



The Fallacy of Approaching Education Reform through a Singular Lens

Russell Craig Helmstedter

“Students in poverty... learn less because they are taught less.” (Dudley-Marling & Dudley-Marling, 2015, p.42). With marksmanship accuracy, the authors direct what Tollefson (2008) refers to as the spotlight of accountability squarely at teachers. Dudley-Marling and Dudley-Marling (2015) offer a tantalizing solution. Since it is teachers who limit the potential of students in lower track classes, which are disproportionately filled with poor students and students of color, by not offering the same engaging curriculum as students in the high-level tracks, schools should get rid of tracking. The authors attempt to support this idea by providing two examples of schools that found success after detracking. However, the authors commit two logical fallacies. The first is a red herring. They blame all disparities in student achievement on teachers employing deficit thinking towards students in poverty while ignoring extenuating circumstances faced by students in poverty. The second fallacy is post hoc ergo propter hoc, or rather, after this because of this. While it is true that all schools have found success after detracking, Dudley-Marling and Dudley-Marling fail to account for all of the factors outside of detracking that account for success in the cases they cite.

A Tale of Two Schools

To illustrate their point that detracking is the solution for closing the achievement gap, Dudley-Marling and Dudley-Marling (2015) first offer the example of The Preuss School (TPS). TPS is a public charter high school in San Diego. Low-income students, who have been identified as high potential, are selected through a lottery system. The school offers a singular college prep pathway in both mathematics and English language arts. Over the span of six years, 2004-2009, 84% of graduates attended a four-year university. However, the authors have omitted key details about the program that have led to success.

To elucidate the magnitude of this omission, consider De Anza Academy of Technology and the Arts (DATA), a Title 1 middle school in Ventura, CA. Table 1 features demographics of both TPS and DATA. For the 2018-2019 school year both schools were comparable in the number of students and served large populations of low-income students. That is where the comparison ends.

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Table 1

Comparison of School Characteristics of DATA and Preuss Schools in the 2018-19 School Year

	DATA	PREUSS	Difference
Students	839	836	-3
Annual Instructional Minutes	54900	74669	19769
Teachers	25	42	17
Student:Teacher Ratio	33.6	19.9	-13.7
Math Classes with 33+ Students	42.1%	3.2%	-38.9%
Counselors	2	3	1
Expenditures Per Pupil	\$7,478.00	\$14,255.67	\$6,777.67
Mean Teacher Salary	\$69,185.00	\$87,504.25	\$18,319.25
Three Year Mean Suspension Rate	7.1%	2.1%	-5.0%
Free and Reduced Lunch Program	71.0%	97.2%	26.2%
English Language Learners	26.5%	9.0%	-17.5%
Students with Disabilities	14.8%	4.2%	-10.6%

Note: Data collected from California Department of Education (2020_a), and California Department of Education (2020_b)

TPS outspends DATA by \$6,778 per student per year, a percent increase of 90%. In other words, TPS spends nearly double what DATA spends per student. TPS employs 17 more credentialed teachers than DATA despite having three less students. Also, any struggling student has access to after school tutoring, counseling, and family counseling. Every student with a GPA below a 2.5 attends mandatory Saturday school (TPS, 2020). Most notably, TPS allocates 74669 annual instructional minutes each year, approximately 20,000 more than the state minimum. This means a high school student who attends TPS for four years accumulates an additional 80,000 instructional minutes equating to more than a fifth year

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of instruction. Detracking is undoubtedly a defining characteristic of TPS. However, TPS also has a highly motivated student body, and the school builds in multiple layers of support for struggling students and their families.

The Curious Case of Railside

Dudley-Marling and Dudley-Marling (2015) provided another example of a school that saw success due to detracking. Boaler and Staples (2008) researched detracking as a reform for equity in mathematics. The study includes a trio of high schools in northern California. Railside school is a school that locals refer to as being on the “‘wrong side’ of the tracks” (p. 609). Railside is the most diverse of the three schools in the study, with 30% of students being ELL and 30% of students being low-income. The study found that after detracking, students at Railside outperformed the other whiter, more affluent schools. Specifically, while Railside students had a lower mean score for the year 1 math pretest, they outscored the other schools by the end of year 2 math. Moreover, 41% of students at Railside took Calculus, compared to 27% on average at the other two schools. However, that success cannot be attributed to detracking alone. The remainder of this section will explore the factors outside of detracking that lead to Railside’s success.

A Methodological Discrepancy

Students at the other two schools in the Railside study (Boaler & Staples, 2008) were either placed in remedial math or offered a choice between a ‘traditional’ mathematics pathway and a pathway that centered on group work and applied problems. It is notable that because of the smaller sample size, students who chose the alternative group work and applied problems pathway are not included in the statistical analysis. This means that all students, including high achievers, were included in the mean scores at Railside. At the other two schools the pathway that typically consists of high achievers is not included in the analysis. Potentially, this could have an impact on the mean scores the study did not explore.

Scheduling

Scheduling was another source of success at Railside (Boaler & Staples, 2008). Students attended the same classes for 90 minute periods every day, with class sizes of 20 to 1. Thus, a course that is a year long at most schools is a semester long at Railside. Students were able to take two math courses each year, therefore, allowing students who fail multiple courses the chance to still reach calculus by senior year. Moreover, Railside students took year 1 math over the course of two semesters to ensure that foundations are taught with depth. This is the equivalent of taking year 1 math over the course of two years at the other schools. So although Railside students outperformed the other two schools on the year 2 math post-test, they had at least 54,000 additional instructional minutes in which to learn the same content than the other two schools.

Curriculum

In addition to detracking, Railside students experienced a completely reformed curriculum designed around complex instruction with cultural awareness and equity in mind. Expectations and norms were put in place so that students knew they were responsible for the learning of others as part of the reformed curriculum. Teachers practiced assigning competence to student ideas by highlighting individual contributions to the whole class, increasing student efficacy. The final component of complex

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instruction was the idea of multidimensional classrooms. Teachers posed complex problems that could be solved in multiple ways and created a culture in which various approaches were valued.

Staffing

Apart from the curriculum, Railside has a unique math department. Veteran teachers would deliberately teach lessons one or two days ahead of more novice teachers. The idea was that more novice teachers were able to observe, reflect, collaborate, and refine lessons taught by veteran teachers before having to teach the same lesson themselves. The study found math teachers put in 650 minutes of planning per week despite only getting paid for 450 minutes of preparation. The culture of the department was such that teachers were expected to work outside of contract hours without compensation. Finally, the Math department also had control over recruitment and hiring. The majority of the department had been working and collaborating for years. New teachers were hired if they fit into the common vision for the department.

To illuminate the uniqueness in department control of staffing, consider DATA once again. Teachers at all middle schools in Ventura Unified School District teach six periods out of a six period day. There exists no opportunity in the schedule that would allow teachers to observe each other. Meanwhile, one quarter into the 2018-2019 school year, district administration removed a teacher from a Ventura Unified high school for breaking state law and misusing district funds meant for the girls' basketball team (D'Angelo, 2018). The Superintendent held an optional staff meeting informing DATA staff that the teacher would be placed at DATA because he was in need of a 'fresh start'. Subsequently, district administrators took a teacher from DATA to cover the now open position at the high school. As cited in the Railside study (Boaler & Staples, 2008), consistency and quality of faculty matters.

The Dangers of Promoting a Single Solution

Dudley-Marling and Dudley-Marling (2015) adduce the detracking at TPS and Railside as exemplary while neglecting to mention the systems, funding, and support required to facilitate such reform. In both cases, successful detracking coincided with other supports and interventions such as counseling services, expenditure per student above the state mean, increase in instructional minutes, a high-quality and consistent staff, small class sizes, a common vision shared by the faculty, and mandatory tutoring. Detracking may be a piece of the puzzle, but it must be accompanied by other reforms. Moreover, if we believe that lack of access to prenatal and early childhood care (Dudley-Marling & Dudley-Marling, 2015), and adverse childhood experiences (Hughes & Tucker, 2018) disproportionately impact students of poverty, we must acknowledge disparity exists amongst the social stratification of socioeconomic statuses and address those disparities accordingly. To promulgate detracking as a feasible reform in closing the achievement gap, without acknowledging the systemic changes required to implement that reform, sets teachers and students up for failure. To paraphrase Adichie (2009), the danger of presenting a single solution is that it robs teachers of their dignity.

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About the Author

Russell Helmstedter is an alumnus of CSUCI through and through. After receiving a B.S. in Mathematics with an emphasis in Education, he went on to earn a Single Subject Teaching Credential in Mathematics. Furthermore, he is currently pursuing a Master's Degree in Curriculum and Instruction, also at CSUCI. He has been a public school teacher for seven years. In the classroom, his passion is creating or presenting problems and scenarios that pique student curiosity and help students develop reasoning.

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