

**Fostering Inclusive and Participatory Classroom Practices
with a California Middle School**

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Table of Contents

<i>Acknowledgements</i>	2
<i>Executive Summary</i>	4
<i>Organization Context</i>	6
<i>Literature Review</i>	11
<i>Methodology</i>	23
<i>Findings</i>	34
<i>Recommendations</i>	55
<i>Limitations</i>	60
<i>Conclusion</i>	60
<i>References</i>	62
<i>Appendix A</i>	67
<i>Appendix B</i>	68
<i>Appendix C</i>	70

Executive Summary

We partnered with a district and middle school in California to explore how teachers foster inclusive and participatory classroom instruction. The school, the district, and county all face challenges with low student achievement. This work strives to develop awareness of how patterns of interactions between teachers and students in the classroom impact student participation. Our project design used multiple methods of data collection centered on observations triangulated with performance assessment data and interviews. We hope our findings and recommendations will offer transferable information for teachers throughout the district.

Methodology

The feedback from both the district and the school helped us crystalize themes within our Literature Review to explore root causes and potential successful outcomes for our Problem of Practice. Four large themes surfaced and remained pillars throughout our project. We examined Belonging, Equity and Inclusion, Classroom and Instructional Design as well as Classroom Management with Lines of Questioning and Participation as subthemes. Our learnings from the literature guided us to build a conceptual framework exploring interactions within the classroom.

We used a mixed-methods approach to data collection by triangulating observations, perceptions, and performance data to further understand how opportunities for student participation relate to student performance. Three research questions guided our research:

RQ 1: What are the physical patterns of student/teacher interactions?

RQ 2: How do teachers invite students to participate in the classroom community?

RQ 3: What classroom design and management techniques are being leveraged to foster inclusion and equity in the learning space?

Findings

Data collection and analysis led to four findings:

- #1: Patterns of teacher-student interactions by gender occurred at a 2:1 ratio
- #2: Absence of diverse questioning strategies inhibits accountability and equity
- #3: WCMS emphasizes the use of positive phrasing school-wide
- #4: Students were expected to work independently rather than collaboratively

Recommendations

The patterns identified in our findings guided us to four recommendations which can be delivered, implemented, and enhanced through district resources. Such resources include existing site instructional coaches, professional development opportunities, and collegial professional learning communities (PLCs).

- #1 Increase the use of collaborative learning in instructional design
- #2: Engage students on a more relational level through culturally significant lessons
- #3: Increase variety in questioning strategies to promote equity and accountability
- #4: Continue the use of positive phrasing while implementing the practice of “Warm Demander”

Purposeful education and implementation can be achieved through schoolwide training followed by reinforcement during PLC meetings and reflective discussions with site instructional coaches and administrators.

Organization Context

Introduction

Adolescence is a period of rapid development. As secondary educators, we are interested in examining how classroom culture can positively or negatively affect the learning experience for any student. We want to understand how interactions in classrooms affect inclusive student engagement through a participatory lens by examining a teacher's language and discourse as well as classroom design and management practices. The overarching goal we seek to achieve is to provide information for educators and administrators on which classroom management styles and teaching methods work for students across disciplines and backgrounds. Our project is in partnership with a school district, referred to throughout as the *District*, in California where we focus our explorations on one specific middle school, referred to as *West Coast Middle School (WCMS)*. Our driving research question was, "*How do teachers foster inclusive learning environments at West Coast Middle School?*"

Partner Organization

We partnered with a California school district with a focus on a single school. The District serves 9,400 students of which roughly 68% of students are socio-economically disadvantaged, 27% are English Language Learners (ELL), 11% are students with special needs, and 12% are homeless (District Website). The District's middle schools are mixed in the structure of whom they serve. Two of the middle schools are traditional models serving grades 6-8 and two have transitioned their programs into a K-8 model. The schools employ teachers, administrators, and support staff to provide educational services for a demographically diverse student population. We wanted to work with a middle school to further develop our and their understanding around student inclusion regarding behavior and motivation. Conversations with

district representatives yielded interest in the impact classroom cultures have for various subpopulations as well, including (but not limited to) students of color (SOC), ELL students, and subgroups that are particularly vulnerable, such as homeless students.

Area of Inquiry

School administrators, teachers, and students may envision a safe and stimulating learning environment, but the methods used to accomplish this important goal change based on each of their respective perceptions of the learning environment. As researchers we want to study language, teaching methods, and classroom design used to foster learning in order to better understand why some students might feel less included in a community of learners.

Understanding how teacher interactions affect a middle school student's experience will allow educators the opportunity to cultivate inclusion. Our interest in this dynamic is two-fold as researchers and as educators who are dedicated to teaching middle school students. In both of our careers, we have seen an overall disconnect between educational institutions' missions to foster communities of inclusion and to develop independent, strong, and thoughtful students with what actually transpires in middle schools.

First, educators frequently employ language in the classroom that can be used to provide classroom management and collective group obedience rather than to foster inquiry and creativity. In our own classrooms, we have seen that some students take up much of the learning space with their presence and ideas while other students participate less. We have discerned that gender, race and socio-economic status have the potential to affect academic participation due to a lack of opportunity.

Finally, we acknowledge that middle school students have unique socio-emotional needs that need to be considered when it comes to feeling a sense of belonging in a school learning

space. The sum of these factors could change the power dynamics of classrooms. We both see this type of discord in our classrooms and seek to learn what we can impart as researchers and educators that fosters comfortable participation with the middle school classroom microcosm.

When we started our initial line of inquiry during the second year of our degree, we were invested in gaining a better understanding of how teachers can influence student behavior and suspected much of this influence may default towards methods of coercion. This study addressed gaps in the perceptions of the language and measures this school uses to gain obedience and how this may be chronically at odds with adolescents' quest for self-identification and assertion over their life. Our operating assumption was that schools set mission statements and endeavor to develop empowered students but inhibit this in favor of messaging control and conformity.

As we developed our relationship with the District and spoke with members of its administrative team, we saw that while the root of our interests may have been different, we were all invested in finding ways that student outcomes could be improved through optimal classroom practices. One District administrator pointed out the impact of finding where successful inclusionary outcomes lie in a school will provide administrators and teacher trainers the ability to replicate said outcomes. Another administrator was interested in finding connections to diversity, equity and inclusion practices. The principal of WCMS was intrigued by seeing the holistic viewpoint of teaching practices in his school and how they can be improved upon overall. These collective interests and viewpoints intersected with our original research objectives, which caused us to refine our initial inquiry.

The needs of middle school students are often overlooked, and as educators who work on a day-to-day basis with this age group, we have noticed that middle school students usually require additional guidance or a different set of skills from educators than other age groups. Our

initial interests highlighted specific aspects or implied skill sets, such as types of discipline programs, relationships built with students or impactful, motivational language that can be used to empower a student community. This Capstone strives to identify ways to develop inclusive classrooms cultivating participation to benefit students.

Stakeholders

The stakeholders for our Capstone project are the students, teachers, administrators, and the district leadership. The District's concerns focus around supporting all their students within a demographically diverse population. District representatives cited specific concerns around ensuring equity and quality instruction for English Language Learners (ELL). The WCMS principal further defined frustrations associated with the disconnect between perceived diversity, equity, and inclusion (DEI) efforts and actual impact. Students are currently underperforming across the district in math with over 50% of 8th grade students at least one grade level below expectations. The District strives to provide quality instruction for all students through equitable teaching across subject content areas. Our research provides awareness and understanding of student participation through a study of the middle school experience using an analysis of teacher-student interactions.

District Demographics

The District is in an agricultural county with sixty percent of county residents identifying as Latino with White (28%) and Asian (6%) the other two dominant racial identities. The District educates just under 10,000 students and has over 1,000 employees. There are two public preschools, seven elementary schools (K-6), three K-8th Grade schools, two middle schools, three comprehensive high schools and one alternative education site housing a continuation high school, community day school, and independent study within the district (District Fact Sheet).

Student Enrollment Profile

The District serves a large portion of Latinx students who account for 25% of the district's student population (EdData, 2023). Additionally, 25% of ELL students speak Spanish as their first language. Roughly 64% of students in the District qualify for free or reduced-price meals (EdData, 2023). Student academic performance overall is below grade level. In 2021-2022 (the most current data available), 52% of students did not meet Level 1 Academic Standards for the CAASSP (California Assessment of Student Performance and Progress) for Math, and 37% of students in 2021-2022 did not meet Level 1 Academic Standards in English and Literacy for the same assessment (EdData, 2023). Little to no data was available about suspension rate and expulsion, likely due to the Covid-19 pandemic.

West Coast Middle School Demographics

West Coast Middle School (WCMS) is located in California and serves 625 scholars (School Website). Table 1 provides demographic data pertaining to the school's student population. The demographics of WCMS reflect those of the surrounding county. Within the county, 60% of county residents identify as Latinx, while at WCMS, Latinx students count as 63% of their school's population. It is important to note that the racial and ethnicity demographic data provided to us was complex, as many students who identified as Latinx also identified themselves as more than one race or ethnicity. These responses resulted in a percentage total greater than 100%. There is a near even split along gender with 52.5% of students who identify as male and 45.5% identifying as female. The remaining percentage did not identify as male or female.

Table 1*WCMS Demographics, 2022-23 Academic Year*

Gender		Racial/Ethnic Demographics				Academic	
Male	Female	White	Latinx	Black	Asian	ELL	SPED
203	176	253	245	50	56	149	67
52.5%	45.5%	65.4%	63.3%	12.9%	14.5%	38.5%	17.3%

Literature Review

Introduction

Successful student outcomes in middle school can often be connected to classrooms which center themselves around the lived student experience and to an understanding of what makes a certain age group experience success (Smith, 2018). These types of classrooms could be defined as ones that foster inclusive practices. Four themes emerge from research on classrooms that foster inclusivity: *Belonging*, *Equity and Inclusion*, *Classroom Design*, and *Classroom Management*. The concept of *Belonging* can be defined as students feeling ownership over their learning space when they feel they are an active participant in a school community (Green, 2016). *Equity* can be defined “as a condition in which every student has access to the resources needed for learning” (Shah & Lewis, 2019, p. 427). *Classroom Design* includes anything that could be related to the physical layout of a learning space (Holley, 2014). *Classroom Management* is defined as the organization of behavioral expectations within a classroom. Within these themes, additional subthemes emerge, such as *questioning* as a form of classroom and instructional design. As teachers, many of our colleagues and administrators have commented to us that the very best teachers have finesse with middle school students, or a

special something that makes them stand apart as successful educators. Our interest in this research stems in seeing which of these themes associated with successful teaching can be leveraged by administrators and teachers to provide consistent inclusionary principles and practices.

Belonging

There are many forms of belonging, but for the purpose of our research, we concentrated on academic belonging. *Academic belonging* is focused on students feeling they can belong academically in a classroom environment through meaningful contributions and by keeping pace, while *social belonging* hinges on the various connections a student may have in the school environment (Green et al., 2016). Both types of belonging are multi-faceted and intertwined into the success of any individual student. Student success derives from implementing appropriate levels of curriculum and support measures. The zone of proximal development theory notes that collaboration among teachers and students, age-appropriate challenging content, and educational support all indicate more successful student outcomes (Vygotsky, 1979). Students who feel they can academically meet the expectations of any given classroom through teacher and student support are more likely to thrive in a classroom environment (Green et al., 2016).

Positive student-teacher relationships can also make students feel more likely to belong to peer groups within the school ecosystem. When a secure attachment is fostered between a teacher and a student, students are apt to feel safe in exploring friendships and partnerships with peers (Endedijk et al., 2021). The way in which students relate to teachers is tri-fold: “students relationally connect interpersonally (via teacher warmth), substantively (via content and tasks assigned by the teacher) and pedagogically (via the teacher’s communication of the subject matter” (Martin & Collie, 2019, p. 862). The concept of *receptiveness* may come into play when

teacher-student relationships are formed (Maggin, 2009). If students perceive that their responses (whether they be questions or contributions) in the classroom are being received in a timely manner or in a positive light, students are more likely to have a positive relationship with their teacher and are therefore more receptive to learning in the classroom environment. If students feel ignored or discredited, they are less likely to participate and more likely to act out in class, which then fractures teacher and student relationships (Maggin, 2009).

Equity and Inclusion

Teachers must possess the ability to decipher when inequitable practices and events are occurring within the classroom. Participatory equity addresses the number of opportunities or affordances that a student has in order to fully contribute to the learning environment (Shah & Lewis, 2019). Students can feel excluded from participating due to race, socio-academic standing or academic performance. Having the ability to see each individual student as a contributor rather than a collective label such as race or gender is imperative in attaining classroom-wide achievement.

A concept to consider related to equity and inclusion is *relational equity*, which addresses how much empathy and mutual camaraderie students feel and experience within the classroom (Shah & Lewis, 2019). Students may feel less inclined to participate in daily classroom activities or group activities if they feel their peers do not respect their perspective. Culturally relevant pedagogy (CRP) also addresses the relevance of any given lesson and its practical application within a real-world context (Smith, 2019). The need for CRP stems from the omnipresent backdrop of social inequity. Classrooms need to reflect worlds the students occupy and value systems that society represents (Holley, 2017). Cross-collaboration is a value upon which modern education principles itself, yet is unable to deliver. Holley notes,

Traditional classrooms with individual student desks and teachers standing at the front to lecture do not reflect these 21st century values (critical thinking and collaboration). If we want students to be resourceful, we need to allow them the materials, organization and opportunity to use resources (in classrooms, in schools, in the community and through technology) (p. 7).

Students need to feel the curriculum being taught is not only culturally relevant but has connections from students' own personal experience (Holley, 2014). Teachers who find ways to reveal present day connections to content have classrooms that are most apt in fostering classroom engagement (Pianta, 2012). Placing equal value on every student's individual culture (race, home life, language, socio-economic standing, etc.) promotes equity and a feeling of belonging. The ability to authentically connect to curriculum provides meaning to tasks. Students' enjoyment of a curriculum being taught is a determinant in scholastic success (Martin & Collie, 2019).

Students may perform and engage differently in classes due to their positive or negative relationship with a teacher (Endedijk, et al., 2021). These negative relationships can stem from a student being labeled, even before entering a classroom, as either problematic or troubled which in turn creates a fear-based narrative (Emdin, 2016). Many preconceived labels, such as a student being "at risk," become a precursor to how a student is treated in class. This perception directly affects the quality of teaching these students receive, thus impeding not only their participation, but also their success in the classroom. Teachers must strive to develop positive relationships with their misbehaving students in addition to the use of disciplinary practices. (Carter Andrews & Gutwein, 2020).

Students develop skills over time through opportunities to participate and practice (Dallimore, et al, 2013). Successful classrooms promote participatory equity as part of their everyday practice through a concept known as *reality pedagogy*. Reality pedagogy is a way to connect the content that reflects the space a student occupies and to bring a student's life into the classroom experience (Emdin, 2016). Teachers disseminate content but students' perceptions and understandings shape how the content should be presented (Emdin, 2016). Students are more likely to participate when teachers provide equal opportunities for students to contribute their connections to the content.

Contributions can manifest in a variety of ways. Student agency manifests when teachers solicit student ideas and thoughts through classroom discussions. This approach provides opportunities for students to shape the direction of learning in the classroom (Pianta, 2012). Peer support and leadership can also draw students into classroom participation due to agency, interest, and personal investment (Smith, 2019). Smith (2019) investigated the blend of teamwork and culturally relevant practices one teacher utilized in an underperforming classroom and found, "The camaraderie established through conferencing and peer evaluation in classroom communities seemed to prevent the typical resistance often experienced by other teachers with students" (p. 369). This offers an explanation why teachers seeking to establish control by limiting collaborative opportunities may experience more behavioral issues and less engagement from students.

Providing a framework for students to respond is an important aspect of equity within instruction. Unfortunately, some students are not given the opportunities or space needed to participate in class in order to properly develop their academic identities. Students "with or at risk for developing emotional or behavioral disorders receive fewer opportunities to respond

(OTRs) than their peers” (Haydon et al., 2012, p. 23). This behavior indicates students who struggle most with developing a positive academic identity may also be receiving less opportunities to contribute.

A study of high and low achieving “silent students” through a focus on the social environment of the classroom discovered the way a teacher interacts and encourages students to participate plays an important role within the outcome of student participation (Sedova & Navratilova, 2020). High-achieving silent students were not disadvantaged, but low-achieving “silent” students were. Both high academic-achieving and low academic-achieving silent students may feel uncomfortable raising their hands, high-achieving students were often called on, especially to answer more complex questions. Low-achieving students were called on less frequently or were called on exclusively to answer simple, closed questions, which potentially perpetuated a lower self-image of academic competence, “Assuming that there is a link between classroom talk and achievement, a negative self-reinforcing cycle arises: because the achievement of these students is low, they participate little— because they participate little, their achievement is low” (Sedova & Navratilova, 2020, p. 710). This research postulated low-achieving silent students need additional attention to counter an interpretation of lower competence and subsequent labeling (Sedova & Navratilova, 2020). Labeling and self-perception may perpetuate overall lower academic achievement among these students.

Teachers can identify opportunities to engage low-achieving silent students and increase their sense of academic belonging by recognizing opportunities for them to participate and offer appropriate encouragement. Capitalizing on these moments of opportunities by continuing to engage with students will disrupt the negative self-perception cycle and transform participation patterns. Students gain confidence resulting in a positive self-perception cycle and shift in

classroom belonging and self and peer perception (Sedova & Navratilova, 2020). Acknowledging the potential and providing appropriate supports assists students and teachers to realize overlooked or hidden potential of students.

Questioning

The delivery and variations of questions posed to foster learning can also make a difference in students' feeling of inclusion during instruction. *Questioning* is used in classrooms in order to construct student understanding and assess students' learning (Erdogan & Campbell, 2008). The types of questions used by teachers solicit different types of responses, levels of thinking, and participation from students. Questions should also capture students' interest and attention by using content relating to students' daily life (Yang, 2020). Questions fall into two categories: open-ended and close-ended. *Closed-ended questions* are, "those that invite brief answers from and place few demands on the student as the answer usually requires only a word or phrase response" (Graesser & Person, 1994, as cited in Erdogan & Campbell, 2008, p. 1898). *Open-ended questions*, "are defined as those that invite extended answers from and place more demands on the student as the answer usually requires several sentences to answer and help reveal students' patterns of reasoning" (Graesser & Person, 1994, as cited in Erdogan & Campbell, 2008, p. 1900). *Open-ended questions* in their nature give students more latitude in the type of answer a student may provide, while *a closed-ended line of questioning* dictates that students deliver a prescribed answer (Erdogan & Campbell, 2008).

Additionally, open and closed questions elicit different responses depending on a student's gender. A study investigating how different genders responded to open and closed lines of questioning found students responded differently depending on their gender. Male students were more likely to respond to closed-ended questions than their female counterparts when

allowed to call out answers. Interestingly, the researchers found negligible differences between male and female students when it came to responding to open-ended questions, regardless of the teacher's gender (Eliasson et al., 2016). Using open-ended inquiry with elaborative opportunities and high participation increases learning for students (Howe et al., 2019). Teachers are therefore empowered to influence participation through the types of questions used during instruction.

Teachers who use *constructivist* practices (where students take on a participatory viewpoint on learning) are more likely to utilize a wider variety of questioning practices than their non-constructivist counterparts (Erdogan & Campbell, 2008). Teachers utilizing highly constructivist teaching practices predominantly used open-ended questions while teachers using low constructivist teaching practices preferred the use of closed-ended and task-oriented questions (Erdogan & Campbell, 2008). Higher participation using open-ended lines of inquiry and opportunities for students to elaborate increase learning (Howe et al., 2019). Teachers need to be aware of the “increased activity required to ensure students are given opportunities both individually and socially to construct knowledge” (Erdogan & Campbell, 2008, p. 1911).

Accountability and comfort often play a role in teachers' decisions concerning questioning strategies. *Volunteer questioning*, where a teacher asks a question and waits for students to volunteer to answer, is often used in lieu of calling-on students to avoid putting a student on the spot. Using volunteer questions in the classroom, however, may not be an inclusive instructional practice for all students. Classroom situations that use volunteer questions can be described as ones in which, “some students even think they are bystanders and wait for other students' responses” (Yang, 2020, p. 839). In contrast, cold calling can be used to provide accountability through expected participation.

A study examining the effects of cold calling on participation connected increased participation with increased expectations of participation, resulting in students being both more comfortable and more prepared for class discussions (Dallimore et al., 2013). The study discovered student participation levels varied from just over 50% in classes using low cold-calling to just more than 90% participation rates in classes with high levels of cold-calling (Dallimore et al., 2013, p. 330).

A concern of using cold calling is putting students on-the-spot making them uncomfortable in class. However, cold calling does not negatively impact student comfort as some teachers feared. Students display more comfort participating in high cold-calling classes when compared to previous courses (Dallimore et al., 2013). The same study also found an increase over time in students' voluntary participation in classrooms when higher levels of cold calling were used. This reveals that the more teachers require students to participate in class, the more students will participate in class.

Classroom Management Techniques

A school's established norms are linked to academic achievement and how students interact socially (Brown et al., 2013). Classroom management techniques can foster adherence to a specific prescribed culture which influences learning. When behavioral expectations are positive or negative, students can give meaning to their environment and the relational transactions within it (Holley, 2014). Interviews with high-risk middle school participants found overall that three aspects of school settings shaped their academic future, "teacher-student relationships, behavior management policies, and challenging learning environments" (Brown, et al., 2013, p. 199). The way teachers present guidance through positive and negative reinforcement influences academic and behavioral results.

Praise produces a more enthusiastic response in contrast with simply asserting correct behaviors (Royer et al., 2019). *Behavior-specific praise (BSP)* shows recognition for behaviors that are positive or negative providing students with immediate and clear directives on how to or not to participate in the classroom space (Johns, 2015). Often, students feel they are being singled out when being disciplined (Carter Andrews & Gutwein, 2020). Positive praise can be particularly important for students that feel apt to being disciplined for negative behaviors. In general, students who exhibit problematic behaviors need a greater amount of praise in order to ensure desired behaviors (Johns, 2015). Students' self-perceptions of their academic identities can be influenced by extrinsic school-based incentives and "a teacher's encouraging dialogue appearing to positively influence students' self-confidence and esteem" (Brown et al., 2013, p. 189-190). Students may also have never been taught how to receive praise or compliments. Teachers can model appropriate praise or compliment-receiving behavior by encouraging behavior-specific praise between peers and from teacher to student. Additionally, students need to feel the praise issued by a teacher is sincere for students to continue utilizing expected behaviors (Royer et al., 2019).

A classroom which promotes a fair and consistent set of behavioral expectations in turn promotes more positive relationships with all involved and stronger overall academic outcomes (Endedijk et al., 2021). Positive relationships stem from students feeling they can be successful within the classroom environment. The benefits teachers indirectly experience when praising students for appropriate behaviors include "lower rates of emotional exhaustion and a higher sense of efficacy for classroom behavior management" (Royer et al., 2019, pg. 1). Teachers who take the time to figure out what type of positive feedback resonates with students experience stronger relationships built over time (Johns, 2015). However, over-praising students can also

backfire. This *inflated praise* is defined as, “a compliment that includes an additional adverb or adjective such as incredibly or super or very. If you relay to a child with low self-esteem exaggerated praise, they may believe they always need to do very well and therefore will choose easier tasks, so they don’t disappoint” (Johns, 2015, p. 4). If positive feedback or positive praise is too general, then limited or negligible changes in on-task behavior, understanding, or academic confidence will occur (Royer et al., 2019). This feedback about praise is paramount when discussing adolescent disciplinary measures as middle school students tend to experience an uptick in incidents involving discipline which is problematic given the correlation between discipline and the achievement gap (Carter Andrews & Gutwein, 2020).

Students thrive in classrooms reflecting appropriate scaffolding measures and consistent routines. Productive classrooms appear to run with ease but are created and cultivated using deliberate effort. Teachers of productive classrooms are effective in proactively managing behavior, well organized, prepared, and are efficient at handling classroom activities and transitions (Pianta, 2012). This appearance of a “well-oiled machine” with all parts working together is not by chance but developed and maintained with care.

Classroom and Instructional Design

Classroom organization is an essential consideration when fostering inclusive classroom practices. The physical layout of a classroom can impact a student’s overall performance. Overcrowded classroom spaces “with excessive noise and distractions can directly hinder a student’s ability to stay on task” (Mundschenk et al., 2011, p. 99). Teachers who effectively organize classrooms also foster inquiry and academic interest (Holley, 2014). By providing clear physical boundaries for where learning occurs and where it does not, such as a seating chart or workspaces, teachers are giving students a delineated set of boundaries which model

organization and structure (Mundschenk et al., 2011). Classroom design can manifest in day-to-day activities that require collaboration among peers. In classes where students are paired in groups with a wide achievement gap, those students who sense their contributions hold less meaning are less likely to participate (Shah & Lewis, 2019).

Teacher proximity, the teacher's position in the classroom in relation to students, can have a positive or negative effect on student participation (Gunter et al., 1995). When students are seated closer to their teacher, they are more apt to participate and receive academic support (Dong et al., 2021). "Students consciously or unconsciously vie for the opportunity to express their ideas, to have those ideas be taken seriously, and to be seen as capable learners" (Shah & Lewis 2019, p. 427). Giving students structure through organizational context can strengthen the classroom environment.

Classroom traffic references the mapping of who tends to participate during classroom activities and who doesn't and can be influenced by the physical structure of the learning environment. The types of relationships a student has impact the type of treatment a student could receive, which could impede participation (Endedijk et al., 2022). "Dyadic teacher-student relationships can be characterized quantitatively by, for example, the amount of interaction a teacher has with a specific student, as well as by more qualitative indicators, such as the type and tone of feedback a teacher generally provides to a student" (Endedijk et al., 2022, p. 371). The interplay between teacher proximity and student positioning may influence a student's experience in the classroom during instruction (Gunter et al., 1995 and Dong et al., 2021).

Methodology

Sample Selection

West Coast Middle School (WCMS) was chosen as our middle school of focus in partnership with the District as WCMS represents the diversity of students in the district. WCMS is also one of the two traditional middle schools serving Grades 6-8. District leadership suggested WCMS as a good fit for our exploratory research as their school leadership is more established than the alternative which recently went through administration changes. The scope of the project led us to center our inquiries on the seventh- grade student experience and to perform observations over three consecutive days. WCMS follows a block schedule including twelve periods distributed between periods 1-4 on Monday and Thursday, 5-8 on Tuesday and Friday and periods 9-12 on Wednesday (Appendix C). Additionally, the administration asked us to observe a zero-period advisory group. Observations were conducted in the month of December 2022 for three consecutive days, Wednesday through Friday.

The intent of the observations was to capture the student experience and school climate. Therefore, the site administrators and guidance counselors created a class schedule to allow observation of what students encounter throughout their twelve periods over three days. Two teachers preselected out of observations and were therefore replaced on the schedule with willing participants.

A small group of teachers and administrators were invited to interview over Zoom during December and January to gather insight into their instructional intentions and a more general understanding of their experiences at WCMS. We were able to interview one administrator and one teacher at WCMS as part of our data collection.

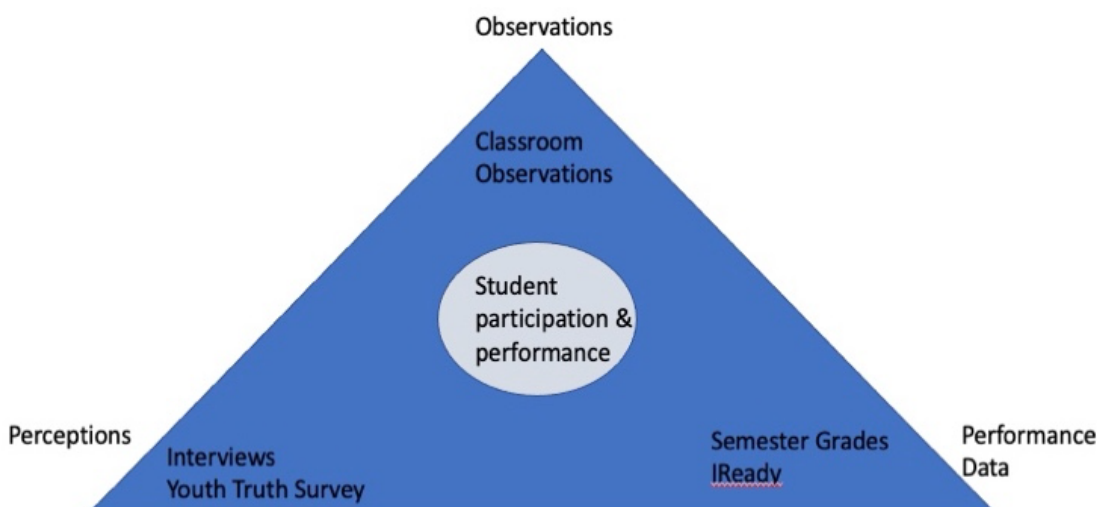
Data Collection and Data Analysis

Our conceptual definition of inclusion is those affordances to students to participate during class through interactions. The operational measurement of inclusion will utilize patterns of demographic inclusion measured in the same way. Demographic inclusion identifies observable attributes of race and gender as well as unobservable academic attributes, such as a student being an English Language Learner (ELL) or a Special Education Learner (SPED).

We used a mixed-methods approach to data collection attempting to triangulate observations, survey data, and academic performance data so we can further understand opportunities for student participation in the context of student performance and school climate data. Figure 1 illustrates the three aspects used to triangulate and contextualize our understanding. The project design took measures to avoid disrupting class proceedings or directly interacting with students.

Figure 1

Data collection



This approach minimized risks to participants but yielded awareness and understanding of classroom patterns across physical and cognitive demographics. This in turn provided transferable knowledge to both WCMS and the District on how to improve educational approaches, which was specifically requested of us when we met with administrators to discuss our Capstone Project.

After delving further into our Literature Review, we were able to refine our initial research questions into the following ahead of our observation and interview period. Our research questions were:

Research Questions

- 1. What are the physical patterns of student/teacher interactions?*
- 2. How do teachers invite students to participate in the classroom community?*
- 3. What classroom design and management techniques are being leveraged to foster inclusion and equity in the learning space?*

Field notes during observations at WCMS and interviews with teachers and administrators were used to answer three general questions:

- 1. What patterns were revealed/existed?*
- 2. Is there anything unusual or unexpected?*
- 3. Was anything in need of a follow-up?*

Observation Data

An observer (Jason) conducted the observations at a middle school over a period of three days following a typical 7th grade student's schedule. The District expressed interest in learning more about the English Language Learner's experience. Therefore, the schedule we followed mirrored that of an English Language Learner (ELL), but the focus of the observation was on all

students in the class and the teacher's actions. The schedule was a near replica of an ELL student at the school, with the exception of two teachers who opted out of data collection. Observations took place across different disciplines to capture a student's full experience over the sequence of classes throughout the three-day cycle. Classes observed included Advisory, ELA 7, MYPath (students working on individualized computer iReady modules), History, P.E., STEM, Math 7 (two different teachers observed over the three-day period), and Flex (described as teachers' passion projects).

We divided classroom observation segments into 20-minute spans. P.E. classes were too large to accurately monitor and record demographics resulting in limited data collection. A total of twenty-eight observations were performed across nine unique courses. Advisory, math and English were observed on multiple days. Six teachers were observed with the following demographics: 3 white females, 2 white males, and 1 Latinx male. Our observer also observed lunch and school layout.

Classroom observations focused on counting teacher interactions between teachers and students. Our observer recorded **Traffic Flow** (teacher movement), **Verbal Flow** (questioning and responses), and **Selective Verbatim** (positive and negative responses to student behaviors). These types of Teacher/Student Interactions are listed below in Table 2.

The data collection process was tested and refined by observing a classroom at a different school site prior to observations. The observer did not interact with students or teachers during observations. Observations primarily collected quantifiable data by measuring the number of each type of interaction (Appendix A). An important aspect of the data collection process was to record the facts as opposed to judgement or opinion (Oregon DoE). Additional qualitative data was collected in field notes.

Table 2*Teacher/Student Interaction Types*

Selective Verbatim	Response to Behavior	Verbal Flow	Class Traffic
Positive & Negative reinforcement	Positive & Negative reinforcement	Deciphering if questions are related strictly to content or if they apply cultural and student relevance	Physical organization of the classroom, and placement of students and teacher(s)
Teachers' response to whole-class behavior	Negative reinforcement	Observing if teachers are posing open or closed lines of questioning	Collecting demographics on student groupings within the classroom
Teachers' response to individual behavior	Tracking if the teacher is calling on students or searching for volunteers	Tracking if the teacher is calling on students or searching for volunteers	Correlating this to potential patterns in teacher and student interactions

Student Subgroups

Categories of student demographics were established to count interactions during observations. Observations focused on counting interactions between teacher and students in the form of *stop-ins* (when teachers approach students to formatively check in about the information being covered), *praise* (when teachers gave students confirmation and positive feedback about behavior and concepts) and *questions* (when teachers posed different types of questions in order to assess students' understanding of concepts). Example of stop-ins are a teacher stopping at a student's desk to give extra help, examples of providing praise can be to say, "*that's a great question!*" and an example of questions can be by posing an open-ended question to see if a student gives feedback about a lesson. The observer also counted types of questions and

responses from students along demographics. Student subgroup by race and ethnicity, as well as ELL and IEP/504 status can be seen below in Table 3.

Table 3

WCMS Racial, Ethnicity, Gender and Academic Data

Gender		Racial/Ethnic Demographics				Academic	
Male	Female	White	Latinx	Black	Asian	ELL	SPED
203	176	253	245	50	56	149	67
53%	46%	65%	63%	13%	15%	39%	17%

Race and ethnicity demographic data from the district was complex, as Latinx was a question on ethnicity, a separate question from race, and not included when identifying racial demographics. Students identifying as Latinx also identified themselves as other races. Because the term Latinx is classified as an ethnicity rather than a racial identity, our racial and ethnicity categories were not mutually exclusive.

The observer first sketched a diagram of the classroom and recorded student demographics of race and gender. Printed rosters were used to cross-reference in attempts to accurately label class diagrams. It was more difficult than anticipated to identify student demographics for data collection. The intent was to use seating charts provided through the school's database (Synergy) which included academic demographic information for English Language Learners (ELL) as well as IEP or 504 statuses. Due to large class sizes, our observer was unable to accurately identify and track this demographic data. Future efforts may incorporate scouting ahead or requesting seating charts from teachers in advance of observations.

Traffic Flow

Traffic flow data tracked each teacher's movement throughout the classroom and assigned a rank score of 1, 2, or 3 based on how teachers spent time in three areas of the classroom: front (1), middle (2), and back (3). The data was then counted and compared to determine percentages of dominant teacher positioning.

The observer also noted where teachers stopped in to work with individuals or small groups and those students' demographics. Each time a teacher stopped to check-in or work individually with a student it was recorded (Appendix B). The data was then transferred to the Data Collection Observation Tool (Appendix A). This data, from all observation periods, was summed categorically by demographics and analyzed for patterns. The data does include, but does not differentiate, when repeated check-ins with the same student occurred. Traffic flow data was compared to verbal flow and studied for how it related to interactions between teachers and students.

Verbal Flow

Verbal flow was observed and recorded to identify participation patterns by tracking which students were interacting during the lesson through contributions and questioning techniques. Data was collected during observations using arrows from teacher to student and student to teacher using a classroom diagram (Appendix B). This data was quantified by counting interactions 'to' (directed towards) and 'from' (responding or initiating towards another student or teacher) within student subgroups. As seen through Table 4, six different types of interactions were surveyed.

Table 4*Verbal Flow Interaction*

Categories of questioning	Description
Student Initiated	When a student asked the teacher a question without advanced prompting
Called-On	When a teacher called on a specific student
>1 Response	When a teacher posed questions where more than one response was accepted
Open-ended	When teachers asked questions that could be answers in multiple ways
Single Response/Closed-ended	When teachers asked closed questions with only one correct answer
Cultural Relevance	When questions were asked to students that related to their daily lives, community context or lived experiences

Categories of questions counted using the observation tool were *Student Initiated*, *Called-On*, *>1 Response*, *Open-ended*, *Single Response* and *Cultural Relevance*. Cognitive demographics were not captured reliably during observations resulting in the decision to exclude them during data analysis.

Verbal flow data was counted and analyzed descriptively to identify frequency and percentage rates to determine patterns of use. Student responses of *Student Initiated*, *Called-on*, and *Volunteer* were also tallied by racial and gender demographics and calculated for percentages to determine patterns within interactions.

Selective Verbatim

The collected *Selective Verbatim* data was used to explore the use of positive and negative reinforcement and its relation to participation among subgroups. Selective Verbatim categories included word for word positive and negative response to individuals and to the entire class. Instances of positive and negative reinforcement were quantified by counting class-wide occurrences with individual students and by both racial and gender subgroups. The observer noted each time a teacher responded to student behavior (both praise and corrections) and recorded what the teacher's words were in field notes. The tallies were then calculated for percentages among subgroups and by positive and negative categories individually and class wide.

Performance Data

We received academic performance data with school board approval and developed a data-sharing agreement between ourselves and the District. The data was sent directly to one of our researchers from the District data specialist. iReady and 1st trimester grades for the 22-23 academic year were provided for performance analysis. iReady is an online diagnostic tool used to assess student performance levels and then provide personalized instruction to students (iReady, 2023). The iReady results were selected for further data analysis as they provided uniformly calibrated academic performance. Most recent scores were used. If a student had two test scores within the same month, the higher test score was used. Scores from December 2022 were used as current. Older scores were used if there was not a current score from December.

We provide descriptive statistics of iReady data by student demographic subgroups. The relative grade level rating by demographic subgroups provided the clearest picture of student performance divided into five categories: *Early on Grade Level, Mid or Above Grade Level, 1*

Grade Level Below, 2 Grade Levels Below, and 3 or more Grade Levels Below. The iReady measures of academic performance provided context for understanding our observation data. We also explored connections between student performance and classroom instruction trends found in observations.

Survey Data

We used data from a pre-existing YouthTruth survey issued by WCMS to students, staff, and families. YouthTruth surveys are conducted annually in October across the District. Yearly results are illustrated as comparisons to scores and percentage of positive scores from previous years' surveys. YouthTruth is a national nonprofit specializing in school surveys and providing usable and timely data to inform schools of stakeholders' perceptions (YouthTruthsurvey.org, 2023). Respondents have equitable access through the ability to toggle between English and Spanish as they take the survey.

Data from the October 2022 YouthTruth survey captured perceptions of school from key stakeholders (students, teachers and families) within the WCMS community. We received the survey results in a January report synthesizing feedback from 477 respondents. The overall response rate was 57%, but there was a low family response, leading us to exclude them from our analysis (School synthesis report, 2022). Table 5 illustrates overall response rates to the YouthTruth survey. Positive responses indicated the percentage of responses of *Agree* or *Strongly Agree*. The YouthTruth survey results were analyzed to triangulate and contextualize observational data. Specifically, we explored for students' and teachers' perceptions of their experiences of classroom culture and instruction along with disparities between the two point-of-views.

Table 5*YouthTruth Survey Combined Response Rates*

Group	Survey Population	Number of Responses Received	Response Rate
Students	397	392	98%
Family	397	51	12%
Staff	40	34	85%
Total	834	477	57%

Interview Data

In November, researchers reached out to seven members of the West Coast Middle School community, teaching staff and administration, in order to schedule 30-minute interviews. Two teachers and one administrator initially responded in order to schedule interviews. Of the three original respondents, one teacher wrote back in January saying that he was no longer interested in participating in our Capstone Project. Our interviewer (Maggie) interviewed two members of the WCMS community, a WCMS administrator, and an ELA7 teacher. Interviews were conducted via Zoom and were recorded and transcribed for the purpose of finding takeaways and common themes. The following five questions were asked of the teacher in order to highlight themes from our literature review:

1. *How do you set up your classroom to foster participation? (Classroom Design)*
2. *What types of learning activities foster the most and least amount of engagement in your classroom? (Classroom Management)*
3. *How do you address a student's learning needs? (Equity)*

4. *How do you (or WCMS) make a student feel that they belong to your school community? (Equity and Belonging)*
5. *Which classroom management techniques are the most impactful for your students and why? (Classroom Management)*

The following questions were asked of the administrator in order to highlight themes from our literature review:

1. *How do you set up your school to foster participation? (Classroom Design)*
2. *What types of learning activities foster the most and least amount of engagement at WCMS? (Classroom Management)*
3. *How do you address a student's learning needs? (Equity)*
4. *How do you (or WCMS) make a student feel that they belong to your school community? (Equity and Belonging)*
5. *Which classroom management techniques are the most impactful for your students and why? (Classroom Management)*

Upon completing each individual interview, our interviewer compared findings in order to generate initial themes to inform coding. Our interviewer coded the transcripts individually by examining the four overall themes of our project (*Classroom Design, Classroom Management, Equity and Inclusion and Belonging*) as well as subthemes, such as *Participation and Questioning* and then related these findings back to our research questions.

Findings

Context

WCMS has an open concept layout with breezeways instead of hallways. There is a single point of entry through the office where students and adults are met by staff. The

classrooms run down the center toward the gym with additional classrooms on both sides with walkways in-between. Classrooms are oriented in either a traditional style using individual desks or in a modern style using small tables. Collaborative and independent work took place in both layouts. The ELA 7 classroom was expanded in recent years to accommodate an area with rows of individual desks as well as collaborative and reading areas.

Per our agreement with the District, we received demographic data (Tables 1 and 2) from WCMS which was collected directly from iReady. In the 7th and 8th grades there was an even split of seventh and eighth graders with 194 students in each grade. The student population by gender is 204 males (52.6%), 176 females (45.4%), and additional 8 students who did not specify their gender (2.1%). Schoolwide subgroups consisted of 83 ELL students (21.4%) and 69 students with IEPs (17.8%). One hundred fifty students (38.7%) at WCMS qualify for free lunch.

Considering academic performance, Table 6 illustrates students' scores in relation to their grade level performance in ELA and Math. "Relative Grade Level" identifies the students' performance in relation to grade level expectations. For example, a 7th grader rating at "1 Grade Level Below" is performing at a 6th grade level. This visualization revealed the dire circumstances of student performance at WCMS with 71% of students below grade level in ELA and 84% below grade level in math.

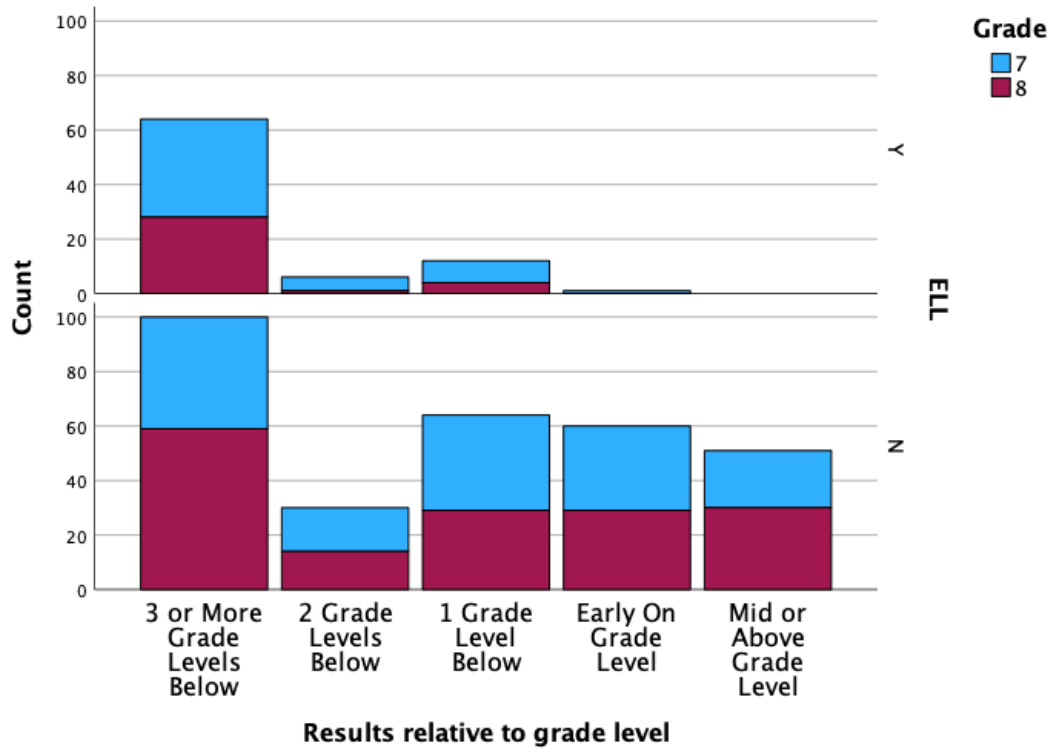
Table 6*WCMS ELA & Math iReady Relative Grade Level Results*

<i>Relative Grade Level</i>	<i>ELA</i>		<i>Math</i>	
	# of Students	Percentage	# of Students	Percentage
Mid or above grade level	50	13%	13	3%
Early on grade level	60	16%	46	12%
1 Grade level below	73	19%	93	25%
2 Grade levels below	35	9%	49	13%
3 Grade levels below	162	43%	178	47%

Figure 2 illustrates the struggle which ELL students currently face at WCMS. In both figures, the top bar graph displays ELL students' iReady results and the bottom bar graph shows the non-ELL students' results. A single ELL student tested on grade level in ELA while 64 ELL students (77%) tested 3 or more grade levels below in both the 7th and 8th grades. ELA results are expected to be lower as these are students still working towards English proficiency, but the high number of non-ELL students (63.6%) measuring below grade level was a surprising revelation.

Figure 2

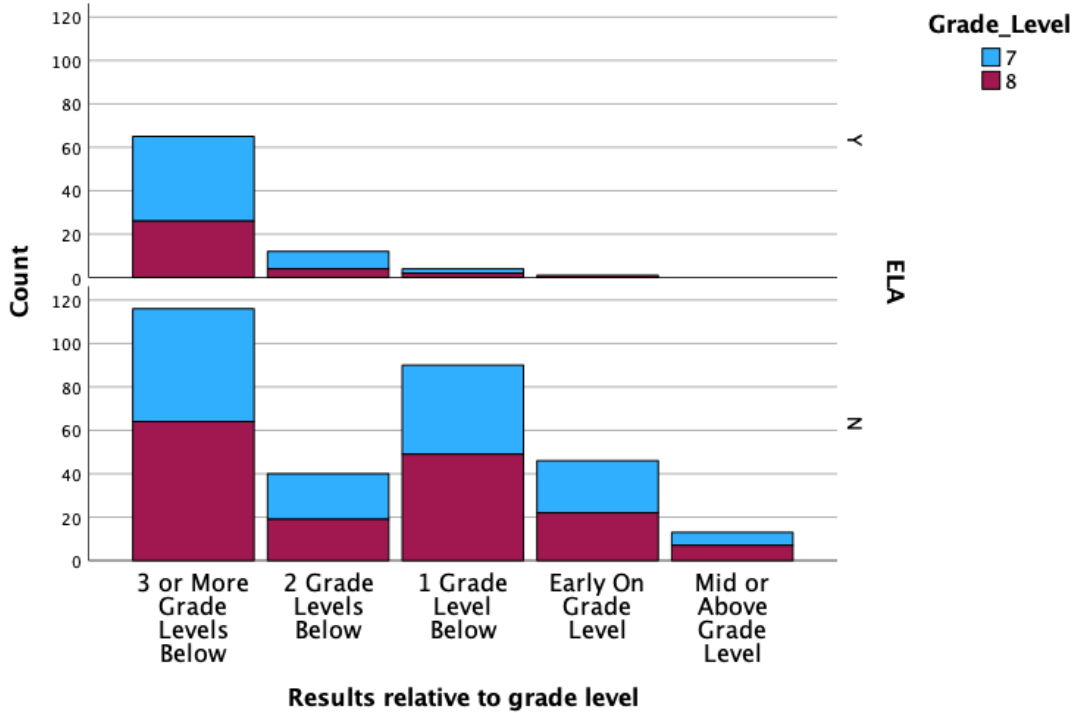
ELA iReady scores for 7th & 8th grades comparing ELL and non-ELL students



iReady math results are similar to ELA with only a single ELL student testing on grade level and 65 ELL students (79%) testing 3 or more grade levels below in 7th and 8th grades combined. Fifty-nine non-ELL students (20%) scored early on or above grade level, but a startling 80% scored below grade level with 38% three or more grade levels below.

Figure 3

iReady math scores for 7th & 8th grades comparing ELL and non-ELL students



Survey Data Results from WCMS YouthTruth

WCMS student perceptions scores from the YouthTruth survey in comparison to other schools’ responses were in the bottom quartile for: *engagement* (31%), *relationships* (31%), *culture* (16%), and *academic challenge* (46%) categories, and in the 3rd quartile for the *belonging* (40%) category. Each of these categories received a mean score of low 3: *engagement* (3.09), *relationships* (3.15), *culture* (3.01), *academic challenge* (3.39), and *belonging* (3.31). These results reflect the disassociation many students at WCMS feel in relation to their education, teachers, and learning experience. Staff perceptions similarly align with the students, suggesting education quality decreased a full 14% between 2021 and 2022.

Findings

We asked the following research questions throughout our data collection process:

- 1. What are the physical patterns of student/teacher interactions?*
- 2. How do teachers invite students to participate in the classroom community?*
- 3. What classroom design and management techniques are being leveraged to foster inclusion and equity in the learning space?*

As we conducted our research, four findings emerged relating to gendered patterns of interaction, questioning strategies, positive phrasing and a reliance on independent work. The following section describes these findings in detail.

Finding 1: Patterns of teacher-student interactions occurred at an almost 2:1 male:female ratio.

During the observations teachers disproportionately focused on male students in comparison to female students. Of teacher responses to behavior, 69% of responses were to male student behavior (Table 7). This is more than twice as often as their responses to female student behavior (31%). Teachers also stopped to check in with students at the same 2:1 male-female ratio (Table 7). Similarly, male students were overrepresented when students answered questions, with males answering 70% of the time compared to female students answering questions only 30% of the time (Table 7). Selective Verbatim results are similar to verbal flow data.

Table 7*Student-Teacher interactions by gender and race*

Type of Interaction	Gender		Race			
	Male	Female	White	Latinx	Black	Asian
Teacher Response to Behavior (both praise and corrections)	106	47	26	85	21	16
	69%	31%	18%	57%	14%	11%
Stops/Check-ins by Teachers	90	45	20	81	12	18
	67%	33%	15%	62%	9%	14%
Student Questioning Participation	57	24	9	51	14	5
	70%	30%	11%	65%	18%	6%

This response rate may indicate addressing male behavior is a proactive method of classroom management. The correspondence between teacher response rate to male student behavior and male-directed verbal flow could also indicate responding to male behavior to prompt greater participation of male students in class.

We compared this against iReady data to determine if there was a connection between the disparity of teacher attention towards male students and performance results. Table 8 compares the relative grade level performance of males to females on their most recent iReady assessment. females outperformed males on almost every measure of relative grade level on both Math and ELA. On the ELA assessment 32% of females scored on or above grade level compared to 26% of males. The math results were similar with 17% of females scoring on or above grade level compared to 14% of males.

Table 8*iReady performance results by gender*

Relative Grade Level	ELA		Math	
	Female	Male	Female	Male
Mid or above grade level	27	23	8	5
Early on grade level	30	30	22	24
1 Grade level below	33	40	43	50
2 Grade levels below	15	20	23	26
3 Grade levels below	71	91	80	98

This was the only disproportionate demographic difference we found. Teacher/student interactions by race/ethnicity were more aligned to the overall student demographic percentages. There were no observed disproportionate teacher interactions towards students across different racial demographics. However, overall teacher attention tended to focus on those students expressing an inclination towards participation, evident by their asking questions or seeking assistance. Still, much of the student work observed in the classroom was independent and left little opportunity to observe interactions between the teacher and students.

However, another subgroup of students who received more attention than their peers were those who presented challenging behaviors. In productive classrooms, teachers used the method of increasing attention to proactively invite students to participate in the class before they could move off task. This approach appeared effective, especially after observing the same students presenting undesired behaviors in other classes. In the other classes, the teacher either

did not address the behavior or only addressed a student using corrections after undesired behavior.

The disproportionality in teacher/student interactions along gender lines in observed interactions yields additional questions of how much and what type of teacher interactions impact participation and performance. There is a chicken and the egg dilemma. Are male students participating more because teachers interact with them at a higher rate or are teachers interacting more with male students because they are participating at a higher rate or exhibit more off task behavior? The observer's perspective on interactions suggested that the higher rate of interactions was to proactively manage behavior of students who may otherwise present undesired behavior, because the observation of students in multiple classes demonstrated students with high levels of energy and undesired behavior often received higher rates of attention in other classes, presumably to keep them engaged. However, we do not have data to validate this perception.

In Sweden, three researchers (Eliasson et al., 2017) sought answers to the differences in how female and male students responded in classroom environments. One of their findings "was that both male and female teachers still interact more often with boys than with girls" (p.434). Another finding from Eliasson et al. (2017) may explain why our observer saw more exuberant students were given higher rates of attention: teachers considered students more skilled depending on their rate of participation (p. 439). Observations indicated that female students were less likely to participate as volunteers (Eliasson et al., 2016), yet students volunteering comprised the largest percentage of questioning observed at WCMS. Reliance on this method – volunteering – perpetuates a cycle where willing students participate and receive attention while others participate less, thus receiving less interaction from teachers.

Finding 2: Absence of diverse questioning strategies inhibits accountability and equity.

Teacher questioning strategies demonstrated a reliance on volunteer questioning and single responses, holding only some students accountable for content knowledge. Teachers employed volunteer questioning 59% of the time, making it the most used questioning strategy in classrooms. Only two teachers used the strategy of calling on students, and just one of these two teachers used equity sticks (popsicle sticks with students' names used to randomly select students to call on). Nearly all the called-on questions, with the exception of two, were observed in a single teacher's classroom. The remaining questions were volunteer questions where students self-selected to answer by raising their hands. All other observed teachers relied on volunteers and only rarely called upon students.

Table 9 shows the data collected across the 28 units of observation. Many of the observed segments focused on independent work which resulted in lower overall data related to teacher/student interactions than initially expected.

Table 9

Types of questions teachers asked

Student initiated	Called-on	Volunteer	>1 response	Open-ended	Single Response
11	12	33	8	18	21

Note. Totals across 28 observations

Teachers primarily asked closed-ended questions (60%) and required only a single correct response. While 40% of questions were open-ended, almost all of these occurred in one teacher's classroom. Teachers rarely asked for more than one response from students (18%) and when they did, it was in combination with open-ended responses. In two classes, teachers utilized online learning platforms like Google suite to facilitate discussions, electronically obtaining

students' answers to questions. Teachers were observed using online learning modules in Google classroom to observe student responses and then share those answers with the class.

During our observations, teachers asked 18 open-ended questions and accepted multiple answers to only eight of those questions. The remaining ten questions were a single response where the teacher accepted one answer and then moved on with the lesson. Limiting students' opportunities to respond creates a learning climate where not all students are held accountable for thinking for themselves. Instead, students can choose to wait and find out, relying on their classmates to answer questions. Reduced opportunities for students to respond may relate to lower student engagement, fewer opportunities for teachers to formatively assess student learning, and increased class disruptions (Haydon, et al., 2012). This creates a passive learning climate, possibly resulting in decreased engagement and student agency.

Relying on volunteer questioning creates inequitable opportunities for participation, which can result in a lack of accountability. Student responses from the YouthTruth survey supported this finding. In response to the question, "*Most of my teachers don't let people give up when the work gets hard*", students' responses indicated a drop in percentage of agreement over the last three years: 2020 (65%), 2021 (54%), 2022, (49%). This decrease may indicate a perception that students are not held accountable for their academic autonomy.

Teachers may be relying on students' volunteer participation to avoid creating discomfort, but this also permits students to remain on the sidelines as passive observers and denies them the opportunity to become comfortable in the classroom and ultimately encourage active participation. The use of technology did require accountability from all students to answer the teacher's questions but did not allow students to learn from their peers' perspectives as they construct their understanding because there was no follow up discussion. Students require

opportunities to practice participating in class discussions to develop their skills and become more comfortable (Dallimore, et al., 2013). Student participation is directly related to what opportunities they are given to participate (Gresalfi, et al., 2009).

Teachers are missing an opportunity to connect with students on a more meaningful level by not leveraging culturally responsive pedagogy. Most questions related specifically to academic content (81%) with a fraction (19%) being culturally relevant to students. *Cultural relevance* in our exploration is defined as any question pertaining to students' lives or cultures in relation to academic content. An observed example of a culturally relevant question was, "How would you describe yourself?" used during an ELA lesson on characterization. Teachers use this type of questioning to establish personal connections and relevance with both content and students to enrich the learning experience. Teachers who honor the cultural norms of all students within the classroom environment are enforcing the notion that every student's voice matters (Smith, 2019). Demonstrating value for students' culture promotes equity and belonging in the classroom (Shah & Al., 2019).

Teachers can foster engagement in the classroom by connecting content to present day connections (Pianta, 2012). The highest instance of participation from students came during the end of the ELA7 class while introducing a unit on characterization. The lesson followed a gradual release of responsibility approach of "*I do, We do, You do.*" This gradual release of responsibility is built from Vygotsky's ideas concerning zone of proximal development enabling teachers to scaffold learning at appropriate levels of learning independence. During the "*I do*" and "*You do,*" portions of the ELA characterization lesson, students were asked to provide examples using open-ended and multiple response questions. Most of the culturally relevant questions used during our observations occurred during this lesson. This observed lesson

provided students with opportunities to share their own opinions and experiences, becoming part of the constructing of understanding.

Class discussions and questioning strategies provide opportunities for teachers to guide and assess students' construction of knowledge (Erdogan & Campbell, 2008). Teachers' use of discussions, open-ended questioning, and requiring accountability through participation creates the space for more challenging and engaging learning opportunities. Failing to challenge students in positive and encouraging ways leads to “destructive friction” (Turner, et al., 2014). This may result in students' feeling less of a sense of academic belonging.

Finding #3: WCMS emphasizes the use of positive phrasing school wide.

Positive reinforcement permeated many interactions in classrooms. Teachers provided students with positive feedback to encourage desired behaviors. Small affirming comments, such as “*thank you for being in your spot*” and “*that’s a good start*” provided students support and direction in a way that also assured the students they were on task. Observation field notes identified how school announcements included messages of community, such as “*to check in on one another.*” The prevalence of positive phrasing was evident in nearly all staff interactions with students. The two staff we interviewed reinforced WCMS’s deliberate efforts, stating the value of positive phrasing as a way of fostering community and inclusion. The teacher commented,

I greet kids at the door every day. You know, I say good morning, how are you? I try and like really be there in that moment with them and connect with them. I really try to like, specifically pay attention to each kid as they come through the door, like “Oh, you did a great job on the quiz,” etc.

I also like really maintaining a safe space in the classroom. You know, like, the same way that like I greet every kid that comes through the door, our principal and AP are the same. Like kids are coming through the door, or are out at lunch and recess and I would say the proportion of positive interactions with students to negative interactions leans towards the positive.

Both the teacher interview and observational data indicated that the principal held a visible presence within the school environment.

Table 10

Positive phrasing examples from teachers at WCMS

Category	Examples
Corrections	<p>“We are practicing trust right now”</p> <p>“It’s not necessary to yell because we are sitting right next to each other”</p> <p>“I would care if someone did that to me”</p> <p>“Students have said, I can’t focus, it’s too loud. So, let’s keep it quiet”</p>
Praise	<p>“Thank you for being in your spot”</p> <p>“That was a good choice”</p> <p>“Thank you for sharing”</p> <p>“Student teaching the teacher”</p> <p>“Very creative” “Very thoughtful”</p> <p>“That’s a great question”</p> <p>“Thank you for following directions”</p>
Modeling mutual respect	<p>“Am I done with your question?”</p> <p>Administrator addressing off-task students, “I was pretty hurt to see what happened here” “I’ve never seen our students behave that way.”</p> <p>“It wasn’t everybody, but it does take everybody to make sure that doesn’t happen.”</p>

Teachers' use of language when communicating to students demonstrated respect and modeled positive phrasing. A teacher was observed asking a student about their goals for the upcoming iReady assessment, "*What do you want to improve on next time you take it?*" *How much do you want to improve?*". Corrective comments, such as, "We are practicing trust right now", demonstrated the same respectful positive phrasing without adding unnecessary shame or judgment. Examples from selective verbatim notes and field notes of positive phrasing in different situations is detailed in Table 10.

Although positive phrasing was practiced when teachers both praised and corrected students, teachers were observed correcting students at a higher rate than praising them as evidenced in Table 11.

Table 11

Class-wide response by teachers

Positive (praise)	Negative (corrections)
19	27
41%	59%

The use of positive phrasing yielded desired behaviors in all but one instance when a teacher was unable to convince a table of girls to attempt the assignment. The students at the table remained off-task for the entirety of the period.

Something that was at odds with both our observational data and our interview findings was the students' cultural content feedback extracted from the YouthTruth survey. Both the *Culture* and *Relationship* portions of the YouthTruth survey contrasted with what we as researchers saw and heard throughout our data collection process. The YouthTruth survey indicated the staff perceives that they have positive relationships with students (mean score of

3.95 on a 5-point scale). However, students perceived their relationships less positively, with a mean score of 3.15, when asked about *“the degree to which students feel they receive support and personal attention from their teachers.”*

More results from the YouthTruth report also suggest further work in areas such as Engagement, Relationships, Belonging and Culture are needed as these areas on the YouthTruth survey overall yielded poor outcomes from students (Engagement, 3.09, Relationships, 3.15, Culture, 3.01 and Belonging, 3.31). Additionally, in our interview with a WCMS administrator, he acknowledged that while there had been progress in the areas of positive phrasing and showing care, there was still more internal growth expected to meet goals. When the administrator spoke about school spirit, he noted that at the time of the interview there was a “Kindness Day” where advisories and groups were reaching out to “give out little messages to kids on campus about kindness.” Still, he also spoke about how he wanted to see this type of positive reinforcement take off within the WCMS community under the initiative of other members of staff outside of himself. The administrator noted, “it takes a little handhold and to get them you know, we’re moving in the right direction. They have great ideas.”

Finding #4: Students are expected to work independently rather than collaboratively.

Throughout our observations, teachers opted to use independent work as an instructional strategy. Independent work was the dominant format in all classes and existed whether seats were arranged using small tables or by individual workspaces. Twenty-three of the 28 observed segments (82%) were focused on independent work. This instructional format limited our ability to observe a teacher’s questioning techniques and responses from students. Interactions between teachers and students generally took place in assignment set-up and lesson review at the beginning and end of class.

While observing traffic flow patterns within classrooms, our observer noted that teachers spent much of their time in the front of the classroom. Our observer sketched the movement of teachers and recorded where each teacher spent the most time, front, middle, or back. Teachers spent most of their time in the front of the classroom space, suggesting that teacher proximity to students perhaps made it difficult for students and teachers to work collaboratively.

During the math courses observed on Day Three, students were provided with two options for independent work: correct a past quiz or utilize iReady questions for practicing their skillsets. Although students were given options for free seating within the classroom, they were not given an opportunity to collaborate. As for teacher and student learning interactions, teachers tended to engage in learning interactions with one specific student rather than collaborating with many students. This dynamic, in which the teacher focused all their attention on one student at a time, happened in several classes, such as the MyPath course during Day 1 and the STEM class on Day Three. Teachers circulated the classroom in order to assess the progress of each student such as in the Math 7 class, but the overall focus of the teacher was checking in with students who asked for help.

Providing individual support to willing students may detrimentally impact the struggling students who are less vocal in the classroom. In helping the vocal students, teachers diminish the amount of instructional time they could allocate to other students, whose limited ability to self-advocate may obscure their educational needs. This dynamic may inadvertently contribute to some students participating less over time. “Assuming that there is a link between classroom talk and achievement, a negative self-reinforcing cycle arises: because the achievement of these students is low, they participate little- because they participate little, their achievement is low” (Sedova & Navratilova, 2010, p. 710). The school-provided ELA and Math scores are initial

evidence of a potential connection among academic performance, self-advocacy and collaboration. The current low achievement at WCMS with 71% of students below grade level in ELA and 84% below grade level in math suggests this negative cycle requires disruption.

Instructional design can take many forms, and one approach is to leave unwilling students to their own devices while the teacher works independently with a single willing student. However, this type of instructional design has classroom management disadvantages. Participation characteristics will reflect the relationship between the participants (Gresalfi et al., 2009). The space between the teacher and the rest of the class during the Math 7 course observation on Day Three afforded a group of disengaged females the opportunity to be disruptive, such as using profane language with loud voices.

This particular math course did not foster opportunities for communal collaboration, but this was not always the case when it came to using independent work as a means of participation. During the observed ELA7 course, the teacher set up three independent workstations (which included crosswords, reading a section of *The Hunger Games*, and word searches and drawing a favorite scene from the novel). While students were working at these stations, the teacher made herself available to students and encouraged rotation and movement amongst students and their peers. In this case, while students were encouraged to work autonomously, students were also encouraged to work with others and participate in the learning environment.

It is crucial to note that even when a teacher fostered a participatory environment through autonomous work, the teacher also worked one-on-one with students in order to foster their writing skills. The ELA7 teacher stressed the importance of providing stations for students to work independently so she could work with ELL students, who comprise a

large demographic of the WCMS community. During the observed lesson, the teacher engaged with students in each group individually. Even when students were physically grouped together, their work was independent and autonomous absent group collaboration.

The YouthTruth surveys also highlighted the importance of students feeling supported as a component of their willingness to participate. Within the “Relationships” section of the survey, only 31% of students felt positively about “the degree of which they feel they receive support and personal attention from their teachers” (YouthTruth Survey, 2022). Touchpoints, or occasions to address students individually, provided students with opportunities to feel supported by their teachers. They were also important for the teacher to gather an accurate picture of students’ understanding of the material presented, such as those touchpoints between the ELA7 teacher and her students at the writing station.

Emergent Finding: School wide initiatives fostered participation within the WCMS Community.

Emergent findings we saw in our observations and interviews included the visible overall efforts made by staff to support students and help foster a sense of community at WCMS. This was done through a three-prong effort which included the physical presence of administrators and teachers, establishing an advisory program for students, and school-wide incentives for students to participate in their school community.

Something that was noted throughout both observations and interviews as a positive was the physical presence of teachers and administrators to the WCMS community throughout the school day and beyond. During the lunch break, staff were observed roaming the school grounds, playing music and engaging with students. The principal was observed greeting students as they

entered the cafeteria while playing “Singing in the Rain” and other upbeat oldies during lunch to uplift students’ moods during a rainy day. Our observer also noted that during morning announcements, the administration gave words of encouragement for students as they started their school day such as *“to check in with one another”* and *“to adapt to opportunities when things do not go as plan.”*

Our teacher interviewee also noted that the administration at WCMS was visible and shared similar tactics such as greeting students at the door in order to affirm their place within the school community. Additionally, the administrator at WCMS mentioned that the school makes efforts to be present for students, whether it be in an overt or covert capacity and how the school is continuously looking for new ways to show up for students.

WCMS utilized different approaches to encourage student engagement within community expectations. The school uses LiveSchool to incentivize behavior associated the school’s values. LiveSchool is an online platform used to improve school culture by proactively recognizing positively identified behaviors (LiveSchool, 2023). Students earn points by demonstrating desired community behaviors such as participating in class or assisting peers and in turn redeem points to buy items from a store inside the WCMS library. WCMS encouraged students during schoolwide announcements and from individual teachers to practice school values and earn points.

WCMS also uses incentives as a way to reflect cultural inclusivity. Our observer noted that if students reached a stretch growth goal in iReady in reading or math they received a ticket to the school’s taco truck. Both the stretch growth goals and the selection of the taco truck as an incentive are of importance. Stretch growth goals in iReady are particularly pertinent to WCMS because stretch growth goals are designed for students who are not meeting grade level

benchmarks and these goals help said students meet grade-level expectations (iReady, 2023). Students at WCMS overall do not meet California state benchmarks for academic readiness, so the need for these types of touchpoints and incentives is paramount. Additionally, the use of the taco truck shows connectivity between the school staff and students as students at WCMS are predominantly Latinx.

These efforts, however, were not reflected entirely through the feelings of students within what was captured in the YouthTruth survey. Regarding *belonging*, 40% of students surveyed believed they belonged to the WCMS community. This finding is a relatively static finding; over the past five years, the percentage of students polled within the YouthTruth survey felt similarly about belonging to the WCMS community. In the culture and relationships portion of the survey, however, there was a decline overall from students. When students were asked within the relationships section if their “teachers cared about them” or if “students had strong relationships with their teachers,” the scores overall were low. Only 31% of students felt that they had strong relationships with their teachers and only 22% felt that they were respected in their school community. These results confirm that further growth and support is needed in order to foster inclusive community practices school wide.

The administrator we interviewed noted additional events within the school community that the staff has undertaken (with help from the Tier One team, a team of administrators and teachers within the WCMS community that helps plan school-wide events) which included soccer games, artist assemblies and pizza parties and their direct correlation with student achievement. Furthermore, our observer was asked to observe the advisory program as part of our observations from the administrator at WCMS and the administrative team at the District. Although our observer witnessed two advisory classes, there was not much decipherable data to

use. One advisory class included the advisor reading a ghost story while the other included students watching CNN. The researcher noted that advisory appeared to be a “soft start to the day” rather than a formal gathering between teachers and students and that it provided an opportunity for students and teachers to mix in a more informal way. The administrator at WCMS noted that there were plans in place to leverage the advisory program for additional uses, such as student led conferences.

Recommendations

Recommendation 1: Use existing site instructional coaches and district-wide professional development (PD) supported by professional learning communities (PLCs) to reinforce and implement instructional strategies.

1a. Increase variety in questioning strategies to increase equity and student accountability for learning.

The District and WCMS can utilize the PLC and PD time to infuse an understanding of questioning strategies and their role in equity and accountability in student learning. Identifying and exemplifying various questioning strategies, beyond requesting student volunteers and accepting a single response, will improve the equity of participation and interaction in the classroom, as well as student accountability. There is a link between a student’s frequency and quality of verbal participation in the classroom and that student’s results (Ing et al., 2015; Sedova et al., 2019; Webb et al., 2014). Professional development should focus on building a repertoire of questioning strategies and teachers’ understanding of how equitable and accountable classroom discussions develop student engagement while decreasing disruptive behavior.

The District schools, including WCMS, can utilize existing instructional coaches on campus to provide observational data to teachers. As noted within the observational data we

collected, teachers checked in with male students at a 2:1 ratio over female students.

Instructional coaches and learning walks will bring increased awareness to teachers' verbal flow and selective verbatim practices, empowering them to make necessary adjustments in the classroom. The instructional coaches can use the same verbal flow and selective verbatim data collection tools used in this capstone project. Teachers can use these resources to develop methods to include female students into the classroom experience. One such approach is through utilizing specific forms of equity questioning strategies, like the observed example of equity sticks, when fostering discussion and inquiry.

1b. Engaging with students on a more relational level through culturally relevant lessons.

Incorporating lesson content that resonates with students on a deeper level promotes a greater sense of belonging to the WCMS community and in turn, strengthens relationships within the school community. In the classroom environment, we observed teachers employing culturally relevant questioning, defined as questions relating to a student's life or experience, the least amount of time. Cultural relevance is imperative to secure successful student outcomes (Smith, 2019). When measuring students' positive responses to "the degree to which students perceive themselves as engaged with their school and their education", the YouthTruth survey shows a steady decline over the last three years from 44% in 2020 to 31% in 2022 (YouthTruth, 2022). Students feeling unengaged with their overall learning supports our recommendations to ensure course content holds cultural relevance. Employing collaborative discussions relating to students and opportunities for enhanced student agency through differentiation of interest on assignments will help encourage equity within the learning space. Additionally, teachers who are acutely aware of their own predispositions in the classroom environment will yield more positive outcomes.

1c. Create additional peer learning opportunities and scaffolding using collaborative learning and gradual release of responsibilities strategies.

Collaborative learning is an instructional strategy which promotes student belonging through shared learning and provides necessary scaffolding for students as they construct their understanding of content and complex ideas. Observed classes relied heavily on independent work to maintain classroom management but simultaneously prohibited peer-to-peer learning. Online applications like Google Classroom are tools for independent work and were utilized during the pandemic, but reestablishing cooperative learning opportunities enables deeper learning for students. Interacting with peers also helps develop the learning community and academic identities of students. The district has provided gradual release of responsibility (I do, we do, you do) training in the past. This training helps teachers to reinforce their existing practice while also ensuring newer teachers are proficient in the practice.

An essential outcome of collaborative learning is that students learn with their peers as they develop their understanding. Christensen (1991) explains the importance of learning with peers, “their knowledge of fellow students brings them swiftly to the core of effective communication, speaking *to* not *at* one another. Equally important, it is simpler and less threatening for participants to check and recheck each other’s meaning than for the instructor to do so” (as cited in Dallimore, et. al, 2013, p. 109). This “We do” phase of learning provides scaffolded support for students during sensemaking before they are left alone to try. In this way, collaborative learning can decrease student frustrations and lead to increased engagement and decreased disruptions.

Accountability to classmates also increases the learning climate and expectations in the classroom while allowing students to adjust their understanding. In classrooms employing

collaborative learning strategies, students are more interactive with their teachers and peers. Within these interactions, the students are expected to prove and explain their solutions with a higher degree of accountability. The feedback from the teacher and the peers produces a feedback loop, allowing students to further refine both their understanding and solutions. (Gresalfi, et al. 2009).

Collaborative learning also permits grouping students based on their ability levels. Thoughtful grouping along readiness levels allows teachers to assist multiple students at once. This improved efficiency means teachers can support more students while also maintaining behavioral expectations. Block schedules with longer class meetings require changing-up teaching strategies. Students working together to decipher more complex ideas provides peer scaffolding preparing them to work individually after forming more concrete understanding of concepts. When this occurred in classes observed it resulted in increased participation. Combining chunked lesson portions with movement from assigned seating to free seating opportunities provided teachers with real-time incentives for students as well as a tool to address undesired behavior. Thoughtful grouping also allows teachers to provide differentiated support to students with increased traffic flow throughout the classroom. Relying on independent work leaves the potential to teach to the proficient group while leaving struggling learners frustrated and above-level students bored or finishing early. In both cases, these students may succumb to undesired behavior as a coping mechanism.

Integrating these adjustments will require consistent effort over time and may first appear unsuccessful in practice. Turner, et al. (2014) advises, “students may be more or less responsive until they eventually become accustomed to the new mode of interaction”. District and school-

wide commitment to these approaches may take time but a sustained effort will improve classroom climate and student learning.

Recommendation 2: Continue reinforcing the use of positive phrasing while implementing the practice of “Warm Demander.”

The prevalence of respectful and positively phrased interactions with students at WCMS revealed a commitment to the practice. Our recommendation is to acknowledge the success in instilling the practice schoolwide and continue to celebrate and build on its use by moving the almost 1:1 praise to correction ratio higher towards 4:1. We also recommend instituting a practice of “Warm Demander” in the classrooms as a natural extension of current practices.

The pedagogical practice of being a “Warm Demander” is defined as an approach communicating “both warmth and a nonnegotiable demand for student effort and mutual respect” (Bondy & Ross, 2008, para. 3). This approach is described as “central to sustaining academic engagement in high-poverty schools” (Bondy & Ross, 2008, para. 3). The Warm Demander approach is a natural extension of existing District initiatives focusing on building relationships, growth mindset, and the positive development of students’ academic identities. Purposeful education and schoolwide implementation will be best accomplished in a schoolwide training followed by reinforcement during PLC meetings and reflective discussions with site instructional coaches and administrators.

District and school-wide commitment to these approaches may take time but a sustained effort will improve classroom climate and student learning. As teachers improve their understanding of the methods to invite, encourage, and support student participation, they should observe positive learning results. The data collection tool developed for this study is a resource to track implementation efforts or to define current context to inform teaching practice. The tool

can be used in learning walks or in individual observations facilitated by instructional coaches or administrators.

Limitations

Our observations did not attempt to determine why some students participated more than others. Future questions to explore can include: *Is participation part of socialization?* and *Do students who are called on participate more or do teachers call on students who actively participate more?* This study does not track unique instances of participation, nor does it match individual students' participation to their performance scores. Future studies may consider this when trying to answer how student participation affects academic performance.

A limitation of our data collection was positive (praise for desired behavior) and negative (corrections for undesired behavior) interactions were counted (both positive and negative) by category. Separating out the count of positive and negative within each subgroup may reveal additional patterns of teacher responses towards students. The data tracked all instances but did not discern among unique or repeat students. In some instances, certain students received multiple responses from teachers impacting the demographic data.

Participation was not matched to performance individually in the data collection process so there was a gap in connecting participation to performance outside of broader demographic categories. Teacher response data may be further analyzed for rates of positive and negative responses to students by gender.

Conclusion

Change is born from awareness. Our exploration reveals patterns of classroom interactions between teachers and students that can be specifically addressed through the introduction and reinforcement of readily available teaching strategies. Our findings will allow

our partner organization to build awareness of current pedagogical practices and our recommendations inform future initiatives focused on improving student participation through inclusionary practices. Ultimately, these efforts should improve student performance.

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Appendix A

Data Collection Observation Tool

Class Demographics

Gender		Race				Cognitive	
Male	Female	White	Latinx	Black	Asian	ELL	IEP/504

Teacher Demographics: _____

Traffic Flow

Area of room Rank of time

Front	
Middle	
Back	

Stops / Check-ins

Gender		Race				Cognitive	
Male	Female	White	Latinx	Black	Asian	ELL	IEP/504

Verbal Flow (whole room)

Questions (Whole room)

Student initiated		Open-ended	
Called-on		Single response	
Volunteer		Content	
More than one response		Cultural relevance	

	Gender		Race				Cognitive	
	Male	Female	White	Latinx	Black	Asian	ELL	IEP/504
Called-on								
Volunteer								
Student init.								

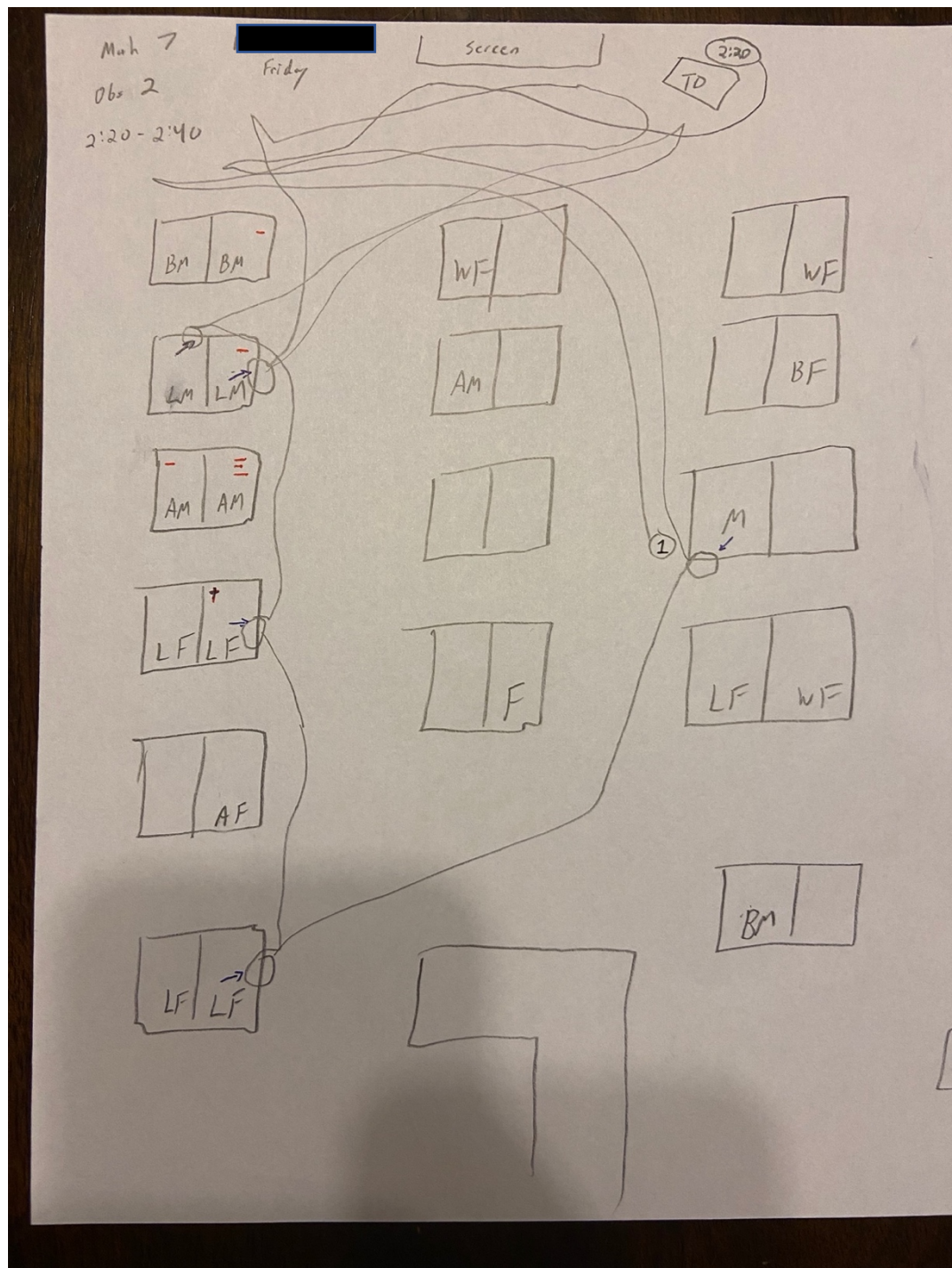
Selective Verbatim

Response to Behavior

Individual						Class wide	
Positive (praise)						Positive (praise)	
Negative (correction)						Negative (correction)	
Gender		Race				Cognitive	
Male	Female	White	Latinx	Black	Asian	ELL	IEP/504

Appendix B

Traffic Flow chart from WCMS observations



Math 7
Obs 2
2:20-2:40

Data Collection
Observation Tool

Class Demographics

Gender		Race				Cognitive	
Male	Female	White	Latinx	Black	Asian	ELL	IEP/504
9	11	2	8	4	3		

Teacher Demographics: _____

Traffic Flow

Area of room	Rank of time
Front	2
Middle	1
Back	3

Stops / Check-ins

Gender		Race				Cognitive	
Male	Female	White	Latinx	Black	Asian	ELL	IEP/504
11	11		111				

Verbal Flow (whole room)

Questions (Whole room)

Student initiated	1111	<i>Independent work</i>	Open-ended	
Called-on			Single response	
Volunteer			Content	
More than one response			Cultural relevance	

	Gender		Race				Cognitive	
	Male	Female	White	Latinx	Black	Asian	ELL	IEP/504
Called-on								
Volunteer								
Student init.	11	11		111				

Selective Verbatim

Response to Behavior

Individual				Class wide			
Positive (praise)	1			Positive (praise)			
Negative (correction)	6			Negative (correction)	11		
Gender		Race			Cognitive		
Male	Female	White	Latinx	Black	Asian	ELL	IEP/504
-----	+		- +	-	----		

6

Appendix C

Bell Schedules

2022-2023 Bell Schedule - Monday & Thursday

In the 2022-2023 school year, school districts across the state must implement a later start time for middle and high schools.

In 2019, California Governor Gavin Newsom placed some restrictions on what time schools start at. This bill, known as Senate Bill 328, does not allow middle schools to start before 8 am, and does not allow high schools to start before 8:30 am.

On May 24, 2022, the Board of Education approved the District's start times for middle and high schools. There is no change for elementary schools.

	Start Time	End Time	Length
Period 0 Advisory	8:35 AM	9:10 AM	35 min
Passing	9:10 AM	9:15 AM	5 min
Period 1	9:15 AM	10:30 AM	75 min
Break	10:30 AM	10:40 AM	10 min
Passing	10:40 AM	10:45 AM	5 min
Period 2	10:45 AM	12:00 PM	75 min

2022-2023 Bell Schedule - Monday & Thursday

In the 2022-2023 school year, school districts across the state must implement a later start time for middle and high schools.

In 2019, California Governor Gavin Newsom placed some restrictions on what time schools start at. This bill, known as Senate Bill 328, does not allow middle schools to start before 8 am, and does not allow high schools to start before 8:30 am.

On May 24, 2022, the Board of Education approved the District's start times for middle and high schools. There is no change for elementary schools.

	Start Time	End Time	Length
Passing	12:00 PM	12:05 PM	5 min
Period 3	12:05 PM	1:20 PM	75 min
Lunch	1:20 PM	1:50 PM	30 min
Passing	1:50 PM	1:55 PM	5 min
Period 4	1:55 PM	3:10 PM	75 min

2022-2023 Bell Schedule Tuesday & Friday

	Start Time	End Time	Length
Period 0 Advisory	8:35 AM	9:10 AM	35 min

2022-2023 Bell Schedule Tuesday & Friday

	Start Time	End Time	Length
Break	9:10 AM	9:15 AM	5 min
Period 5	9:15 AM	10:30 AM	75 min
Break	10:30 AM	10:40 AM	10 min
Passing	10:40 AM	10:45 AM	5 min
Period 6	10:45 AM	12:00 PM	75 min
Passing	12:00 PM	12:05 PM	5 min
Period 7	12:05 PM	1:20 PM	75 min
Lunch	1:20 PM	1:50 PM	30 min
Passing	1:50 PM	1:55 PM	5 min
Period 8	1:55 PM	3:10 PM	75 min

2022-2023 Bell Schedule - Early Release Wednesdays

	Start Time	End Time	Length
Period 9	8:35 AM	9:35 AM	60 min
Break	9:35 AM	9:45 AM	10 min

2022-2023 Bell Schedule - Early Release Wednesdays

	Start Time	End Time	Length
Passing	9:45 AM	9:50 AM	5 min
Period 10	9:50 AM	10:50 AM	60 min
Passing	10:50 AM	10:55 AM	5 min
Period 11	10:55 AM	11:55 AM	60 min
Lunch	11:55 AM	12:25 PM	30 min
Passing	12:25 PM	12:30 PM	5 min
Period 12	12:30 PM	1:30 PM	60 min
