The Relationship Between a School's Educational Program & NWEA Outcomes

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Goals for Today

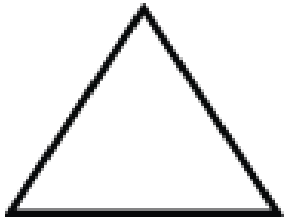
1. EPR: The Classroom Observation Tool
2. Antecedents to Student Engagement
3. The Research Design
4. Use of NWEA & Findings
5. Practical Implications

“The songwriting process is like planting a seed; every chord, every lyric, every note nurtures its growth until is blossoms into a masterpiece.”

How can we evaluate the educational program and activities that lead to academic achievement and growth?

Are these “inputs” as important as outcomes?

Triangle-Square-Circle



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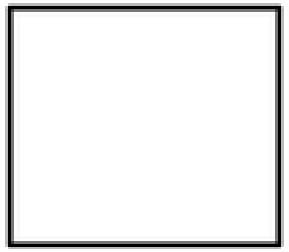

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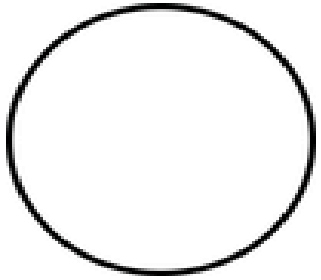

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Classroom Observation Continuum of Progress

School:	**Grade/Subject:**	**Start Time of Observation:** **End Time of Observation:**
Reviewer:	**Room Number:**	**Part(s) of Lesson Observed:** B M E All
Date:	**Number of Adults:**	**Brief Description of Lesson:**
Mission, Vision, Values Evident:	**Number of Students:**	

Overall Rating Per Element

Below Expectations (B), Approaching Expectations (A), Meets Expectations (M), or Exceeds Expectations (E)

Element	Rating	Notes
Learning Environment	B A M E	
Cognitive Challenge	B A M E	
Student Engagement	B A M E	
Research-Based Strategies	B A M E	
Assessment & Adjustment	B A M E	

Learning Environment

Learning Environment	Below Expectations ☐	Approaching Expectations ☐	Meets Expectations ☐	Exceeds Expectations ☐
Key Question *How does the teacher ensure a safe and respectful environment conducive to learning?* **Observable Evidence** *"Classroom management structures" examples include, but are not limited to proximity, circulating, time use, rules, attention signals, routines, norms, contracts and behavior charts.* *"Rapport" evidence includes but is not limited to respectful tone of voice, affirming words and body language, pleasant and positive interactions, a sense of community, synergy and safety.* *"Resources" include but are not limited to staff, furniture, literature books, technology, manipulatives, textbooks, and anchor charts on walls.*	☐ Teacher has little or no established classroom management structures and lacks control of the classroom environment.	☐ Teacher has some established classroom management structures but exhibits inconsistent control of the classroom environment.	☐ Teacher has established many **classroom management structures** and exhibits consistent control of the classroom environment.	☐ Teacher has implemented highly effective classroom management structures which systematically demonstrate high expectations and scholarly behavior as the norm.
	☐ Teacher and students do not demonstrate mutual respect and rapport.	☐ Teacher and students partially demonstrate mutual respect and rapport, yet some negativity is evident.	☐ Teacher and students consistently demonstrate mutual **respect** and **rapport** which conveys a sense of community.	☐ Teacher and students constantly demonstrate mutual respect and rapport which conveys a sense of safety and community.
	☐ Student behaviors are inappropriate and disrupt instruction and learning.	☐ Student behaviors are somewhat appropriate, but some disruptions occur to instruction and learning.	☐ **Student behaviors** are appropriate with limited to no disruption to instruction and learning.	☐ Student behaviors are consistently appropriate with no disruption to instruction and learning.
	☐ Teacher utilizes little or no accountability measures for behavior.	☐ Teacher utilizes limited or inconsistent accountability measures for behavior.	☐ If needed, the teacher utilizes consistent **accountability measures** for behavior.	☐ If needed, the teacher utilizes strategic and seamless accountability measures for behavior that do not disrupt the flow of the lesson.
	☐ Teacher does not utilize time appropriately (e.g., excessive time is spent on non-instructional activities).	☐ Teacher utilizes time somewhat appropriately (e.g., some instructional time is lost).	☐ Teacher consistently **utilizes time** appropriately (e.g., minimal, if any, instructional time is lost).	☐ Teacher strategically utilizes instructional time with emphasis on rigorous pacing.
	☐ Teacher does not ensure provision of necessary instructional resources.	☐ Teacher provides some instructional resources, but others are lacking.	☐ Teacher provides the appropriate **instructional resources.**	☐ Teacher provides ample and innovative instructional resources.

Student Engagement

Student Engagement	Below Expectations ☐	Approaching Expectations ☐	Meets Expectations ☐	Exceeds Expectations ☐
Key Question *How does the teacher integrate strategies and activities to actively engage students and enhance the learning?*	☐ Instruction is primarily teacher-centered and provides little to no opportunities for students to demonstrate learning.	☐ Instruction is somewhat teacher-centered and provides limited opportunities for students to demonstrate learning.	☐ Instruction is primarily **student-centered** with ample opportunities for students to demonstrate learning.	☐ Instruction is fully student-centered with innovative opportunities for students to demonstrate learning.
Observable Evidence *"Engaging activities" evidence include but are not limited to rigorous tasks, peer-to-peer discussions, hands-on activities, student inquiry, debate, student enthusiasm, academic games, competition, project-based learning (PBL), reflection and closure.* *Examples of dis-engagement include but are not limited to silence, no peer-to-peer talk or interactions, heads-down, worksheets, teacher-directed lesson, no student voice, no hands-on materials, off-task student behaviors, mere compliance, unequal participation and down time with no academic focus.*	☐ Teacher provides little or no opportunities for students to discuss content, collaborate with peers or self-reflect on the learning thus fostering an environment of passive learners.	☐ Teacher provides some opportunities for students to discuss content, collaborate with peers or self-reflect on the learning thus allowing an environment of mostly passive learners.	☐ Teacher provides many opportunities for students to discuss content, collaborate with peers or self-reflect on the learning thus fostering an environment of **active learners.**	☐ Teacher provides numerous strategic opportunities for students to discuss content, initiate inquiry, make contributions, challenge thinking and explore the content thus fostering an environment of active, self-directed learners.
	☐ The pace of the lesson is not appropriate (e.g., rushed or dragged out).	☐ The pace of the lesson is at times appropriate (e.g., sometimes rushed or dragged out).	☐ The **pace** of the lesson is appropriate for student learning.	☐ The pace of the lesson is consistently appropriate, student-driven and rigorous to advance student learning.
	☐ Teacher does not connect the learning objective / purpose to prior knowledge or the real world.	☐ Teacher occasionally connects the learning objective / purpose to prior knowledge or the real world.	☐ Teacher consistently connects the learning objective / purpose to **prior knowledge or the real world.**	☐ Teacher and students systematically connect the learning objective / purpose to prior knowledge, personal lives or the real world throughout the lesson.
	☐ Instructional activities and assignments are not aligned to the objective and do not substantiate the purpose of the learning.	☐ Instructional activities and assignments are partially aligned to the objective and somewhat substantiate the purpose of the learning.	☐ Instructional **activities** and assignments are **aligned to the objective** and substantiate the purpose of the learning.	☐ Instructional activities and assignments are fully aligned to the objective and deepen understanding and synthesis of material through thoughtful reflection to consolidate the learning.

Cognitive Challenge

Cognitive Challenge	Below Expectations ☐	Approaching Expectations ☐	Meets Expectations ☐	Exceeds Expectations ☐
Key Question *How does the teacher ensure higher-order thinking and application of the learning?*	☐ Teacher does not utilize strategies that promote higher-order student thinking.	☐ Teacher utilizes minimal strategies to promote higher-order student thinking.	☐ Teacher consistently utilizes **strategies** to promote higher-order student thinking through a scaffolded progression.	☐ Teacher systematically utilizes strategies to promote higher-order student thinking through a scaffolded progression and customization.
Observable Evidence *"Higher-order questions" include but are not limited to those which challenge students to explain their thinking, infer, back up a position, or foster deeper levels of thinking in accordance to the taxonomies.* *"Strategies" include but are not limited to using advanced organizers, generating and testing hypotheses, identifying similarities and differences, providing feedback, nonlinguistic representations, summarizing, note taking, etc.* *"Rigorous tasks" include but are not limited to analyzing, creating, inventing, citing evidence, researching, debating, error analysis, self-reflection, defending a claim, writing, etc.*	☐ Learning tasks do not require students to apply content skills and/or skills are at the lowest level of the cognitive domains (e.g., knowledge).	☐ Learning tasks partially allow students to apply content skills, but skills are at the lower levels of the cognitive domains (e.g., knowledge and comprehension).	☐ **Learning tasks** consistently allow students to apply content skills and primarily require students to perform at the mid-levels of the cognitive domains (e.g., application and analysis).	☐ Learning tasks consistently allow students to apply content skills and predominately require students to perform at the highest levels of the cognitive domains (e.g., synthesis and evaluation).
	☐ Teacher does not pose questions that deepen academic understanding.	☐ Teacher poses some questions that deepen academic understanding, but most questions are closed questions.	☐ Teacher poses many **academic questions** that deepen academic understanding and encourage elaboration on content or examination of reasoning (i.e., open-ended questions).	☐ Teacher and students pose strategic academic questions that deepen academic understanding through metacognition, analytic reasoning, critical thinking, problem solving and/or tactical thinking.
	☐ Students are not encouraged to engage in academic discussions or make connections to prior learning.	☐ Students are occasionally encouraged to engage in academic discussions or make some connections to prior learning.	☐ Students are consistently encouraged to engage in substantive **academic discussions** and **make connections** to prior or future learning.	☐ Students are constantly encouraged to engage in deep academic discussions, pose insightful questions, elaborate on content, and make connections that demonstrate the transference of skills to new constructs.

Our Research: Principal Components Analysis

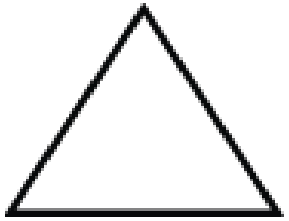
Two Main Variables

- Learning Environment
- Antecedents to Student Engagement

Learning Environment

1. Accountability Measures
2. Classroom Management
3. Student Behaviors
4. Respect & Rapport
5. Use of Time

Triangle-Square-Circle



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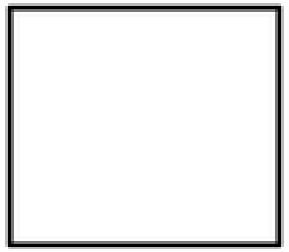

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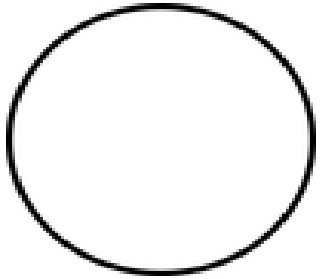

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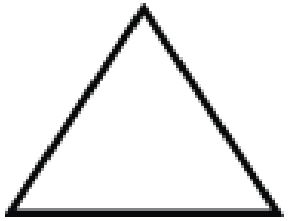

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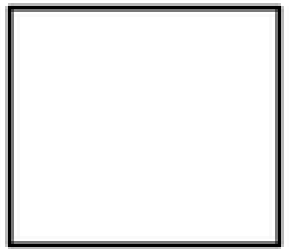

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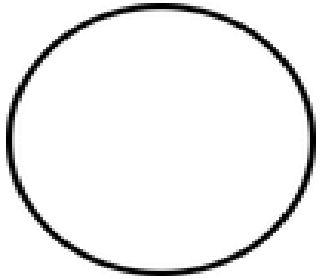

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Student Engagement

- The goal for teaching is academic outcomes, but before learning can take place, teachers must first engage students in the learning process. (Astin, 1999)
- If a student is actively involved in learning, they are engaged (Lei et al., 2018)
- Examples of behavioral engagement include working hard, trying one's best to acquire knowledge, and persevering despite difficulty.
- Behavioral engagement is the level to which students participate in learning activities and the effort that is put forth while learning. (MI Student Voice, 2024)

Antecedents to Student Engagement

- Engagement is also more likely to occur if teachers use specific instructional strategies.
- Engagement is increased by using interactive teaching categorized by facilitating active student responses and providing frequent feedback.
- Instructional design is also important to engagement categorized by using a variety of teaching methods and matching instruction to student ability levels. (Gettinger & Walter, 2012).

Antecedents to Student Engagement

1. Types of Learning Tasks (Rigor)
2. Active Learning/Academic Discussion
3. Scaffolding
4. Differentiated Instruction
5. Interventions & Support
6. Pace
7. Academic Vocabulary

Antecedents to Student Engagement

Schools that do well in one, do well in others.

Scores on individual constructs vary in a similar way across schools:

- Schools typically had a variance of 0.7.
- Differentiated instruction had a variance of 0.2.

Student Engagement Related to Student Achievement

- Student engagement has been shown to be strongly related to academic achievement and growth (Hughes et al., 2008; Lei et al., 2018; Maamin et al., 2022; MI Student Voice, 2024).
- When engagement is diminished, instructional time is reduced and opportunities to learn are lost having negative cumulative effects on student outcomes (Quin, 2016).
- The amount of time a student spends in academic engaged time is a strong predictor of academic achievement (Gettinger & Walter, 2012).

Research Questions

- Is there a relationship between the Antecedents to Student Engagement (ASE), as measured by the EPR Classroom Observation Protocol, and NWEA MAP achievement and growth?
- Specifically, are there a set of specific indicators or groups of indicators with more significance?
- Does higher ratings on the EPR Classroom Observation Protocol have any mediating effects on Socio-Economic Status?

Analytic Sample - Population Comparison				
	n	% SES	% LEP	% White
Sample	5,763	69.6%	12.9%	33.2%
State Charter Schools	150,486	78.0%	12.0%	32.5%
All State Public Schools	1,429,895	56.0%	7.0%	64.3%

- Number of Schools In Study= 24
- Includes Grades 3-8 (distributed evenly)
- 2 Years of Data
- *SES in study = SNAP eligible

Our Research: How was NWEA used?

- NWEA MAP (Math & Reading).
- Administered fall & spring.
- Vertical nature of NWEA allows comparison across grade levels.
- Fall assessment is used as a control (beginning achievement). Growth is change in achievement from fall to spring.
- Aligns to our accountability system.

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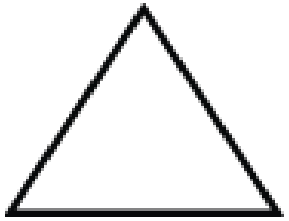

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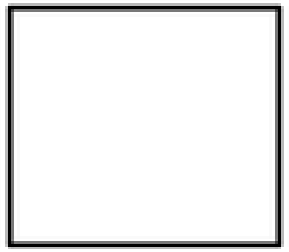

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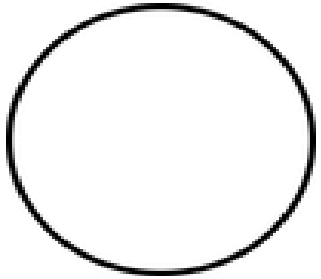

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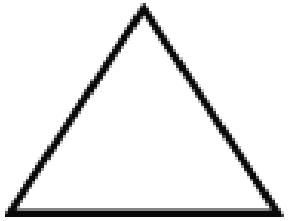

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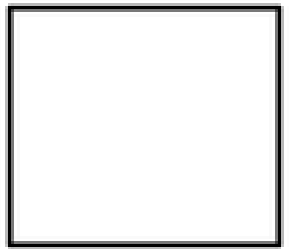

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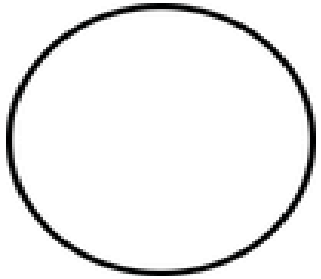

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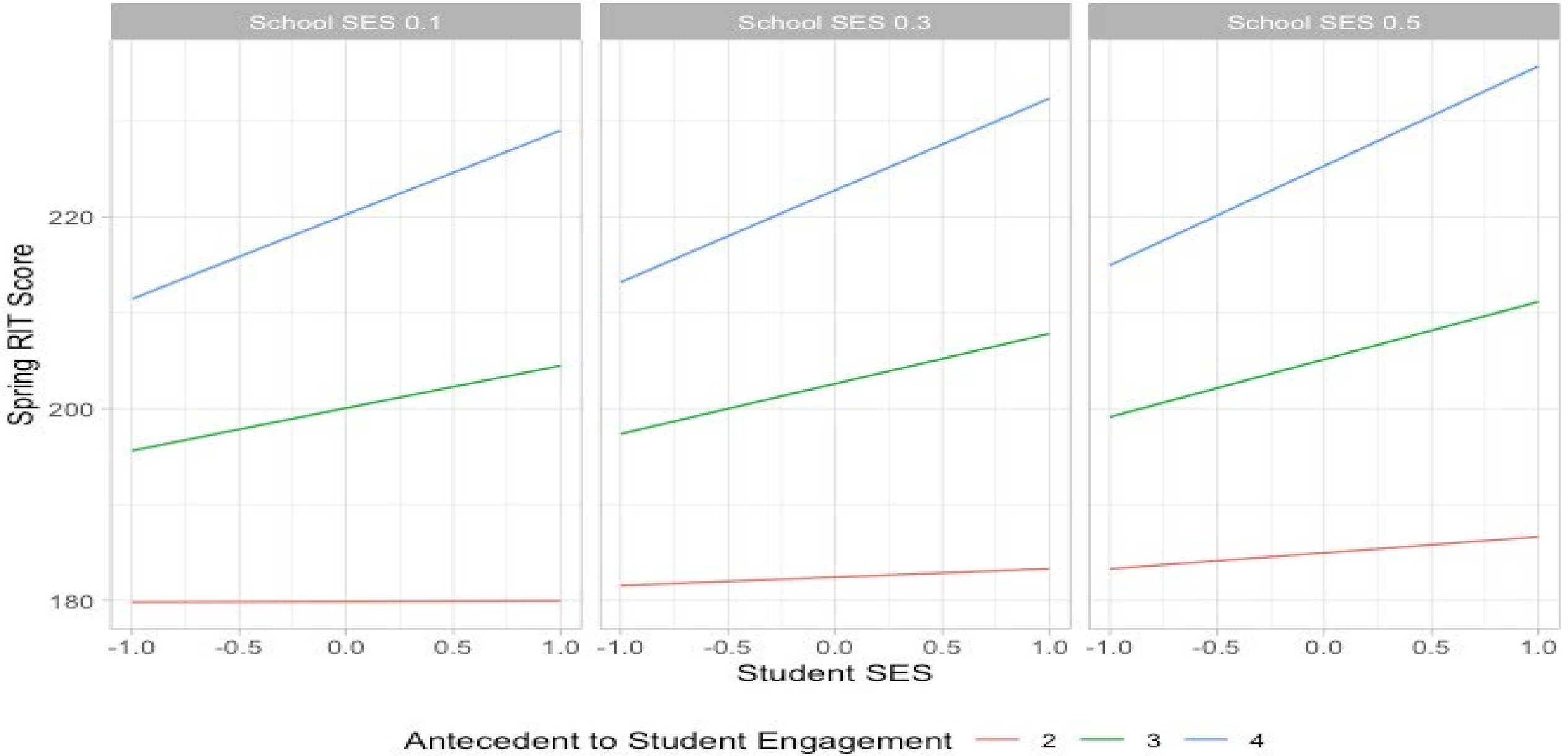
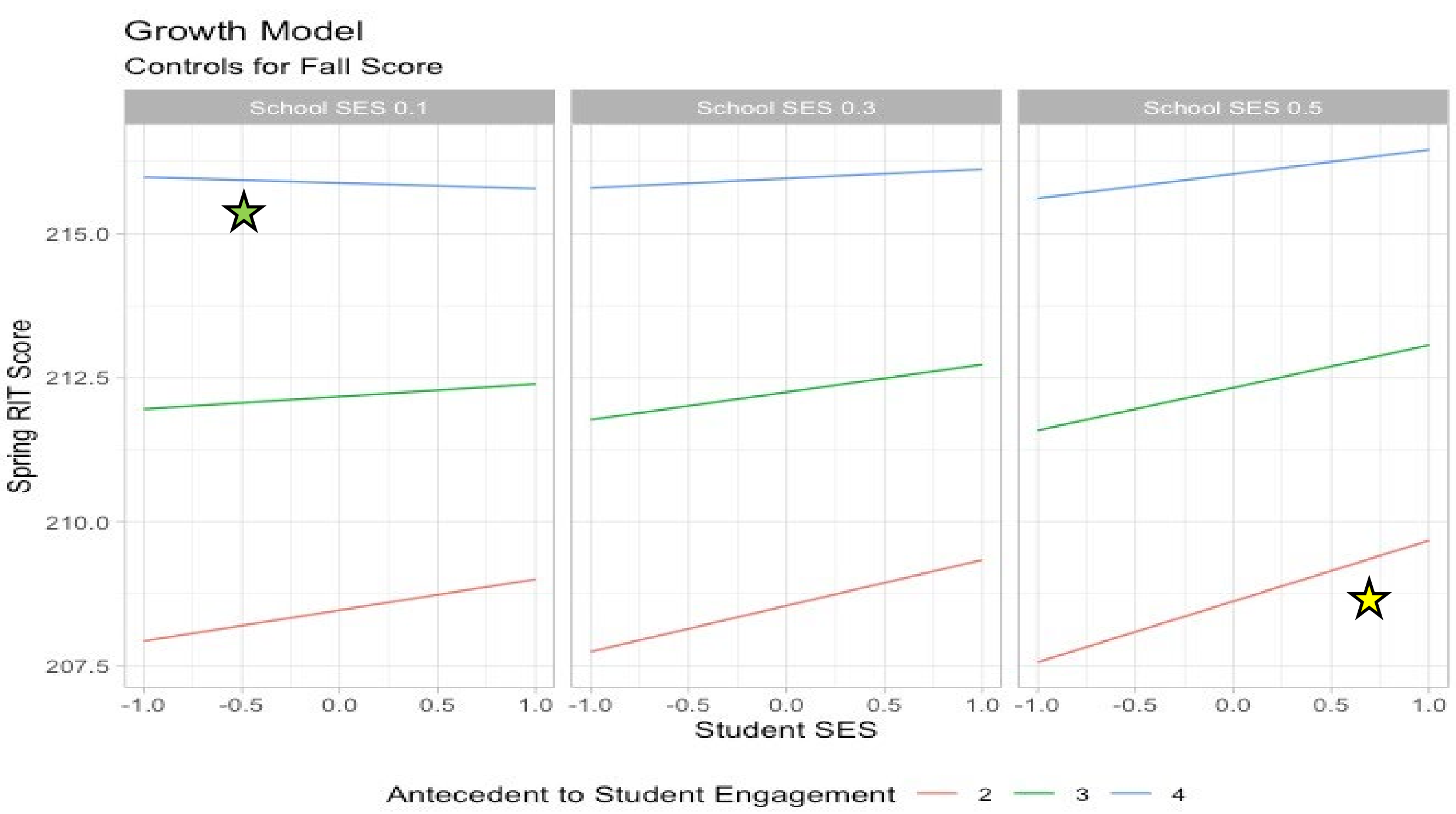
Our Research: Methods

Learning Environments	Cognitive Challenge	Student Engagement
School1	School2	School2
School2	School1	School5
School3	School3	School1
School4	School5	School3
School5	School4	School4
School6	School7	School6
School7	School20	School10
School8	School13	School7
School9	School18	School8
School10	School11	School9
School11	School6	School18
School12	School10	School11
School13	School15	School13
School14	School9	School15
School15	School8	School12
School16	School12	School20
School17	School22	School21
School18	School16	School16
School19	School21	School14
School20	School14	School17
School21	School17	School22
School22	School19	School19
	<30 Growth, <30 Meeting Norm	
	≥44 Growth, <30 Meeting Norm	
	≥44 Growth, ≥44 Meeting Norm	

Achievement Model




Growth Model
Controls for Fall Score
School SES 0.1
School SES 0.3
School SES 0.5
Spring RIT Score
215.0
212.5
210.0
207.5
-1.0
-0.5
0.0
0.5
1.0
Student SES
Antecedent to Student Engagement
2
3
4

Antecedents to Student Engagement

1. Types of Learning Tasks (Rigor)
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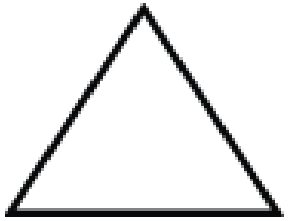

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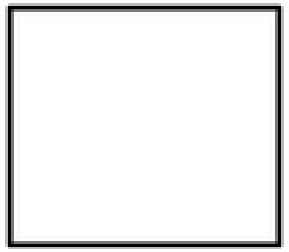

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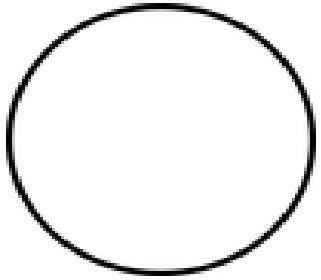

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Practical Uses and Implications

Student Engagement	Below Expectations: 38%	Approaching Expectations: 25%	Meets Expectations: 31%	Exceeds Expectations: 6%
	Evidence supports: • Thirty-seven percent (37%) of teachers integrated strategies and activities to actively engage students and enhance learning. • Some observations revealed teachers engaging students in the learning by making connections to prior knowledge. These teachers capitalized on a learner's understanding of previous concepts. • In some classes, teachers assigned students to demonstrate their work on the board while sharing their thinking and asking the rest of the class to check each step and to provide feedback. --- • Sixty-three percent (63%) of the time, teachers *did not* actively engage students and spent the complete lesson demonstrated passive and inattentive student participation. • A few teachers did not post learning objectives nor include any opportunities to integrate prior knowledge (e.g., graphic organizers or utilization of preparatory texts such as picture books). • Many classes permitted passive learning behaviors (e.g., only teacher-directed, no student voice, unequal participation or asking students to copy information). • In many classrooms, there were limited real-world connections. For example, review team members observed isolated academic worksheets with little-to-no discussion of relevance to student lives or how academic concepts apply beyond the task.			

W.O.W.

What Am I Walking Out With?

My W.O.W.

Classroom Instruction is Essential

Early Support for Schools/Teachers is Possible

Information is Support

In partnership with

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