

Gender and Participation in an Alternative Eighth Grade Classroom

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Introduction:

Participation takes many forms in the classroom. Some students participate by raising their hands and contributing to discussions, but many others participate through active listening (note-taking, looking at the speaker, not distracting peers) and engagement in small group activities. For the purposes of this study, however, we will focus on verbal participation in large groups. The paper will explore how the type and extent of students' verbal participation may be influenced by gendered social interactions, specifically in terms of students' relationships with their teachers and the level of comfort they feel in the classroom.

We aim to explore this question within Soundings, an alternative eighth grade classroom at Radnor Middle School. Soundings brings together forty students and two teachers each year to explore an integrated curriculum of their own creation. The Soundings teachers and administrators intentionally compose a gender-balanced classroom, made up of twenty boys and twenty girls. This year, the teaching team is also gender-balanced. Although gender dynamics permeate every educational environment, they are particularly pronounced in the middle school years. Eighth graders, who are between the ages of twelve and fifteen, are often undergoing puberty and may be experiencing complicated emotional and physical transitions. We believe that each individual has a different developmental trajectory; furthermore, boys often mature later than girls. This diversity may produce complicated gender dynamics in the classroom, which in turn can affect whether and how students participate.

We predict that the results of this study will support the above claims as well as suggest ways in which teachers and students can create a secure environment for all students to share their opinions. The study will address whether teacher personality, gender, and teaching style affects students' comfort in the classroom and ability to verbally engage in lessons and class discussions. It will also explore whether boys and girls think about or approach participation differently. While we understand that a student's interest in a particular subject influences the degree to which he or she participates, we will not be taking into account these differences in interest. Instead, we propose to look at how boys and girls assess their own participation in all class activities and subjects.

This is a case study: we looked at one alternative eighth grade classroom, and the results will not necessarily apply to every other class situation. Nevertheless, we believe that there is a complex relation between students' gender and their feelings about verbally participating. So although we do not claim that these results are universal, we believe that they have powerful implications for many classrooms.

Literature:

We believe that every classroom should be a place where students feel safe verbally participating. As Lauren B. Resnick argues in her article "How (Well-Structured) Talk Builds the Mind," verbal participation is fundamental to learning (163). Specifically, participating in group discussion helps students develop knowledge and solve problems (164). In her article, Resnick focuses on "accountable talk," a structure of classroom discussion whose main components are "a) accountability to the community, b) accountability to standards of reasoning, and c) accountability to knowledge" (180).

While we recognize that not all of the verbal participation in the Soundings classroom counts as Resnick's accountable talk, we extrapolate from her argument that constructive verbal participation, whether or not it is specifically "accountable," is fundamental to learning. Resnick suggests that teachers who facilitate productive verbal participation in their classrooms aid their students in building knowledge and becoming active and effective classroom participants (180). It is clear that social interactions, specifically classroom discussion, are essential for students' learning (180). In this study, we have chosen to focus on students' verbal participation because Resnick sees it as so basic to the development of students' knowledge, creativity, self-awareness and problem-solving techniques.

This constructive verbal participation is one fundamental part of the Community of Learners classroom led by Ann L. Brown and Joseph C. Campione, an alternative classroom that is comparable in some ways to Soundings. In the Community of Learners classroom, "learners have become widely viewed as active constructors of knowledge rather than passive recipients of others' expertise" (231). As in Soundings, students are actively involved in creating their curriculum and determining the ways in which content is presented. Both students and teachers have the dual role of providers and recipients of knowledge; the teacher is not expected to know everything, and the students become experts on certain topics, taking responsibility for teaching their peers. In order for this practice of reciprocal teaching to work, the classroom must be a space in which all students feel confident participating.

Brown and Campione emphasize the importance of repetitive "participant structures" (235) in which students are familiar enough with their role to feel comfortable enacting it. Brown and Campione do not specifically address the role of gendered social

interaction in their Community of Learners, but we speculate that gender dynamics could profoundly shape the format of participant structures. For instance, how might implicit teacher preference for a certain gender impact the participation of both genders? How might the content of students' comments change depending on teachers' and peers' expectations of each gender? Brown and Campione emphasize the importance of encouraging diversity in a student-led learning environment. In other words, they invite all students to freely express themselves, explaining that their "classrooms are intentionally designed to give place to multiple voices" (267). Learners must feel supported to bring their unique personalities and stories into the discussion. This allows them to develop as learners in these classrooms that depend so heavily on participation.

Classrooms like Soundings and the Community of Learners attempt to create an environment that fits middle schoolers' developmental needs. Jacquelynne S. Eccles and her colleagues emphasize the importance of creating a school environment that matches students' developmental stage. They call this concept "stage-environment fit" (92) and argue that the structure of most middle schools impedes learning by overlooking students' needs. Specifically, the transition to middle school is highlighted by a weakening of student-teacher relationships (92) and fewer chances for students to take responsibility for their schoolwork, and a decrease in small-group activities (93). By attempting to strengthen student-teacher relationships, give students the power to create their own curriculum, and maximizing the amount of small-group work, Soundings is working to create a better stage-environment fit for its students.

Nevertheless, this educational model is not perfect. Eccles et. al. emphasize the difficulty of creating an environment that fits a diverse array of developmental stages. For instance, many factors affect students' ability to feel close to their teachers. Teachers'

behavior and personality affect students in different ways; because teachers, like students, are unique individuals, it may be difficult for every student-teacher relationship to be equally close. Despite the difficulty involved in creating an intimate relationship with every student, Eccles and her colleagues stress that middle school students need to feel both comforted and challenged by their teachers (94). In this study, we are particularly interested in how gender affects the character and quality of student-teacher relationships. In the Soundings classroom, some students may feel more comfortable with Teacher 1, while others feel closer to Teacher 2. How might this phenomenon affect the extent to and ways in which students participate?

Although none of these pieces deals specifically with gender, each of them introduces ideas that can be examined through the lens of gender roles in the classroom. Resnick argues that constructive verbal participation is necessary for learning, while Brown and Campione emphasize the importance of inviting diverse voices into classroom discussion. Eccles and her colleagues advocate a middle school environment that fits its students' developmental needs, one that gives ample space for students to "own" their work and share their opinions while being supported and nurtured by their teachers. When combined, these three essays call for an analysis of whether and how gender influences students' verbal participation. Furthermore, they will prove useful in interpreting the results of this study.

Methods:

We began to observe the Soundings classroom at the beginning of their school year in September. As we sat in the back of the classroom and wandered among the island groups, we began to question how boys and girls participate differently in the

classroom. We also wondered what motivates this (potentially different) participation, specifically focusing on seating arrangements and students' relationships with their teachers. With these questions in mind, we have continued our observations in order to gather anecdotes and other situational evidence. We have observed the Soundings classroom twice, recording the seating arrangements, the number of boys and girls who participate in class discussion, the ways in which the students react to both Teacher 1 and Teacher 2, and how the teachers elicit and respond to different kinds of participation. We paid attention to which students and table groups had side conversations during class work time, students' body language during different class activities, and Teacher 1 and Teacher 2's roles and behavior in the classroom at given moments.

In addition to observations, we asked most members of the Soundings classroom about their experiences. We used teacher interviews, student interviews, and student surveys to further explore our questions. We interviewed Teacher 1 and Teacher 2 separately, asking them each the following questions:

1. What is your definition of effective participation?
2. How do you encourage participation in the classroom?
3. Do you think your personal relationships with students make a difference, like if you're closer to one student and not as close to another? How?
4. Do you use seating arrangements to address participation at all? What kinds of things do you take into consideration? (If they didn't mention them, we then asked whether gender, personality, degree and level of participation make a difference.)

We conducted these interviews in a teacher break room; we recorded the responses and subsequently transcribed them.

We only asked one question to the students in the Sounding class, since most of the questions we wanted to ask them were covered in the surveys they had filled out. We asked seven boys and nine girls, "Describe your relationship with Teacher 1 and your

relationship with Teacher 2.” If the students didn’t address Teacher 1 and Teacher 2’s teaching style, we asked them follow-up questions such as: Do you find similarities or differences in Teacher 1 and Teacher 2’s teaching styles? Do you feel more or less comfortable with one teacher over the other? We spoke to sixteen students (nine girls and seven boys) during their free work period at the end of the day. We interviewed the students in a hallway outside of their classroom. As we did with the teacher interviews, we recorded each student interview and subsequently transcribed the student responses.

Finally, we looked at student responses gathered from two questionnaires, one completed during the first week of Soundings and another filled out after students had been in the class for approximately two months. We focused on a single question from the first questionnaire: “Would you say that you are more likely to ask questions in the Soundings classroom than you were in your classroom last year? Why or why not?” In order to analyze these responses, we coded the data into two groups: one composed of student who thought their participation would change due to the differences in the Soundings learning environment compared to their previous learning environment and one made up of those who either thought the change in environment would have no effect on their participation or who did not recognize a change in the learning environment. In SPSS, we made this into a dichotomous variable so that it could easily be compared to other factors. We titled this variable “Soundings Difference.”

We looked at multiple questions from the second questionnaire. First, we studied the responses to “When do you feel most comfortable participating in class? Why?” and “When do you feel least comfortable participating in class? Why?” We were interested in identifying students who have a self-consciousness that impedes participation. Again, we coded these data into two groups: those who identified feeling or appearing stupid (i.e. a

negative self-consciousness) as a reason not to participate and those who did not. This was also made into a dichotomous variable, which we entitled “Appearing Stupid.” We also noted the different student reasoning as to why they did or did not feel comfortable participating.

Additionally, we examined student’s self-evaluation of their participation by studying the responses to “How often do you participate in classroom discussion, labs, and group work? Why do you participate?” We rated student responses on a scale from one to three, one representing very little participation, two being moderate participation, and three being consistent participation. We titled this variable “Level of Participation.” Again, we recorded the students’ reasons for participating.

With these data, we ran multiple tests in SPSS. In order to isolate gender as our independent variable, we wanted to ensure there was no gap in the achievement levels of boys and girls. We ran Independent-Sample t-Tests, comparing Math PSSA scores, Reading PSSA scores, and teacher ratings (an “overall ability” rating provided by Teacher 1 and Teacher 2) with gender. We also ran a t-Test comparing family pressure and gender, to ensure that there were no significant differences in the impact of family life on student achievement.

In order to measure the impact of gender on participation, we ran a variety of tests. We conducted a chi-square test to compare “Appearing Stupid” with gender to see if there was a correlation between gender and how students explained discomfort participating in the classroom. We ran another chi-square test comparing “Soundings Difference” with gender to see whether both boys and girls saw a change in their learning environment and participation in transitioning to Soundings. We also juxtaposed “Level

of Participation” and gender; we ran a t-Test to determine whether gender predicted perceived level of participation.

We also ran tests without gender as the independent variable in hopes of better understanding participation in general. We ran multiple chi-square tests. First, we compared “Appearing Stupid” with “Level of Participation,” to see whether negative self-consciousness affects perceived participation. Next we juxtaposed “Soundings Difference” and “Level of Participation” to look at whether the student’s predictions of their participation in the first questionnaire were accurate. We also looked at the impact of students’ previous classroom experiences (especially whether they were in an alternative or traditional classroom). We ran a chi-square test comparing “Previous Classroom Experience” with “Appearing Stupid,” whether participation in a democratic classroom predicted positive self-consciousness. Another chi-square test juxtaposed “Previous Classroom Experience” and “Soundings Difference,” to better understand students’ perceptions of changes in their classroom environments and their role of participants within them. We conducted a final chi-square test comparing “Previous Classroom Experience” with gender to make sure an imbalanced male to female ratio involved in democratic classrooms did not skew our data the year before Soundings.

Finally, we ran tests to determine whether or not Teacher 1 and Teacher 2’s ratings of the level of their student’s development impacted their learning. These data were borrowed from the study conducted by Heber, Black-Schaffer, and Patton (2010). Both Teacher 1 and Teacher 2 rated each student on physical development on a scale of one to three, one being least developed, two being moderately developed, and three being most developed. We conducted chi-square tests juxtaposing each teacher’s developmental ratings with our other variables. We compared it with gender to see if there were trends in

one gender and development, with “Appearing Stupid” to see if student with lower developmental ratings were more likely to have a negative self-consciousness, and with “Level of Participation” to see if students with higher development ratings were more likely to participate in class.

Results:

We found no significant differences in achievement levels of boys and girls (Math PSSA score vs. gender, Reading PSSA score vs. gender, Teacher Rating vs. gender, and Family Pressure vs. gender). We found no significant difference in the impact of gender on participation (“Appearing Stupid” vs. gender and “Level of Participation vs. gender). Our results for “Soundings Difference” vs. gender were also non-significant, but the majority of both boys and girls predicted their participation in the Soundings would be different from their participation in their previous classroom (Figure 1).

Gender x Soundings Difference Cross Tabulation

		Soundings Difference		Total
		1.0	2.0	
Gender	Male	4	14	18
	Female	2	15	17
Total		6	29	35

Table 1. Chi-square chart comparing students’ (n = 35) rating of whether they predicted their participation in Soundings would be different from that in their previous classroom (2.0), or the same as it was the previous year (1.0).

We found a significant difference between student’s self-consciousness and their level of participation (“Appearing Stupid” vs. “Level of Participation,” $c^2(1, n = 39) = 14.30, p < 0.05$). Students who reported a concern of being judged or feeling unintelligent

in the classroom assessed themselves as participating less than the students who had a more positive self-consciousness (Table 2).

Level of Participation x Appearing Stupid Cross Tabulation

		Appearing Stupid		Total
		1.0	2.0	
Level of Participation	1.0	11	2	13
	2.0	4	8	12
	3.0	2	12	14
Total		17	22	39

Table 2. Chi-square chart comparing students’ (n = 39) self-consciousness (“Appearing Stupid”) with their self-assessed level of participation in the classroom. “Appearing Stupid” 1.0 represents student concern for appearing stupid and 2.0 represents lack of concern for appearing stupid.

There was no significant difference between student predictions that their participation would be different in Soundings than it had been in their previous classroom environment and their actual level of participation. Student’s self-assessments of their level of participation was unaffected by whether or not they predicted their participation would change from that of the previous year (“Soundings Difference” vs. “Level of Participation”). We also did not find a significant difference between the students’ previous classroom experience and their self-consciousness (“Previous Classroom Experience” vs. “Appearing Stupid”). There was no significant difference in the students’ previous classroom experiences and their predictions as to whether or not their participation in Soundings would be different than their participation in the previous year (“Previous Classroom Experience” vs. “Soundings Difference”). There was no correlation between gender and previous classroom experience (“Previous Classroom Experience” vs. gender).

Finally, we found no significant difference in either teacher’s developmental ratings of students and their gender. There exist, however, a significant difference in Teacher 1’s development rating of students and their self-consciousness (Development Rating Teacher 1 vs. “Appearing Stupid,” $c^2(1, n = 39) = 5.98, p < 0.05$). No significant difference was found in Teacher 2’s developmental rating and student self-consciousness. However, regardless of the significance of the data, the results of these two Chi-square tests vindicate that the individuals who were rated as being less developed (1.0 on scale) were more likely than those who were rated as being more developed (2.0 and 3.0 on scale) to have a negative self-consciousness (Figures 3 and 4).

**Development Rating Teacher 1 x Appearing Stupid
Cross Tabulation**

		Appearing Stupid		Total
		1.0	2.0	
DevelRatingTea1	1.0	5	1	6
	2.0	6	15	21
	3.0	6	6	12
Total		17	22	39

Table 3. Chi-square chart comparing students’ (n = 39) self-consciousness (“Appearing Stupid”) with Teacher 1’s development rating. “Appearing Stupid” 1.0 represents student concern for appearing stupid when participating, 2.0 represents lack of concern. “DevelRatingTea1” 1.0 represents least developed, 2.0 is moderate development, 3.0 is most developed.

**Development Rating Teacher 2 x Appearing Stupid
Cross Tabulation**

		Appearing Stupid		Total
		1.0	2.0	
DevelRatingTea2	1.0	6	2	8
	2.0	9	15	24
	3.0	2	5	7
Total		17	22	39

Table 4. Chi-square chart comparing students' (n = 39) self-consciousness ("Appearing Stupid") with Teacher 2's development rating. "Appearing Stupid" 1.0 represents student concern for appearing stupid when participating, 2.0 represents lack of concern. "DevelRatingTea2" 1.0 represents least developed, 2.0 is moderate development, 3.0 is most developed.

We also found significance in Teacher 2's development ratings of students and their self-assessed level of participation (Development rating Teacher 2 vs. "Level of Participation," $\chi^2(1, n = 39) = 10.02, p < 0.05$, Table 5). Teacher 1's development ratings of students and their self-assessed level of participation is a tendency; it has the potential to be significant in an extension of the study ($\chi^2(1, n = 39) = 8.60, p = 0.072$, Table 6).

**Development Rating Teacher 2 x Level of Participation
Cross Tabulation**

		Level of Participation			Total
		1.0	2.0	3.0	
DevelRatingTea2	1.0	6	0	2	8
	2.0	6	10	8	24
	3.0	1	2	4	7
Total		13	12	14	39

Table 5. Chi-square chart comparing students' (n = 39) level of participation with Teacher 2's development rating. "Level of Participation" 1.0 represents limited participation, 2.0 is moderate, 3.0 is consistent. "DevelRatingTea2" 1.0 represents least developed, 2.0 is moderate development, 3.0 is most developed.

**Development Rating Teacher 1 x Level of Participation
Cross Tabulation**

		Level of Participation			Total
		1.0	2.0	3.0	
DevelRatingTea1	1.0	5	0	1	6
	2.0	5	7	9	21
	3.0	3	5	4	12
Total		13	12	14	39

Table 6. Chi-square chart comparing students' (n = 39) level of participation with Teacher 1's development rating. "Level of Participation" 1.0 represents limited

participation, 2.0 is moderate, 3.0 is consistent. “DevelRatingTea1” 1.0 represents least developed, 2.0 is moderate development, 3.0 is most developed.

Discussion:

At the outset of this study, we were interested in two questions having to do with participation: first, does gender predict how and how often students participate, and second, how do student-teacher relationships affect participation? Through the results of the SPSS tests recorded above, and through qualitative analysis of teacher and student interviews (see below), we will attempt to explore these questions in this section. We will focus on the first question first, and then move on to the second.

The results of this study indicate that gender does not predict the extent to which students participate; the SPSS trials showed that the relationships between gender and level of participation, students’ reasons for not participating (the “appearing stupid” variable), and so on were not significant. According to our data, then, girls participate as much as boys and are not more negatively self-conscious than their male peers. This is great news; nonetheless, we do not claim that it generalizes beyond the Soundings community. Many factors contribute to the creation of school culture, classroom culture, and individual behavior. Radnor Middle School is located in a wealthy suburb of Philadelphia, and many students may come from well-to-do families in which both parents work high-powered jobs. Students in Soundings come from a variety of cultures, but it is likely that most parents have taught their children to participate since they were young. Furthermore, the majority of the students in the Soundings classroom have probably attended school in a setting similar to Radnor Middle School up to this point. Schools that are equipped with more money, more resources, more teachers, better teacher support and development, and so on may be better able to individualize

instruction and encourage participation in each student. Additionally, the democracy of the Soundings model may mean that all students feel more supported to participate. Although these are all speculations, they explain why these data may not generalize to other classrooms, school systems, populations, or cultures.

Furthermore, our research methods did not allow us to study the ways in which students participate; our results show that male and female students generally participate the same amount in class discussions, but they do not specify the character of that participation. For instance, do boys participate more often by suggesting new ideas, while girls build off of others' ideas, or vice versa? We would need to design further studies to explore this aspect of participation. While our results are encouraging in that they show that girls participate as much as boys, we cannot conclude anything about the nature of this participation. It is possible that gender does play a role in participation in Soundings, but that our data collection did not capture its effect. Although we did not find any significance with gender as our independent variable, we found interesting significance pertaining to participation more generally. These significant relationships were between: "appearing stupid" vs. "level of participation," "development level" vs. "appearing stupid," and "development level" vs. "level of participation." The meaning of this significance is discussed below.

The significant relationship we found between "appearing stupid" and level of participation suggests that students are more likely to participate if they are not worried about looking stupid in front of their classmates and teachers. It appears that students who identified not wanting to look dumb as a reason not to participate in class were less likely to ultimately participate. This is not a surprising result, but it is an important one for teachers to take into account in designing their classroom and supporting every

student to participate. Even in a democratic setting where students are encouraged to work together, know each other, and share their ideas, some students seem to stay quiet because of a negative self-consciousness. When asked why they participate in class discussions, Soundings students answered in a variety of ways. Students shared, “I think all ideas should have a voice,” “I like growing as a learner,” and “I like to share my ideas.” Other students said that they participate “because [they] have to” or “for good grades.” These responses suggest that there is a gap in Soundings between students who are intrinsically motivated to participate and those who participate for other reasons. Lauren Resnick, author of “How (Well-Structured) Talk Builds the Mind,” might argue that these students feel different degrees of empowerment to participate. One of the students explicitly recognizes the link between talking and learning that Resnick champions, while at least two do not. Because, as Resnick argues, learning cannot happen without verbal participation, the students who worry about looking stupid and those who participate out of obligation may not be learning as effectively as other students. How can teachers, peers and parents help empower students to recognize the importance of participation for learning? How can members of a classroom help reduce social anxiety and thereby reduce students’ negative self-consciousness?

By definition, a democratic classroom is a place where, ideally, everyone contributes. While verbal participation is valued in most classrooms, in Soundings it helps guide the curriculum. Students who feel uncomfortable verbally participating in Soundings not only lose a chance to learn, as Resnick argues; they also diminish their chances of having a say in what the class explores together. As Brown and Campione have demonstrated in their discussion of a democratic classroom, participation empowers the student to be an active creator of his/her own learning. Participation as an agent of

student empowerment rings particularly true in a democratic classroom like Soundings, where students are responsible for creating so much of their learning. The Soundings teachers recognize the importance of participation in their classroom: one sees his/her role as that of a facilitator, supporting students to participate more by responding to their questions with more questions. The other adds that his/her role is to encourage students to participate. This teacher distinguishes between traditional and democratic classrooms: whereas in traditional classrooms teachers will often call on students who don't have their hands raised, Soundings teachers do not force anyone to participate, supporting students' capability to choose for themselves whether to participate. In our observations at Soundings, we witnessed the importance of class discussion in the curriculum. As a large group, the class discusses quotations, lab reports, log questions, and activities in repeated exercises of debriefing. A student who does not feel comfortable participating in this debriefing period risks feeling isolated from the learning as well as disconnected from the class.

In an effort to better understand the dynamics of participation in Soundings, we looked at Black-Schaffer, Heber, and Patton's data regarding the teachers' ratings of each child's puberty level. Both teachers rated the students' physical development, and their ratings did not match for all students. Potential explanations for the differences in each teacher's ratings are that their perceptions of development are different because of their own background and experiences, or, because one teacher is male and the other is female, their familiarity with male and female development processes differs. Like many of our other data sources, this one is subjective; these are not factual puberty ratings but speculations by people who know the students well. Because of this subjectivity and the differences between the teachers' ratings, we will look at each data set separately.

The first significant relation we found was Teacher 1's development rating vs. "appearing stupid." This significance suggests that students who are less physically developed are more likely to fear looking dumb in front of their teachers and classmates. Conversely, students with higher development ratings were less likely to worry about looking stupid. We did not find significance when we compared Teacher 2's pubescence ratings with "appearing stupid," because of the differences between Teacher 1 and Teacher 2's ratings, but the chi-square (Table 4) shows that more of Teacher 2's low-development students were likely to fear looking stupid. Despite the fact that only one comparison is significant, both data sets agree that less-developed students fear looking stupid more often. What might explain this phenomenon? Perhaps students who are less physically mature are more negatively self-conscious about what others think of them, and are therefore more likely to worry about looking bad in front of others. Perhaps physical comfort influences emotional comfort. No matter what the explanation, this is an important issue to address in the classroom. We argued at the beginning of this essay that everyone needs to feel comfortable participating in discussion; although boys and girls seem to feel equally comfortable participating, there are still students who may require more support than others to contribute to discussion.

Another significant finding was the relation between Teacher 2's development rating and students' level of participation. Our data suggest that students with low development ratings are less likely to participate in class discussions. The same is true for the converse: students with high development ratings appear to be the ones who participate most. Although the findings are significant only when we compare Teacher 2's data to students' level of participation, the numbers for Teacher 1 support the same conclusion (Table 6). Again, although boys and girls seem to be participating the same

amount, verbal participation seems to cut the cake a different way, leaving behind the less physically mature students. What kinds of support need to be in place for these students to feel comfortable participating?

Our study seems to corroborate Eccles and her colleagues' call for the importance of improved stage-environment fit in middle schools. Soundings is a unique classroom – one that relies on students' participation to function. According to our data, a majority of Soundings students participate moderately or consistently, but a significant portion participate very rarely or not at all (Figure 1). If students continue to feel uncomfortable participating in a classroom as open as Soundings, students in traditional classrooms and other school districts may have an even harder time. On the other hand, our data suggest a large range of developmental stages in the Soundings classroom. Eccles et al. call for classrooms that match each student's developmental stage; with such a wide array of developmental stages in one classroom, how can teachers hope to create an environment that matches each individual?

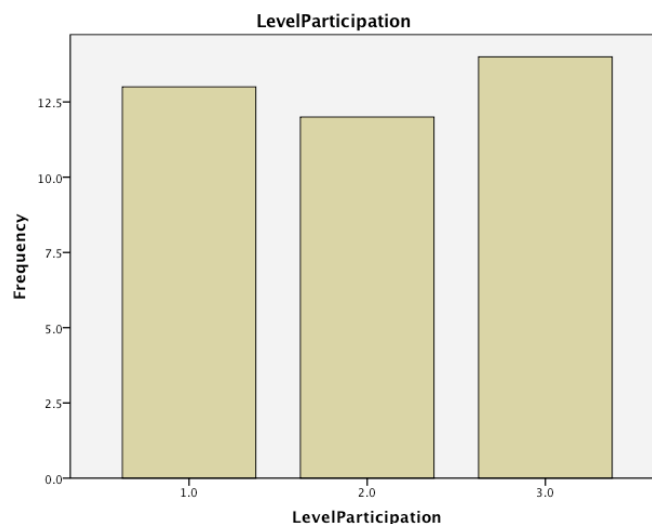


Figure 1. Distribution of level of participation across the Soundings classroom (n = 39). “Level of Participation” 1.0 represents very little participation, 2.0 is moderate participation, and 3.0 is consistent participation.

There are still issues with participation in democratic classrooms, as our data suggest; nevertheless, the democratic model may be the closest that schools have yet come to creating a more individualized stage-environment fit. For instance, Eccles and her colleagues emphasize the importance of strong student-teacher relationships (92-93) in creating strong stage-environment fit. The fact that Soundings has two teachers, and that students' autonomy is often honored in Soundings, may allow students and teachers to become closer. While there are discrepancies in particular cases, most students we interviewed pointed to a relationship with their teachers that was close, helpful, and respectful. In the next few pages, we will explore our second question: how do these student-teacher relationships influence participation?

We find this question specifically relevant to the Soundings classroom given its interpersonal nature. In Soundings, students are constantly interacting with their teachers and other peers; student-teacher relationships are foundational to the curriculum. An interesting aspect of the Soundings classroom is its inclusion of two teachers, one male, and one female. With two teachers in the classroom, students have double the chance of establishing a close relationship with at least one, if not both, of their teachers. Additionally, Teacher 1 and Teacher 2 have different specialties and some students go to one or the other for different subjects. In the interviews we conducted with the students, most students stated that they went to Teacher 1 for math, writing, and current events and to Teacher 2 for lab reports, language arts, and writing and math as well. One student explained, "Like, Teacher 2 is more of the language arts teacher, I guess, like with the grammar. And Teacher 1 is more of the actual writing kind of stuff," while another said, "Teacher 2 takes over the language arts part sometimes. She talks about language arts and writing, whereas Teacher 1 just talks about like everything." These statements

appear to emphasize the different sorts of backgrounds and experiences that the two teachers bring into the classroom. This diversity translates well as students can then choose whom they wish to speak with depending upon the subject.

Students also indicated that they go to different teachers depending upon the type of answer they are looking for. Generally, students cited Teacher 1 as the person they would go to for a “thinking” response or a challenge, while they indicated Teacher 2 for more direct answers and support. One student explained, “Teacher 1 kind of gives you an answer to your questions that you need to think about. It’s not so much like here’s the answer and just work from there. It’s like here’s how you *get* to the answer, which lead to more thought-provoking responses.” The same student stated, “Teacher 2 kind of gives you more like, a more direct response to all of your answers.” This response varied only slightly throughout the interviews. Another student explained, “Teacher 2, I think she’s really always kind and she’s always willing to help you; she really understands the place you’re in. Teacher 1, he always has good advice for you [...] he’s kind of like the teacher to make us challenge ourselves, in a good way.” The difference in students’ perception of the types of answers their teachers provide them with is also telling of the background of both teachers. While one employs a more “challenging” or questioning method, the other more directly answers the students’ questions. This difference may come out of teaching styles or familiarity with the Soundings classroom. Teacher 1’s previous experience in a Soundings environment may lead to his “challenging” answering style, while Teacher 2’s previous experience in a traditional middle school may lead her to more directly answer student’s questions.

Despite these differences in subject knowledge and answering style that the students indicated as affecting who they might go to for help, most of the students we

interviewed expressed that they maintain similar relationships with both teachers. One student said, “my relationship with Teacher 2 is pretty much the same as it is with Teacher 1. I go to them half and half.” Another student stated, “Teacher 2 can help you a lot and so can Teacher 1, so they’re kind of the same.” This suggests that the students feel comfortable enough with both of their teachers that they are free to ask questions of either one, which may increase their level of participation and “fit” in the Soundings environment. This was not true of all students, however.

Several students reported a gender preference. One boy, out of the seven we interviewed, explained, “Well, Teacher 1 I actually go to more often than Teacher 2, because obviously he’s a guy.” Of the nine girls we spoke with, two of them expressed a closer relationship to their female teacher: “Like with Teacher 2, I talk to her maybe more than I talk to Teacher 1 because she’s a girl,” and “well I don’t have as strong of a relationship with Teacher 1 as I do with Teacher 2. I have her for more classes and she understands where I’m coming from.” While these responses are by no means conclusive, they do suggest that gender can have an affect on which teacher the student may choose to work with. It should be noted that we never explicitly asked the students about a gender preference, therefore some students who indicated equality in their teacher relationships may additionally have their own gender biases that were not explored in the interviews and therefore not reported.

In addition to asking students about their relationship with their teachers, we also spoke with Teacher 1 and Teacher 2 about their relationships with their students and how they might affect student participation. Teacher 2 stated, “I think it probably affects how comfortable they feel in class, but I don’t necessarily think it affects how they’re going to—I think maybe if I’m working with a small group of kids and they were in that group,

they might feel comfortable, but I don't know if there's a direct correlation between my positive rapport with a kid and their participation in front of thirty-nine other kids." Teacher 2's response suggests that while students may work a great deal with one teacher and develop a relationship with them it does not mean that their participation will be directly affected. Teacher 1 agreed, saying "I'm sure there are students in there who see me more as the disciplinarian and a little bit edgier, and Teacher 2 as not so much, and that might be better for them, and so they tend to go to her with information or to have a conversation. But, I'm hoping that doesn't turn any kids off from participating."

While the interview responses of both the students and teachers appear to indicate that student-teacher relationships are important, they also indicate that these relationships do not fully affect the level to which a student might participate in the classroom. The level of comfort a student may have with their teacher does not necessarily ensure that that student will feel comfortable speaking in front of their peers or with the teacher of the opposite sex. Furthermore, comfort with oneself may affect one's ability to participate. Because middle schoolers are often reevaluating their relationships with their own bodies and selves, classrooms should help promote students' comfort with themselves in order to encourage participation. Clearly, a number of factors influence students' comfort in participating. Addressing all of these factors is a daunting but necessary task for any teacher.

Conclusion:

Our results suggest that gender does not influence how often students participate in the Soundings classroom. Throughout this study, we uncovered many factors that might influence participation: comfort level, developmental stage, and relationship with

teacher, among other things. In its design, the Soundings classroom directly addresses these issues of participation; nevertheless, there are still a number of students that do not feel comfortable participating. Working from Resnick's understanding of verbal participation as the foundation of learning, this may mean that some Soundings students are not connecting to the material as well as they could.

We understand that our results are not necessarily conclusive, and that they may not generalize to other classrooms and educational environments. Additionally, we recognize that due to their limited scope and subjectivity, our methods of data collection may not have investigated the questions as deeply or broadly as our research may have required. Nevertheless, we believe that there is some level of validity and importance to our results. Based on the works that inspired this study, we have reason to believe that all students share the fundamental needs of the Soundings students. Our study has expanded upon the work of Resnick, Eccles et al., and Brown and Campione. We did not set out to prove or refute these authors; rather, we wished to extend their work into the realm of gender. Every student needs to feel comfortable participating, as Resnick suggests, and strong student-teacher relationships are fundamental to a healthy learning environment, according to Eccles and her colleagues. Furthermore, students must feel in charge of their own learning in order to want to participate, as both the Soundings classroom and Brown and Campione's Community of Learners demonstrate. All students benefit from having a creative role in their learning. These needs are characteristic of what Eccles et al. call a strong stage-environment fit. Both the Community of Learners and Soundings are good examples of alternative attempts at creating a better middle school stage-environment fit. Even so, there are certainly areas in which Soundings and similar democratic learning

environments could improve, particularly in supporting each individual to verbally participate.

As we conducted this study, more possible avenues of exploration relating to participation surfaced. While considering the impact of developmental stage on students' comfort in participating, we realized that it would have been useful to have each student's objective/biological pubescence score. Though the teachers' ratings of students' pubescence was helpful for our purposes, we recognize that these data were subjective, and may have skewed our results. We are also interested in looking at the impact of Malcolm Gladwell's "phenomenon of relative age." Gladwell suggests that within a bracketed age group, such as eighth grade, older students often have an advantage over their younger peers due to their few extra months of development (21-24). Studying this phenomenon might shed light onto the complex dynamics of participation. For instance, we wonder if older students might be more likely to participate because of their actual or perceived maturity.

We also became interested in the role that culture, class, and previous education played in whether and how students feel comfortable verbally participating. As a classroom situated in a wealthy suburban school district, Soundings appears to be made up predominantly of upper-middle class students. How might the map of participation change in less wealthy school districts, in different cultures, or among students of a different socioeconomic class? Additionally, would we find the same results in a traditional classroom?

We did not find that gender played a significant role in how often students participate. However, through our research, we uncovered other factors that may influence student participation. We believe that further studies should be conducted in

both the Soundings classroom and in other learning communities to better understand these impacts on participation. While Soundings still faces challenges in supporting every student to participate, our findings suggest that, overall, it is an effective learning environment. Through our observations, interviews, and survey analysis, we found that students feel supported by one or both teachers, take an active role in creating their curriculum, and participate in a variety of ways. This democratic classroom is well on its way to embodying an effective stage-environment fit for each of its students. Yet, there is still work to be done. For Soundings, continuing to strive to create this stage-environment fit will mean continuing to address disparities in student participation.

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