

Drew Diedrich

## Authentic Data Integration

**Title:** The Hour of Code: Impact on Attitudes towards and Self-Efficacy with Computer Science

**Link:** [https://code.org/files/HourOfCodeImpactStudy\\_Jan2017.pdf](https://code.org/files/HourOfCodeImpactStudy_Jan2017.pdf)

**Lesson Enhancement:** After examining the data reflected in the [study](#), it is apparent that majority of students were uncomfortable and did not have positive feelings when it came to coding and/or computer science. My coding unit last roughly 3-4 weeks (depending on grade level) and I usually dive right into coding using [Scratch](#). This data helps me understand that computer science is a male-dominated field and that women and minority groups typically are not interested in the discipline or have no prior experience with coding. That statistic alone makes me want to help females and minorities become more involved with computer science and connect them with careers in the field. This makes me want to schedule Zoom interviews with women and minorities in the computer science field to talk with my students about careers in the field and their personal experiences in the field. This data also makes me want to start my coding unit off using the Hour of Code activities. Based on the data, it is evident that students, especially females, are more likely to be engaged in computer science with a basic exposure to it.

**Using Data:** The first thought that I have when thinking about data in the classroom, I think about data that is gathered from pre-assessment data, but it is apparent that it is far from that. Student-observation data is important to me because it provides me and the student with feedback on whether or not they are mastering the standard. It also helps me group students, create more opportunities for them, and help engage them in the content. After finding data from other sources, I can see how this can help an educator develop better connections for and with

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the students and provide them with resources to help engage them learning. Also, it helps the teacher provide the students with a fuller picture of information about a certain study or topic.

**Rationale:** Being a middle school computer literacy/science teacher, I often find it difficult find outside sources that examine data dealing with percentages when it comes to my content field. Being in a rural setting, I like comparing data to other school districts and examine what they might be doing differently that I can incorporate into my classrooms to help my students become more aware of what is available to them outside of the county. This data gives me reasoning as to why I need to help more females and minorities to get involved in the computer science field. This data could help other teachers across the STEM content areas to really examine the career field based on ethnicity and sex. Whatever that data might be, combat it and help to fix those gaps that might be misrepresented in that field.

**Interdisciplinary STEM:** This data can help break stereotype barriers across multiple STEM content areas and help more students become excited and engaged in STEM careers. This data can help me create lessons that connect the students with careers of individuals of all ethnicities and sexes and maybe see other gaps, whether it be misrepresented gaps or learning gaps, in other units. During lessons on coding, I could incorporate other content areas to help with this data. For instances, I could have work with the math teacher on teaching students about the coordinate planes while coding or having students compare the coding language to other languages around the world. This data can help change the attitudes and perceptions towards computer science and STEM related disciplines and help more females and minorities get involved and engaged in these fields.