Gender Engagement Differences with Remote Learning

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Abstract

This essay shares the perspective of a sixth-grade teacher working with students during a period of remote learning. Gender engagement data from multiple classrooms are presented.

Introduction

In a few years, scholars with much more time and energy than I have will dissect this educational experiment we are currently running as a result of a global pandemic. I am confident that those scholars will find things we did well and things we did not do so well. I look forward to reading those analyses of this period in time. In the interim, I hope my observations can shed light onto a gender engagement difference that I am seeing with remote learning.

I am a science and mathematics teacher on a two- person team at Edmunds Middle School in Burlington, Vermont. It is one of two sixth through eighth grade middle schools in the Burlington School District. It has a diverse population of just over 400 students. Students that identify as boys make up 55% of the student population and those that identify as girls the remaining 45%. Less than 1% of students identify as neither male nor female. Our diversity is defined by our economic and our ethnic make-up. Forty-two percent of our population qualifies for the federal free and reduced lunch program. Over 30% of our population identifies as non-white. We are also one of the major refugee resettlement sites for Vermont. As a result, there are over 20 languages spoken in our hallways and classrooms. Sixteen percent of the Burlington School District students receive English Language support.

As I have been teaching my sixth-grade home learners for the past four weeks I see glaring evidence of inequities. Due to the COVID-19 virus, it is clearly evident that this educational experiment does not do a great job in supporting our English Language learners, our Special Education learners, or our students experiencing mental health or family health issues. There will be much written in the future about these marginalized groups and the lack of meaningful growth they experienced during this period of remote learning. The focus for this essay is to share my concern for the diminished engagement of boys during this time of remote learning.

On March 15, 2020 there were indications that our school would be closing for an undefined period of time in response to the COVID-19 pandemic. On March 17th, students walked out of the building for the last time. Teachers were encouraged to take personal possessions from the classrooms, teaching supplies, and plan for remote learning. There was little guidance on how to teach remotely. Each teacher found their own strategy in balancing the instruction and support. Some teachers taught with a more synchronous model, while others taught more asynchronously. Each teacher offered “office hours” in which students could receive individual or small group support. All students were able to use their assigned chromebooks from the start of the year and had already developed sufficient classroom routines for submitting assignments electronically. Our local telecommunication company provided free or reduced internet access for any family that did not have internet access.

Each day of remote learning our school asked the teachers to track student engagement. This engagement could be a video chat, an email correspondence, or a completed assignment. As I entered my data at the end of each day of remote teaching and learning, I began to notice a pattern within my class over the first four weeks. My students who identify as boys were not appearing to participate as much as those who identify as girls. The results for my class seemed to be significant enough to warrant further exploration. A truly scientific study would need a larger sample size and control; however, in this essay I do present data that was collected by me and my colleagues over the first four weeks of remote learning.

Table 1

Remote Student Interaction by Gender

My Class: Remote Learning	Number	Total Interactions	Average Interactions per Student over four-week period
Identified as Male	13	315	24.2
Identified as Female	11	352	32.0

The data show that the 13 boys in my class were interacting, on average, nearly 8 fewer times than the 11 girls. Since this data was gathered over four weeks of learning, it indicated two fewer interactions per week. Based on my in-class experience, this was somewhat expected, but not to this degree. As I consider my individual class, there were five students that struggled to remain engaged before remote learning. Three of the students identify as male, two as female. Some receive English Language services and some qualify for the free and reduced lunch program.

In order to gauge if this was atypical for my group, I compared the remote learning data to my in-class learning. For this comparison I used the number of completed assignments for the second quarter of school for the same group of students before the transition to remote learning. I was anticipating a similar outcome, that the females were interacting more, but was surprised to see that the boys were actually interacting slightly more as measured by completed assignments.

Table 2

In-Person Student Interaction by Gender

My Class: In- Person Learning	Number	Total Interactions	Average Interactions per Student
Identified as Male	13	171	13.14
Identified as Female	11	136	12.36

The data show that while the number of interactions was less, albeit defined differently, there was a reversal in the average interactions per student over the period of time. While not a strong difference, it does show that in some measures the boys were engaging more than the girls with in-person teaching. I am unsure why the boys showed more engagement in this measure; perhaps the boys are engaged more by the hands-on activities and the variety of group activities.

Seeking more data to create a larger sample I looked at the data from the rest of the sixth grade. Our school has six sections of sixth grade. There are typically 22 to 24 students in each class. There was no uniform measure of engagement, but most of the teachers had some data record of engagement: video conference check-ins, completed assignments, and/or email correspondence. Two classrooms had limited data (one or two data points per child), so I did not include those in my data summary.

My final data included data from 91 sixth grade students, totaling 1,625 interactions logged into the data sheets by four different teachers.

Table 3

Remote Student Interaction by Gender for Grade Six

6th Grade: Remote Learning	Number	Total Interactions	Average Interactions per Student
Identified as Male	54	861	15.94
Identified as Female	37	764	20.64

The data show that, on average, the 37 girls are interacting more than the 54 boys. The girls are engaged nearly 30% more than the boys in this larger sample group. It begs for an explanation, especially when my class results for an "in-person" learning experience showed the opposite result. Perhaps the girls found the online communication safer. Perhaps the boys found the limited social interaction or assigned activities less engaging.

There has been much research exploring the interaction of social media and adolescents. In the January 2018 *Journal of Educational Technology & Society*, authors Martin and colleagues researched many elements of social media use for middle level students. Their research discusses what sites are used, when students started their social media relationships, and their usage patterns. According to the authors, girls check their social media site approximately 19 times per day, while boys check their social media site just over 9 times per day. Boys have less tendency to interact with social media.

In the article "Females Find Social Interactions to be More Rewarding Than Males" in the January 2019 edition of *Science Daily*, the authors summarize research published in the 2018 journal *Neuropsychopharmacology*. In this summary the authors describe how the female brain is more sensitive to the oxytocin reward than the male brain during social interactions. While there is much more to be learned, it does begin to explain why online learning, a very socially interactive process, may favor the female brain. Their brain is rewarded by each social interaction more than the boys' brains.

In addition to the interaction of social media and adolescents, there have been hundreds of studies analyzing the different ways girls and boys learn in traditional classrooms. In a 2018 article on *Psychology Today* titled "Do Girls Perform Better in School?" the authors conduct a meta-analysis of 300 studies and over one million students. They describe how girls and boys do relatively the same until adolescence. At that point, for a myriad of reasons, the girls begin to excel in all areas. Boys may do better on SAT-like tests, but girls are more successful in their classroom performance. If boys are struggling to find success with in-person learning, the online learning experience may be magnifying their challenge.

Girls in middle school are doing better than boys according to research. They are getting a stronger biological reward from the type of social media/remote learning we are offering than the boys. While this seems significant enough, the boys are faced with other societal challenges. The movie "The Mask You Live In" does a phenomenal job describing the mental health struggles of young boys in our society. As described in the movie, boys are twice as likely to flunk out of school than girls, twice as likely to receive special education services, and four times as likely to be expelled than girls. The third leading cause of death for boys is death by suicide. Boys need our attention and our educational creativity to excel in class, whether in-person, or online.

Nearly every parent and trained educator has heard that "girls are more social." From my observations, the socializing is different between girls and boys. Many boys enjoy large groups. They congregate at lunch and meet as a pack. They are a living organism, all working together and moving in one direction. While some girls enjoy the large groups, there are many that prefer the smaller friendship circles. These are recognized as "best friends." They meet at lockers, share secrets, and pass electronic notes.

The instructional component of teaching remotely has a tendency to be very social. We post assignments online for the class to see through email. We create and post videos to try to instruct and connect with students, we are tied to verbal and auditory learning. My data mirrors this very social aspect of remote learning. My in-person teaching allows the students to move about the room, collaborate in group projects, and build models of scientific concepts. During online learning, I invite my students to video chat each day, I ask them to post their assignments on Seesaw (a platform for student engagement), and I ask them to submit assignments through Powerschool, our learning management system. This imposed learning contract requires my students to use these social media tools throughout their remote learning.

I wish my data were more reliable. To truly compare remote learning to in-person learning I would need to control many variables. I never collected face to face interaction data with my students during an "in-person" learning period. While teaching remotely, I do not get to see the student at a desk struggling, ambivalent about raising their hand for help. I do not have conversations in the hallway with students about their sporting activity, their friend's birthday party, or their older sibling's accomplishments. While teaching remotely, I become a provider of education and a customer support call center. There may be a number of factors that influence the data. Each child has their own remote learning story. Some students are actively engaged in family commitments. Some families have determined that they can provide individual enrichment activities that supersede the school's learning. However, my data for my students at my school show that there may be a gender engagement difference with remote learning.

Remote learning is a challenge. My role as educator to my sixth-grade students is challenging. Managing the day to day stressors of a global pandemic is challenging for everyone. How can I deliver remote learning that works for all students? How can we take what we are learning from teaching remotely and apply it to our in-person teaching? My process of writing and thinking about gender engagement has already made an impact on my engagement tactics. I have started creating more hands-on activities for my students. My students are building, designing, and sharing their creations. I am finding ways to use virtual manipulatives to support mathematical concepts. I am confident that over time and with our collective creativity we, as educators, will find the answers to these questions.

References

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