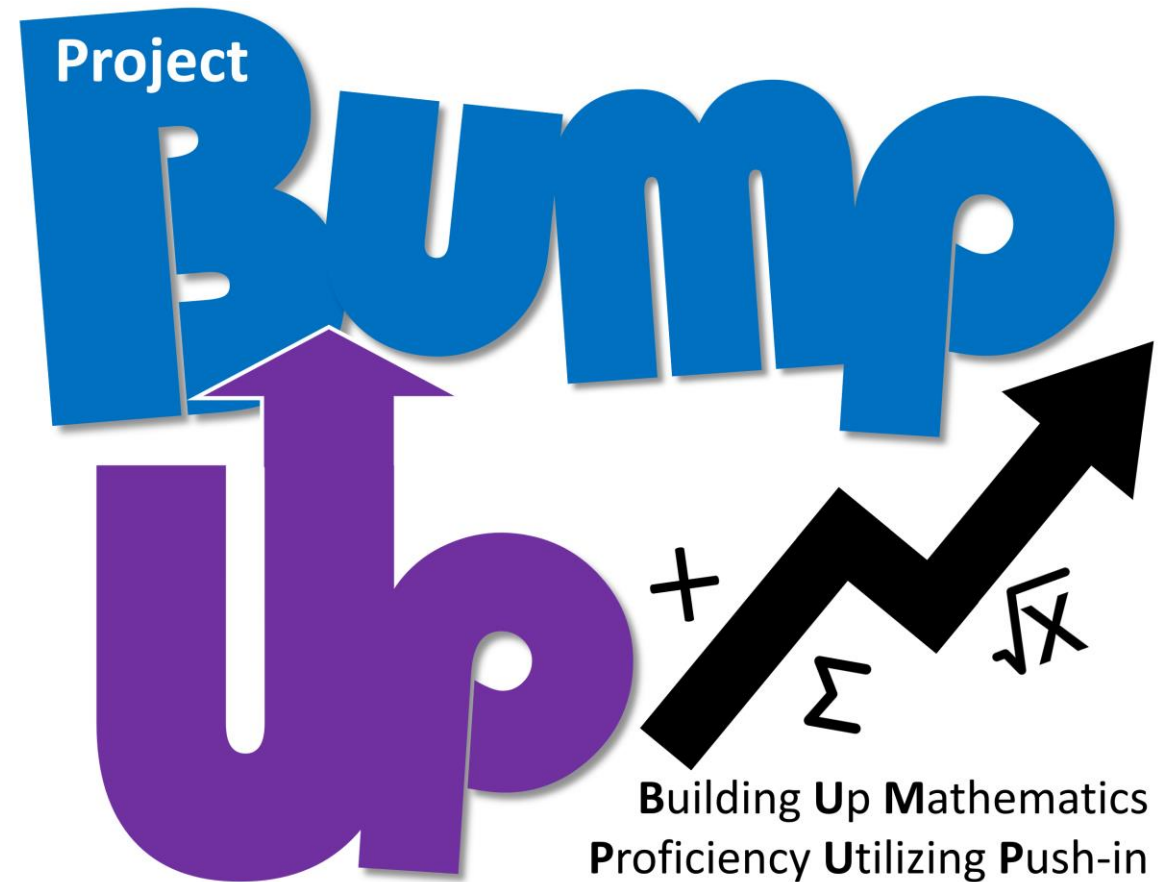
UCONN | UNIVERSITY OF
CONNECTICUT

RENZULLI CENTER FOR CREATIVITY, GIFTED
EDUCATION, AND TALENT DEVELOPMENT



WILLIAM & MARY

CHARTERED 1693



FUNDED BY JACOB K. JAVITS GIFTED AND TALENTED STUDENTS
EDUCATION PROGRAM, U.S. DEPARTMENT OF EDUCATION
PR/AWARD # S206A190028



Push-in Collaboration

- Co-planning
- Co-teaching

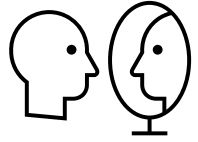
Math Differentiation

- Pre-Assess
- Differentiate by Unit

4th and 5th grade classrooms

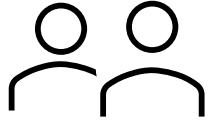
- Increase identification of gifted students from underrepresented/underserved groups
- Increase math achievement
- Develop math talent
- Improve student motivation and attitude towards math

Collaborative Teaching Model



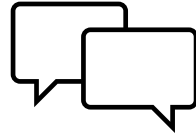
Reflect (Intrapersonal)

1. Reflect on my beliefs and values about teaching gifted learners.
2. Consider my strengths and areas of growth.



Engage (Interpersonal)

1. Build trust.
2. Establish norms.
3. Recognize and build on strengths.
4. Align philosophies.



Co-Plan

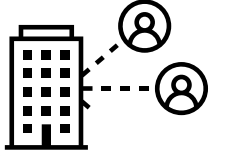
1. Review existing student data.
2. Set a purpose.
3. Establish roles and responsibilities.
4. Determine a co-teaching plan.
5. Select and prepare materials

Co-Teach

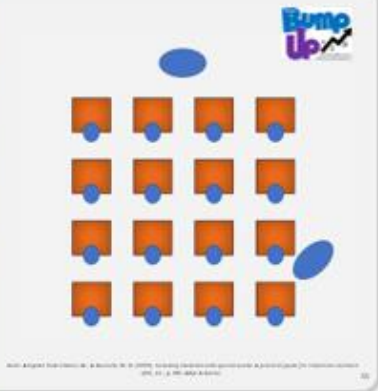
1. Implement co-teaching plan.
2. Adjust to student needs.

Fine Tune

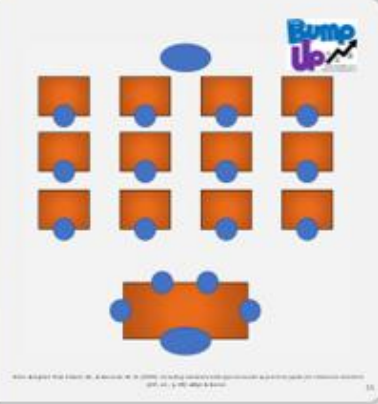
1. Reflect on the co-teaching experience.
2. Review student outcomes.
3. Revise for next steps.



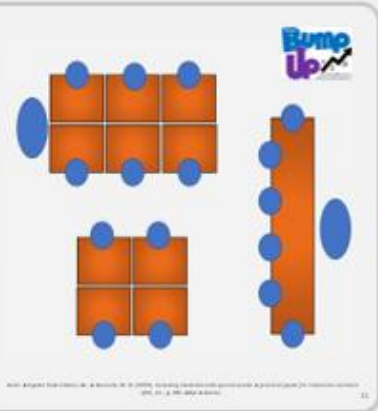
Stretch
*(One teach,
one assist)*



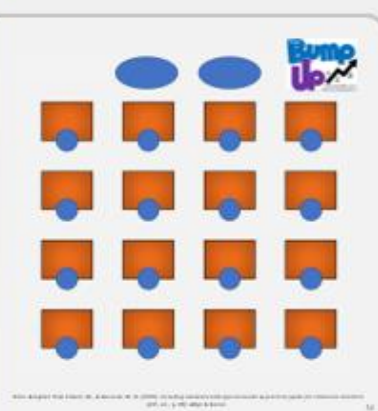
Safari
*(Alternative
teaching)*



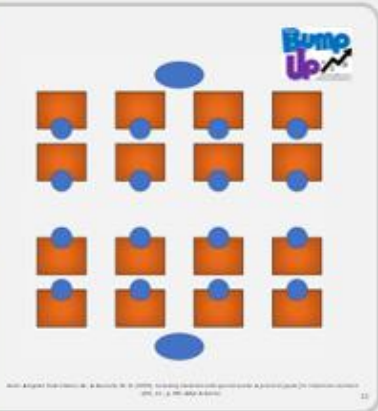
Carousel
*(Station
teaching)*



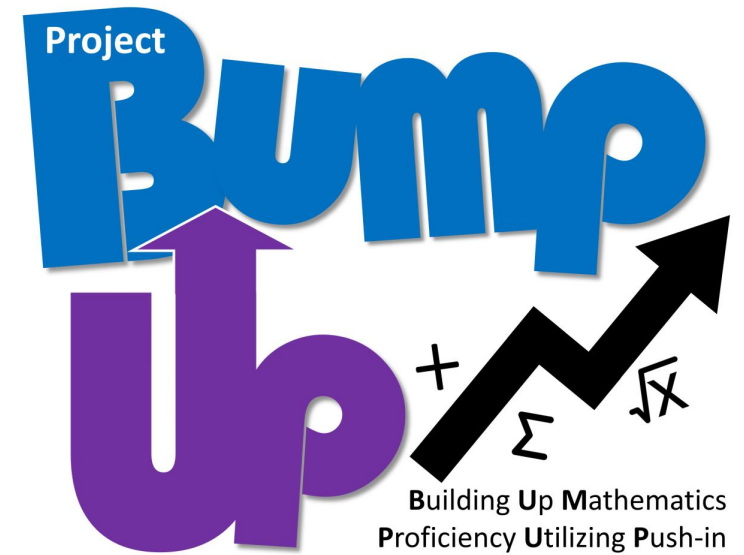
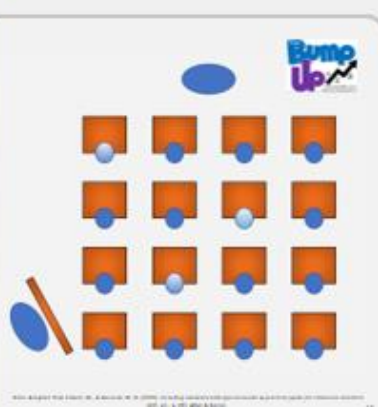
Tango
(Teaming)



Tier
*(Parallel
teaching)*



Scout
*(One teach,
one observe)*





Differentiation Planning Guide

Unit: _____ Lesson: _____	Date: _____	Grouping of Advanced Students <input type="checkbox"/> Whole Class <input type="checkbox"/> Flexible Group <input type="checkbox"/> Individual
--	--------------------	--

Standard(s) for Today's Lesson

Standard(s) <input type="checkbox"/>
--

Content From a Supplemental Source	Differentiation for BUMP UP Students	Alternative Standard
<p>Topic: <u>polygons</u></p> <p>Source: <u>Georgia Curriculum Frameworks</u></p> <p>DOK Level 3 _____ or 4 <u>X</u>?</p> <p>Brief description of differentiated math activity:</p> <p><u>Lesson 4 - Geometry Town pp. 90-97</u> https://www.georgiastandards.org/Georgia-Standards/Frameworks/4th-Math-Unit-6.pdf</p> <hr/> <p><u>Symmetry W&M Beyond Polygons</u> Lesson 3 Gr. 3 Lesson 5.2 pp. 207-209: Analyzing lines of symmetry and formulating a pattern/rule about lines of symmetry and the number of sides shapes have</p>	<p><input type="checkbox"/> Math differentiation option from the textbook for this lesson. Page <u>5</u> Activity Number(s) <u>30</u> Brief description of differentiated math activity:</p> <p style="text-align: center;">DOK Level 3 <u>X</u> or 4 _____?</p> <p style="text-align: center;">and/or</p> <p><input type="checkbox"/> DOK Differentiated math to: Level 3 _____ and/or Level 4 _____ Brief description of differentiated math activity:</p> <p style="text-align: center;"><u>Lesson 1 - Removed scaffolding</u></p>	<p>Grade <u>5</u> Standard <u>G.2.3</u></p> <p style="text-align: center;">DOK Level 3 <u>X</u> or 4 _____?</p> <p>Brief description of differentiated math activity:</p> <p style="text-align: center;"><u>Lesson 2 - Gr. 5 Ready Textbook pp. 323-324</u></p>

Other/Notes



Differentiation Planning Guide

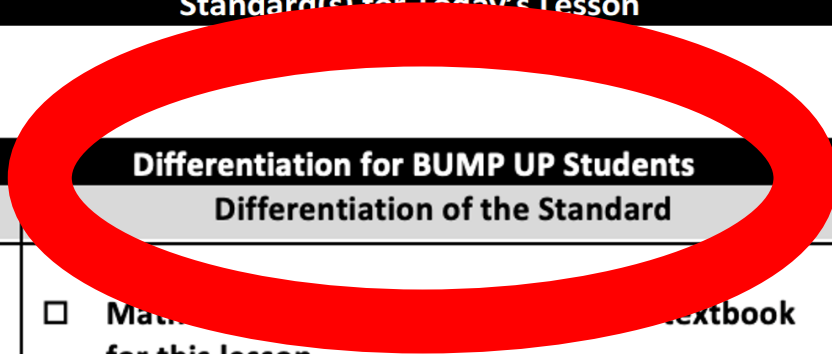
Unit: _____
 Lesson: _____

Date: _____

Grouping of Advanced Students
 Whole Class
 Flexible Group
 Individual

Standard(s) for Today's Lesson

Standard(s)



Differentiation for BUMP UP Students

Content From a Supplemental Source	Differentiation of the Standard	Alternative Standard
<p>Topic <u>polygons</u></p> <p>Source <u>Georgia Curriculum Frameworks</u></p> <p>DOK Level 3 _____ or 4 <u>X</u>?</p> <p>Brief description of differentiated math activity:</p> <p><u>Lesson 4 - Geometry Town pp. 90-97</u> https://www.georgiastandards.org/Georgia-Standards/Frameworks/4th-Math-Unit-6.pdf</p> <hr/> <p><u>Symmetry W&M Beyond Polygons</u> <u>Lesson 3 Gr. 3 Lesson 5.2 pp. 207-209:</u> <u>Analyzing lines of symmetry and formulating a pattern/rule about lines of symmetry and the number of sides shapes have</u></p>	<p><input type="checkbox"/> Math <u>textbook</u> for this lesson. Page <u>5</u> Activity Number(s) <u>30</u> Brief description of differentiated math activity:</p> <p>DOK Level 3 <u>X</u> or 4 _____?</p> <p>and/or</p> <p><input type="checkbox"/> DOK Differentiated math to: Level 3 _____ and/or Level 4 _____ Brief description of differentiated math activity:</p> <p><u>Lesson 1- Removed scaffolding</u></p>	<p>Grade <u>5</u> Standard <u>G.2.3</u></p> <p>DOK Level 3 <u>X</u> or 4 _____?</p> <p>Brief description of differentiated math activity:</p> <p><u>Lesson 2 - Gr. 5</u> <u>Ready Textbook</u> <u>pp. 323-324</u></p>

Other/Notes



Differentiation Planning Guide

Unit: _____ Lesson: _____	Date: _____	Grouping of Advanced Students <input type="checkbox"/> Whole Class <input type="checkbox"/> Flexible Group <input type="checkbox"/> Individual
--	--------------------	--

Standard(s) for Today's Lesson

Standard(s)

Differentiation for BUMP UP Students

Content From a Supplemental Source	Differentiation of the Standard	Alternative Standard
<p>Topic <u>polygons</u></p> <p>Source <u>Georgia Curriculum Frameworks</u></p> <p>DOK Level 3 _____ or 4 <u>X</u>?</p> <p>Brief description of differentiated math activity:</p> <p><u>Lesson 4 - Geometry Town pp. 90-97</u> https://www.georgiastandards.org/Georgia-Standards/Frameworks/4th-Math-Unit-G.pdf</p> <hr/> <p><u>Symmetry W&M Beyond Polygons</u> Lesson 3 Gr. 3 Lesson 5.2 pp. 207-209: Analyzing lines of symmetry and formulating a pattern/rule about lines of symmetry and the number of sides shapes have</p>	<p><input type="checkbox"/> Math differentiation option from the textbook for this lesson. Page <u>5</u> Activity Number(s) <u>30</u> Brief description of differentiated math activity:</p> <p style="text-align: center;">DOK Level 3 <u>X</u> or 4 _____?</p> <p style="text-align: center;">and/or</p> <p><input type="checkbox"/> DOK Differentiated math to: Level 3 ___ and/or Level 4 ___ Brief description of differentiated math activity:</p> <p style="text-align: center;"><u>Lesson 1-Removed scaffolding</u></p>	<div style="border: 2px solid red; border-radius: 50%; width: 100%; height: 100%; position: relative; margin-bottom: 10px;"> 5 Standard <u>G 2 2</u> </div> <p style="text-align: center;">DOK Level 3 <u>X</u> or 4 _____?</p> <p>Brief description of differentiated math activity:</p> <p style="text-align: center;"><u>Lesson 2 - Gr. 5 Ready Textbook pp. 323-324</u></p>

Other/Notes

Student Self-Report Survey

12:29

CHALLENGE: Move the slider on the number line below to rate how challenging math class was for you this week.

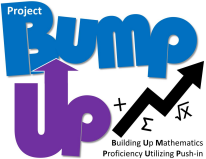
DESAFIO: Mueva el control deslizante en la línea numérica para calificar el nivel de desafío de la clase de matemáticas para usted esta semana.

Very Easy/Muy Fácil Just Right/ Nivel Correcto Very Hard/Muy difícil

-5 -4 -3 -2 -1 0 1 2 3 4 5

3

Challenge



Project Bump Up
Building Up Mathematics
Proficiency Utilizing Push-in

12:29

NEW MATH CONCEPTS: Select a rating star below to tell us how much you learned during math class this week.

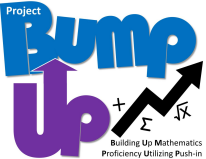
NUEVOS CONCEPTOS MATEMÁTICOS: Seleccione una estrella de calificación para decirnos qué tan aprendiste durante la clase de matemáticas hoy.

1 star = Nothing was new to me. / 1 estrella = Nada era nuevo para mi.

10 stars = Everything was new to me. / 10 estrellas = Todo era nuevo para mi.

★★★★★★★★★

New Math Concepts



Project Bump Up
Building Up Mathematics
Proficiency Utilizing Push-in

12:29

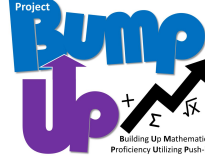
INTEREST: Select a rating star below to tell us how interesting you thought math class was this week.

INTERÉS: Seleccione una estrella de calificación para decirnos qué tan interesante estuvo la clase de matemáticas esta semana

1 star = Nothing was interesting to me / 1 estrella = Nada me interesó 10 stars = Everything was interesting to me / 10 estrellas = Todo me interesó.

★★★★★★★★★

Interest



Project Bump Up
Building Up Mathematics
Proficiency Utilizing Push-in

12:29

ENGAGEMENT: Select a rating star below to tell us how engaged you were during math class this week.

COMPROMISO: Seleccione una estrella de calificación para decirnos qué tan comprometido estuvo durante la clase de matemáticas hoy.

1 star = Not at all engaged. / 1 estrella = Sin ningún compromiso

10 stars = Extremely engaged. / 10 estrellas = Con extremo compromiso

★★★☆☆☆☆☆☆

Engagement



Project Bump Up
Building Up Mathematics
Proficiency Utilizing Push-in

CHALLENGE: Move the slider on the number line below to rate how challenging math class was for you this week.

DESAFIO: Mueva el control deslizante en la línea numérica para calificar el nivel de desafío de la clase de matemáticas para usted esta semana.

Very Easy/Muy Fácil	Just Right/ Nivel Correcto	Very Hard/Muy difícil
-5 -4 -3	-2 -1 0 1 2	3 4 5



Self-Report Survey



12:29

INTEREST: Select a rating star below to tell us how interesting you thought math class was this week.

INTERÉS: Seleccione una estrella de calificación para decirnos qué tan interesante estuvo la clase de matemáticas esta semana

1 star = Nothing was interesting to me / 1 estrella = Nada me interesó
 10 stars = Everything was interesting to me / 10 estrellas = Todo me interesó.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ☆

Interest

Project Bump Up
Building Up Mathematics
Proficiency Utilizing Push-in

12:29

ENGAGEMENT: Select a rating star below to tell us how engaged you were during math class this week.

COMPROMISO: Seleccione una estrella de calificación para decirnos qué tan comprometido estuvo durante la clase de matemáticas hoy.

1 star = Not at all engaged. / 1 estrella = Sin ningún compromiso
 10 stars = Extremely engaged. / 10 estrellas = Con extremo compromiso

★ ★ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆

Engagement

Project Bump Up
Building Up Mathematics
Proficiency Utilizing Push-in

CHALLENGE: Move the number line below to rate

math class was for you this

DESAFIO: Mueva el con

línea numérica para calific

desafío de la clase de ma

usted esta semana.

Very										
Easy/Muy										Just Right/N
Fácil										Correcto
-5	-4	-3	-2	-1	0					

Challe



NEW MATH CONCEPTS: Select a rating star below to tell us how much you learned during math class this week.

NUEVOS CONCEPTOS

MATEMÁTICOS: Seleccione una estrella de calificación para decirnos qué tan aprendiste durante la clase de matemáticas hoy.

1 star = Nothing was new to me. / 1 estrella = Nada era nuevo para mi.

10 stars = Everything was new to me. / 10 estrellas = Todo era nuevo para mi.



ort Survey

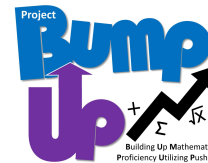
ST: Select a rating star below to tell interesting you thought math class week.

S: Seleccione una estrella de on para decirnos qué tan interesante clase de matematicas esta semana

Nothing was interesting to me
lla = Nada me interesó
10 stars
thing was interesting to me /
las = Todo me interesó.



Interest



ENGAGEMENT: Select a rating star below to tell us how engaged you were during math class this week.

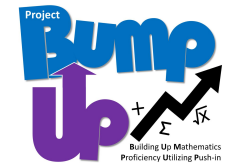
COMPROMISO: Seleccione una estrella de calificación para decirnos qué tan comprometido estuvo durante la clase de matemáticas hoy.

1 star = Not at all engaged. / 1 estrella = Sin ningún compromiso

10 stars = Extremely engaged. / 10 estrellas = Con extremo compromiso



Engagement



Stud

12:29

CHALLENGE: Move the slider on the number line below to rate how challenging math class was for you this week.

DESAFIO: Mueva el control deslizante en la línea numérica para calificar el nivel de desafío de la clase de matemáticas para usted esta semana.

Very Easy/Muy Fácil	Just Right/ Nivel Correcto	Very Hard/Muy difícil
-5 -4 -3 -2 -1 0 1 2 3 4 5		

3

Challenge



12:29

NEW MATH CO
star below to tell u

during math clas
NUEVOS CONC
MATEMÁTICO
calificación para c

1 star = Nothing v
Nada era nuevo pa
10 stars = Everyth
estrellas = Todo e



New Co



INTEREST: Select a rating star below to tell us how interesting you thought math class was this week.

INTERÉS: Seleccione una estrella de calificación para decirnos qué tan interesante estuvo la clase de matemáticas esta semana

1 star = Nothing was interesting to me / 1 estrella = Nada me interesó
10 stars = Everything was interesting to me / 10 estrellas = Todo me interesó.



12:29

ENGAGEMENT: Select a rating star below to tell us how engaged you were during math class this week.

COMPROMISO: Seleccione una estrella de calificación para decirnos qué tan comprometido estuvo durante la clase de matemáticas hoy.

1 star = Not at all engaged. / 1 estrella = Sin compromiso

10 stars = Extremely engaged. / 10 estrellas = Muy comprometido



Engagement



Student Self-Report

12:29

CHALLENGE: Move the slider on the number line below to rate how challenging math class was for you this week.

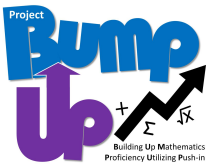
DESAFIO: Mueva el control deslizante en la línea numérica para calificar el nivel de desafío de la clase de matemáticas para usted esta semana.

Very Easy/Muy Fácil Just Right/ Nivel Correcto Very Hard/Muy difícil

-5 -4 -3 -2 -1 0 1 2 3 4 5

3

Challenge



12:29

NEW MATH CONCEPTS: Select a rating star below to tell us how much you learned during math class this week.

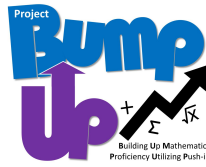
NUEVOS CONCEPTOS MATEMÁTICOS: Seleccione una estrella de calificación para decirnos qué tan aprendiste durante la clase de matemáticas hoy.

1 star = Nothing was new to me. / 1 estrella = Nada era nuevo para mi.

10 stars = Everything was new to me. / 10 estrellas = Todo era nuevo para mi.

★★★★★★★☆☆

New Math Concepts



12:29

INTEREST: Select us how interesting was this week.


INTERÉS: Seleccione una calificación para decirnos qué tan interesante estuvo la clase de matemáticas hoy.

1 star = Not at all interested. / 1 estrella = Sin ningún interés

10 stars = Extremely interested. / 10 estrellas = Con extremo compromiso

★★★☆☆☆☆☆☆

Interest



ENGAGEMENT: Select a rating star below to tell us how engaged you were during math class this week.

COMPROMISO: Seleccione una estrella de calificación para decirnos qué tan comprometido estuvo durante la clase de matemáticas hoy.

1 star = Not at all engaged. / 1 estrella = Sin ningún compromiso

10 stars = Extremely engaged. / 10 estrellas = Con extremo compromiso

★★☆☆☆☆☆☆☆☆

10 stars = Extremely engaged. / 10 estrellas = Con extremo compromiso

Descriptive Statistics

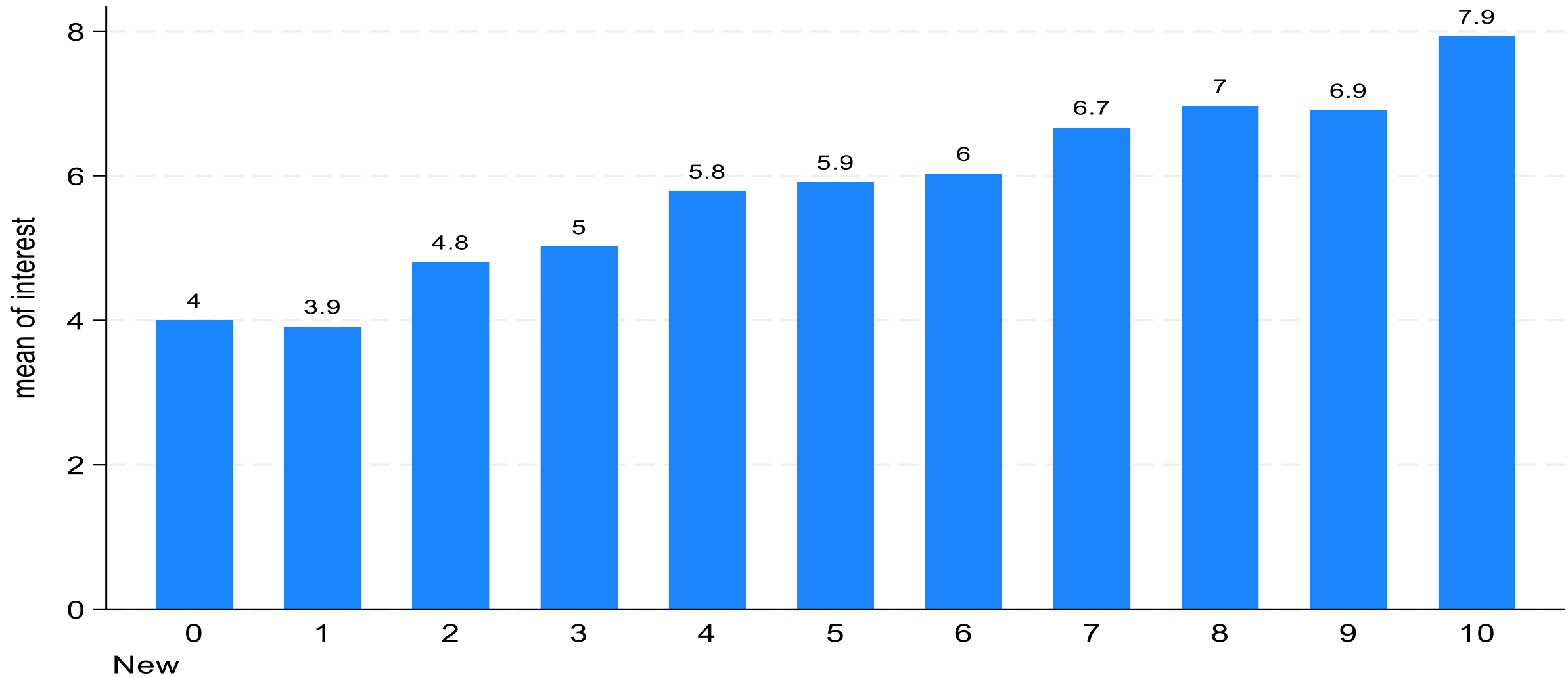
$N=248$

Construct	M (SD)
Challenge	-0.316 (2.765)
New Math Concepts	5.717 (2.809)
Interest	6.386 (2.856)
Engagement	7.016 (2.464)

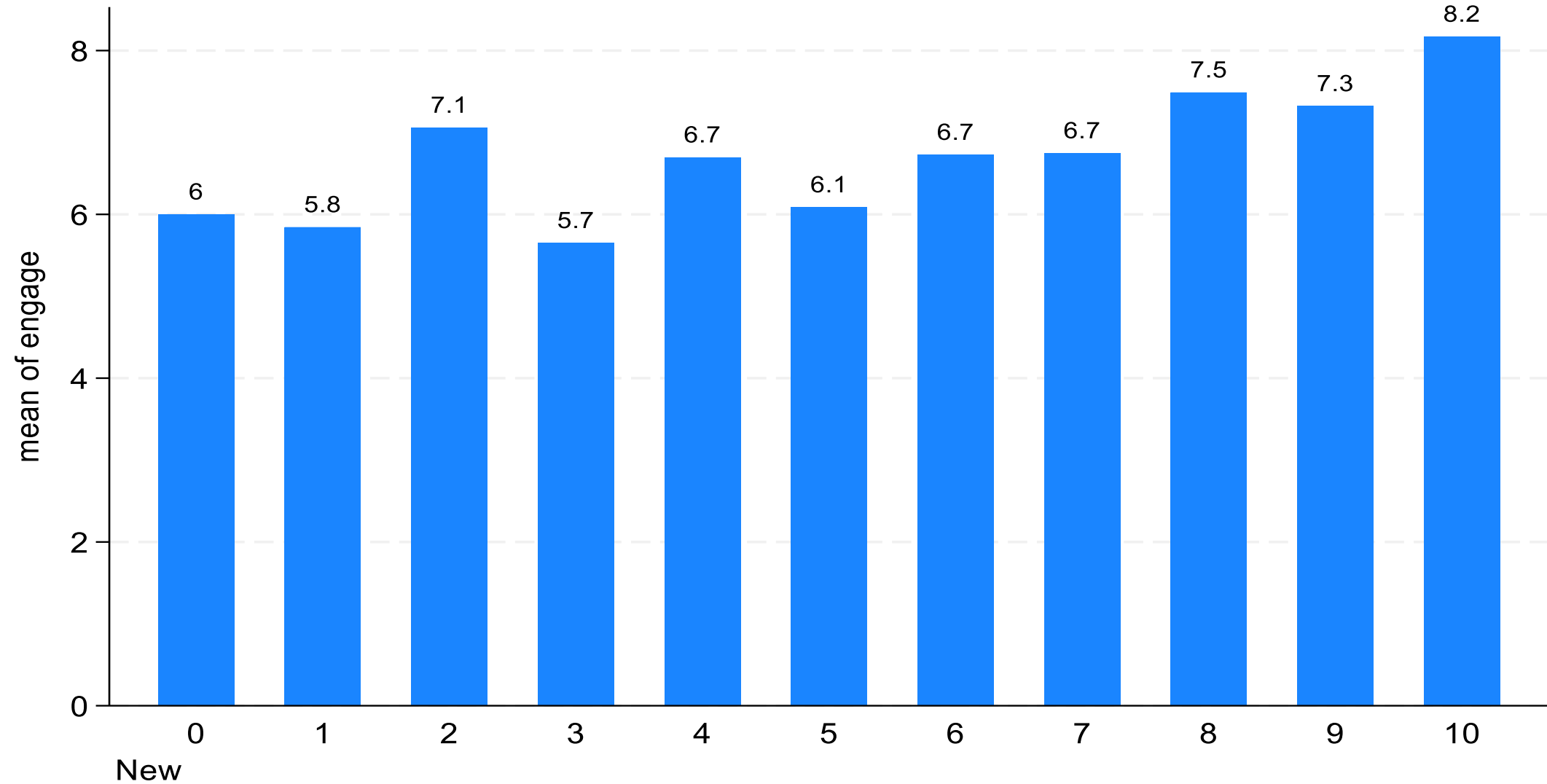
Correlations

	New	Challenge	Interest	Engage
New Math Concepts	1.00			
Challenge	0.23	1.00		
Interest	0.46	-0.06	1.00	
Engagement	0.29	-0.18	0.50	1.00

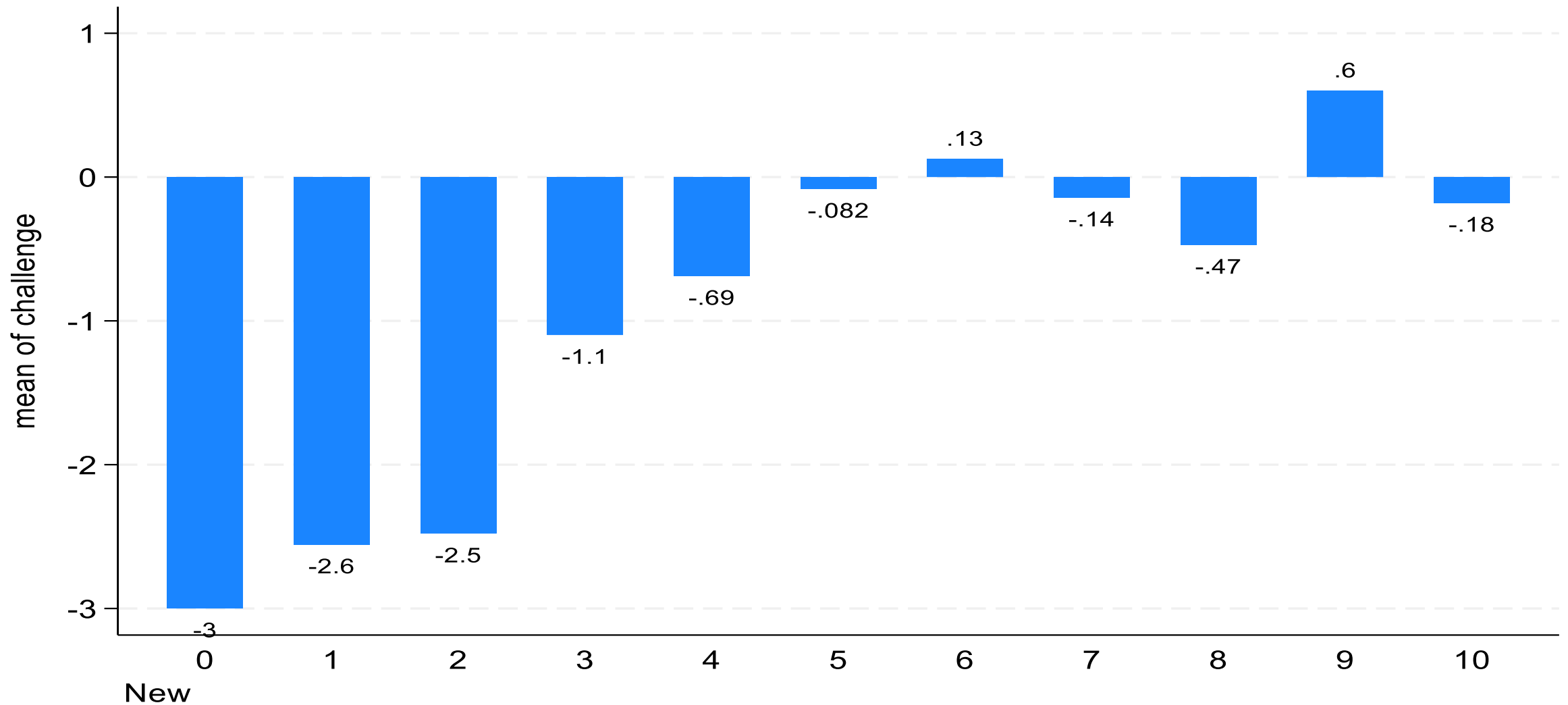
Interest as a Function of the “New” Rating



Engagement as a Function of the “New” Rating

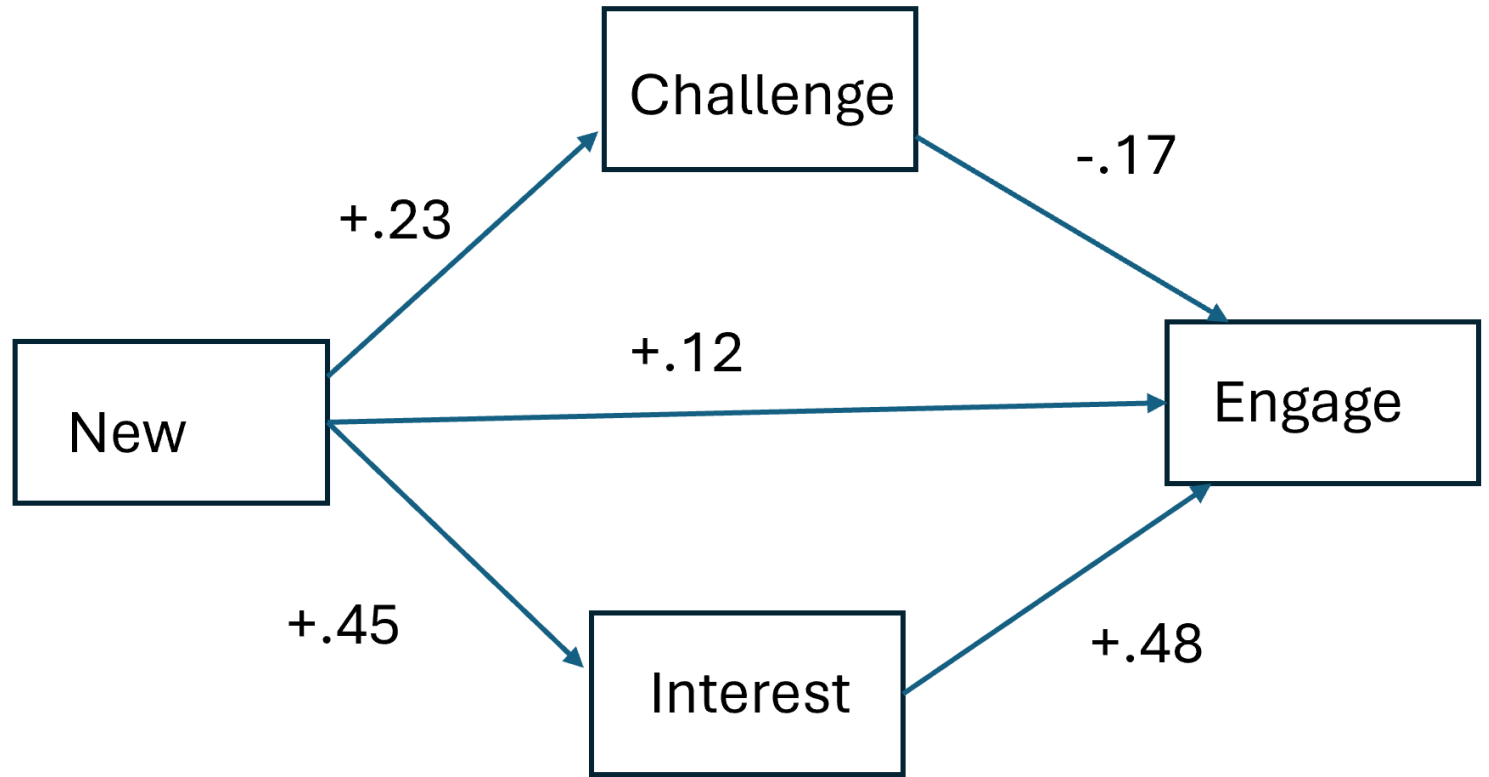


Challenge as a Function of the “New” Rating



Mediation Model

($R^2=.30$)



	Standardized Regression Coefficient	<i>p</i> -value
Direct Effect: New → Engage	.12	.048
Indirect Effect: New → Engage	.18	<.001
Total Effect: New → Engage	.30	<.001

Future Plans with the Data...

- Explore within and between person variance and correlations
- Explore whether relationships differ depending on the math content of the unit
- Explore the four constructs' relationships with math achievement
- Explore between teacher/classroom differences



Comments?
Questions?
Suggestions?