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Spencer C. Weiler

Susan Walker

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# DESEGREGATING RESEGREGATION EFFORTS: PROVIDING ALL STUDENTS OPPORTUNITIES TO EXCEL IN ADVANCED MATHEMATICS COURSES

*Spencer C. Weiler\* and Susan Walker\*\**

## I. INTRODUCTION

In 1954, Chief Justice Warren penned the following question and answer as a part of the landmark *Brown v. Board of Education of Topeka*<sup>1</sup> ruling: “Does segregation of children in public schools solely on the basis of race, even though the physical facilities and other ‘tangible’ factors may be equal, deprive the children of the minority group of equal educational opportunities? We believe it does.”<sup>2</sup> With the *Brown* ruling, the Supreme Court effectively ended *de jure* segregation. However, *Brown* failed to adequately address the issue of *de facto* segregation and its overall influence was limited by subsequent Supreme Court rulings that effectively excused school districts from having to address this issue. As a result, many scholars have argued that America is actually more segregated in the 21<sup>st</sup> century than it was in the 1970s, before busing was introduced.<sup>3</sup>

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\* Ph.D., Assistant Professor, Educational Leadership and Policy Studies, University of Northern Colorado.

\*\* Doctoral Student, Educational Leadership and Policy Studies, University of Northern Colorado.

1. *Brown v. Bd. of Educ. of Topeka (Brown)* 347 U.S. 483 (1954)..

2. *Id.* at 493.

3. GARY ORFIELD, *SCHOOLS MORE SEPARATE: CONSEQUENCES OF A DECADE OF RESEGREGATION* 34 (Harvard University 2001); Erwin Chemerinsky, *The Segregation and Resegregation of American Public Education: The Court's Role*, in *SCHOOL RESEGREGATION: MUST THE SOUTH TURN BACK?* 30 ( John Charles Boger & Gary Orfield eds., University of North Carolina Press 2005); Sean F. Reardon & John T. Yun, *Integrating Neighborhoods, Segregating Schools: The Retreat from School Desegregation in the South, 1990 – 2000*, in *SCHOOL RESEGREGATION: MUST THE SOUTH TURN BACK?* 52 (John Charles Boger & Gary Orfield eds., University of North Carolina Press 2005).

Resegregation manifests itself in inter-school district disparities, intra-school district segregation, and ability-based tracking within schools. Although each type of resegregation will be discussed in this article, the latter is of primary interest. On the surface, grouping students based on ability appears to be sound pedagogy that ensures all students receive appropriate instruction. However, “ability-based tracking has racially resegregated youths within the same school system.”<sup>4</sup> As a result of ability-based tracking, schools that appear desegregated, or even integrated, on the surface, are extremely segregated when the demographics of students in either advanced or remedial classes are compared to that of the school’s overall student population.<sup>5</sup> The purpose of this article is to review the historical and legal nuances associated with desegregation and resegregation and to highlight the efforts of one educator who successfully created opportunities for all students in advanced mathematics courses.

This article is divided into seven sections. Section I introduces the paper. Section II reviews the *Brown* ruling and the subsequent desegregation efforts. Section III reviews court cases, in an effort to illustrate the current plight of desegregation efforts and possible resegregation of America’s schools, and documents the barriers to desegregation that ultimately resulted in limiting the overall influence of the *Brown* ruling related to integration.<sup>6</sup> Section IV explores inter- and intra-school district resegregation. Section V details the impact of resegregation within a school building. Section VI presents a case study that details the efforts of one teacher to provide all students in a diverse high school in northern Colorado with greater access to advanced mathematics classes. The results of this teacher’s efforts are presented to illustrate that the process of desegregation might become more effective if the issue was taken out of the courtroom and brought back to the classroom. Finally, Section VII discusses the implications of the case study for educators and “equal educational

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4. Angelia Dickens, *Revisiting Brown v. Board of Education: How Tracking Has Resegregated America’s Public Schools*, 29 COLUM. J.L. & SOC. PROBS. 469, 470 (1996).

5. PAUL STREET, *SEGREGATED SCHOOLS: EDUCATIONAL APARTHEID IN POST-CIVIL RIGHTS AMERICA* 17–18 (Routledge 2005).

6. *Brown*’s influence has transcended desegregation and infiltrated many aspects of school law including school finance litigation and rights of students with disabilities.

opportunit[y]”<sup>7</sup> advocates and provides a conclusion.

## II. THE *BROWN* RULING AND DESEGREGATION

In 1896, the Supreme Court handed down its decision in *Plessy v. Ferguson*<sup>8</sup>—a decision that effectively legalized discrimination based on a person’s skin color and established the “separate but equal” standard. The process of reversing that ruling took nearly a half-century, culminating with the *Brown* decision.<sup>9</sup> The *Brown* case centered on the practice of segregation and asked the Supreme Court to examine the concept of “separate but equal.”<sup>10</sup> This section provides a brief summary of *Brown*, offering the necessary context for understanding the subsequent desegregation and resegregation efforts in public education.

In a unanimous decision, the Supreme Court ruled that the practice of separating races inherently denied minority students the opportunity to be equal.<sup>11</sup> One of the more significant statements from *Brown* related to the issue of desegregation came in Chief Justice Warren’s opinion: “it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made available to all on equal terms.”<sup>12</sup> The Court determined that a school system that segregated students based on race could not ensure the opportunity for an education to all.

Segregation in public education has been defined as “unevenness in patterns of enrollment” and “the extent to which these patterns are racially unbalanced.”<sup>13</sup> The *Brown*

7. *Brown*, 347 U.S. at 493.

8. *Plessy v. Ferguson*, 163 U.S. 537 (1896).

9. Lynn T. Brown, *Brown v. Board of Education and School Desegregation: An Analysis of Selected Litigation 24–74* (April 2004) (unpublished dissertation at Virginia Polytechnic Institute and State University providing a concise summary of the legal efforts leading up to *Brown*).

10. *Brown*, 347 U.S. at 488.

11. The actual wording from the Warren opinion read, “Does segregation of children in public schools solely on the basis of race, even though the physical facilities and other ‘tangible’ factors may be equal, deprive the children of the minority group of equal educational opportunities? We believe that it does.” *Brown*, 347 U.S. at 493.

12. *Id.*

13. Charles T. Clotfelter, Helen F. Ladd & Jacob L. Vigdor, *Classroom-Level Segregation and Resegregation in North Carolina*, in *SCHOOL RESEGREGATION: MUST*

ruling empowered (or required) public school districts to begin the process of examining student demographic patterns and make the necessary changes to ensure greater racial balance.<sup>14</sup> The examination process was originally left up to the local school districts,<sup>15</sup> but with the *Brown v. Board of Education of Topeka (Brown II)* ruling, school districts were required to desegregate “with all deliberate speed.”<sup>16</sup>

The *Brown* ruling introduced two significant ideas that continue to affect education. First, the opinion established the idea of “equal educational opportunities” for all students.<sup>17</sup> Second, it dealt with the “opportunity of an education” from the Warren opinion.<sup>18</sup> These two statements effectively turned education from a privilege to a right for all students. As a right guaranteed by most state constitutions,<sup>19</sup> education enjoyed greater constitutional protection with the *Brown* ruling.

The *Brown* ruling has rightly been hailed as the most significant Supreme Court decision in the 20th century. However, the ruling did not eliminate segregation practices overnight. “We often celebrate [*Brown*] as if it were a permanent reversal of a history of segregation and inequality.”<sup>20</sup> The reality is that efforts to desegregate America’s public schools faced overt and covert resistance. The full realization of the *Brown* ideal—to completely integrate schools across America and to provide all students with an equal educational opportunity—requires a political dedication that spans “several generations.”<sup>21</sup>

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THE SOUTH TURN BACK? 73 (John Charles Boger & Gary Orfield eds., University of North Carolina Press 2005).

14. *Brown v. Bd. of Educ. of Topeka (Brown II)*, 349 U.S. 294, 299 (1955).

15. *Id.* at 301.

16. *Id.*

17. *Brown*, 347 U.S. at 493.

18. *Id.*

19. See e.g., Peter Enrich, *Leaving Equality Behind: New Directions in School Finance Reform*, 48 VAND. L. REV. 101, 108. See also William Thro, *To Render Them Safe: The Analysis of State Constitutional Provisions in Public School Finance Reform*, 75 VA. L. REV. 1639.

20. Gary Orfield et al., *Deepening Segregation in American Public Schools: A Special Report from the Harvard Project on School Desegregation*, EQUITY & EXCELLENCE IN EDUC. 5 (1997).

21. Denise C. Morgan, *The Less Polite Questions: Race, Place, Poverty and Public Education*, 1998 ANN. SURV. AM. L. 267, 274 (1998).

## III. THE ENDING OF DESEGREGATION EFFORTS

The transition from the Court's ruling in *Brown*, which rendered desegregation unconstitutional to practice in public education across America, proved difficult. How was America to ensure that all students had the same educational opportunities? The first attempts focused on desegregation. However, significant Supreme Court rulings limited desegregation efforts.<sup>22</sup> In this section, the struggles to desegregate public schools and the eventual limitations placed on desegregation efforts are examined in greater detail.

A. *Brown v. Board of Education of Topeka (Brown II) (1955)*

In his book about the Civil Rights Movement and education changes, Meyer Weinberg wrote that, "desegregation objectives were hobbled by crafty stratagems and endless delays."<sup>23</sup> For this reason, in 1955, a year after the first *Brown* ruling, the Supreme Court was asked to determine the appropriate course of action for local school districts attempting to address the desegregation issue.<sup>24</sup> At the core of *Brown II* was how quickly school districts were able to implement a desegregation plan.<sup>25</sup> The opinion of the Court, again penned by Chief Justice Warren, encouraged school districts to give consideration to "the public interest" and to the "personal interest[s] of the plaintiffs."<sup>26</sup> The Supreme Court was effectively asking the impossible of local school districts—the public interest (the white majority at the time) and the interest of the plaintiffs (the African-American minorities) were often in opposition to one another.

The *Brown II* ruling also required school districts to implement desegregation plans "with all deliberate speed."<sup>27</sup>

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22. *Milliken v. Bradley*, 418 U.S. 717 (1974); *Keyes v. Sch. Dist. No. 1*, 413 U.S. 189 (1973); *Bd. of Educ. of Okla. City Pub. Sch. Dist. No. 89 v. Dowell*, 498 U.S. 237 (1991); *Freeman v. Pitts*, 503 U.S. 467 (1992). *Milliken* and *Keyes* restricted the scope of actions school districts could take to desegregate. *Dowell* and *Freeman* released school districts from their court ordered desegregation plans once a unitary system is established.

23. Meyer Weinberg, *The Civil Rights Movement and Educational Change, in THE EDUCATION OF AFRICAN-AMERICANS 4* (Charles V. Willie, Antoine M. Garibaldi & Wornie L. Reed eds., Auburn House 1991).

24. *Brown II*, 349 U.S. at 298.

25. *Id.* at 300.

26. *Id.*

27. *Id.*

However, there was little substance behind the “deliberate speed” statement and minority families were left relying on the benevolence of local school districts. If school districts failed to recognize the value of integrated schools, they were given permission by the United States Supreme Court to mire themselves in stratagems and endless delays, since “all deliberate speed” allowed local officials leeway to determine the appropriate timeline for implementing desegregation plans.

In a study about classroom-level segregation in North Carolina, authors Clotfelter, Ladd, and Vigdor astutely pointed out that “[t]otally ignoring white parents’ desire to limit exposure might result in ‘white flight’ to other districts or private school[s].”<sup>28</sup> In other words, failure to consider the desires of some white parents while desegregating could have resulted in white families moving out of the school district, which would impede desegregation efforts. In the *Brown II* ruling, the Supreme Court was cognizant of this fact and attempted to draft a ruling that would encourage school districts to proceed judiciously. However, the ruling effectively legalized delay tactics by individuals who did not want to see schools desegregated.

### *B. Keyes v. School District No. 1 (1973)*

The next impediment to desegregation focused on the difference between *de jure* and *de facto* segregation. *De jure* segregation consists of overt efforts to keep races separate, such as maintaining different school systems for different races.<sup>29</sup> *Brown* ended the practice of *de jure* segregation.<sup>30</sup> *De facto* segregation, on the other hand, is the result of natural choices.<sup>31</sup> An example of *de facto* segregation includes private housing patterns.<sup>32</sup> The next question related to the desegregation effort concerned the scope of *Brown*. Did *Brown* render *de facto* segregation unconstitutional as well?

In *Keyes v. School District No. 1*, the question before the United States Supreme Court was whether school districts were responsible for implementing a desegregation plan if the

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28. Clotfelter, Ladd & Vigdor, *supra* note 13, at 78–79.

29. KERN ALEXANDER & M. DAVID ALEXANDER, *AMERICAN PUBLIC SCHOOL LAW* 905 (Thomson West 6th ed. 2005).

30. *Brown*, 347 U.S. at 495.

31. ALEXANDER & ALEXANDER, *supra* note 29, at 905.

32. *Id.*

racial imbalance was due to natural housing patterns.<sup>33</sup> If the school district did not purposefully segregate students based on race, was it then responsible for addressing racial imbalance issues? The Supreme Court determined in *Keyes* that, if the school district did not purposefully attempt to segregate races, then the natural occurrence of segregation—*de facto* segregation—was permissible and did not require a desegregation plan.<sup>34</sup>

The *Keyes* ruling limited the influence of *Brown* to *de jure* segregation. If plaintiffs could not prove intentional efforts by the school district to separate the races, then school districts were not required to implement a desegregation plan. The *Keyes* ruling allowed residential housing patterns to significantly limit the integration of public schools.

#### *C. Milliken v. Bradley (1974)*

The next limitation to desegregation efforts came in *Milliken v. Bradley*.<sup>35</sup> This case asked the Supreme Court to determine if desegregation plans required inter-school district busing to provide multiple school districts with the capability to desegregate.<sup>36</sup> Detroit schools lacked sufficient white students to implement a desegregation plan.<sup>37</sup> The surrounding suburban school districts lacked sufficient African-American students to desegregate.<sup>38</sup> The original desegregation plan was to bus students from the city and the suburbs to create more integrated schools throughout the greater Detroit area.<sup>39</sup>

The plan to bus students was challenged in federal court. The two lower courts to first hear the *Milliken* arguments ruled that Detroit could not desegregate without inter-school district busing.<sup>40</sup> The Supreme Court examined the facts differently than the lower courts and, as a result, offered a different opinion on the use of busing to desegregate. The Supreme Court ruled that the use of inter-school district busing to desegregate could be an improper remedy if there was no

33. *Keyes*, 413 U.S. at 207.

34. *Id.* at 203–14.

35. *Milliken*, 418 U.S. at 717.

36. *Id.* at 744–45.

37. *Id.* at 735.

38. *Id.*

39. *Id.* at 722–23.

40. *Id.* at 729–36.

evidence that the original school district boundaries were racially motivated.<sup>41</sup> The *Milliken* ruling effectively rendered urban school districts with high minority student populations completely isolated and incapable of desegregating.

#### *D. Unitary School System*

As a result of the *Keyes* and *Milliken* rulings, proponents of desegregated schools had a greater initial burden of proof to demonstrate intentional efforts to segregate races within a school district. However, once intentional segregation efforts were established, the school districts were subjected to court-ordered desegregation plans. These desegregation plans remained in place until the court that issued the order determined the school district had made sufficient progress toward integration.

School districts that were required to develop and follow desegregation plans were considered to have “maintained a racially segregated ‘dual’ school system”<sup>42</sup> prior to the court order. The purpose of the court-ordered desegregation plan was to turn the school district from a dual system to a unitary one, or a system of schools that “no longer discriminates between school children on the basis of race.”<sup>43</sup> The next challenge to desegregation efforts came in determining when a school district had achieved unitary status.

In *Board of Education of Oklahoma v. Dowell*, the Supreme Court was asked to determine the obligation of a school district that had been on a desegregation plan once it was released from that plan.<sup>44</sup> The Oklahoma City School District had been ruled unitary by a federal court in 1977 with the following statement, “the Court [ ] concluded that [the Finger Plan] worked and that substantial compliance with the constitutional requirements has been achieved.”<sup>45</sup> However, after being granted unitary status, the Oklahoma City School Board opted to return to neighborhood schools, which were segregated.<sup>46</sup> As a result, the gains made under the desegregation plan were

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41. *Id.* at 744–45.

42. ALEXANDER & ALEXANDER, *supra* note 29, at 913.

43. *Pitts v. Freeman*, 887 F.2d 1438, 1445 (citing *Columbus Bd. of Educ. v. Penick*, 443 U.S. 449 (1979)).

44. *Bd. of Educ. v. Dowell*, 498 U.S. 237, 244–45 (1991).

45. *Id.* at 241 (quoting No. Civ-9452 (W.D. Okla., Jan. 18, 1977)).

46. *Id.* at 242.

erased. The Supreme Court ruled that the unitary status “released the district from its obligation to maintain desegregation.”<sup>47</sup> In other words, once school districts had achieved unitary status, they were no longer required to adhere to the ideals of *Brown* and could revert back to a dual system of schools.

In *Freeman v. Pitts* the Supreme Court placed additional restrictions on desegregation plans.<sup>48</sup> The Court determined that it was constitutional to allow a school district to be released from a portion of its desegregation plan, even if the entire plan had not been achieved.<sup>49</sup> Research indicates that desegregated schools benefit all students in multiple aspects of child development and the Supreme Court, with the rulings discussed in this section, effectively limited the reaches of *Brown* and school desegregation.<sup>50</sup>

In her article on the resegregation of public education, Chemerinsky observed that America is committed to the notion of neighborhood schools.<sup>51</sup> However, with neighborhood schools come segregated schools.<sup>52</sup> Kozol, along with many other scholars, observed that the American public school system is becoming more segregated over the past fifteen years: “Schools that were already deeply segregated 25 or 30 years ago . . . are no less segregated now, while thousands of other schools that had been integrated either voluntarily or by the force of law have since been rapidly resegregating both in northern districts and in broad expanses of the south.”<sup>53</sup>

The problem with the current resegregation trend is that it negatively impacts all students—”[s]egregated schools produce

47. GARY ORFIELD & SUSAN E. EATON, *DISMANTLING DESEGREGATION: THE QUIET REVERSAL OF BROWN V. BOARD OF EDUCATION* xxiii (The New Press 1996).

48. *Freeman*, 503 U.S. at 490.

49. *Id.* at 485–91.

50. Morgan, *supra* note 21, at 272–73; ORFIELD & EATON, *supra* note 47, at 5.

51. Chemerinsky, *supra* note 3, at 30.

52. *Id.*

53. Jonathan Kozol, *Confections of Apartheid: A Stick-and-Carrot Pedagogy for the Children of Our Inner-City Poor*, 87 PHI DELTA KAPPAN 2654 (2005); see also GARY ORFIELD & CHUNGMEI LEE, *BROWN AT 50: KING’S DREAM OR PLESSY’S NIGHTMARE?* 20 (The Civil Rights Project), available at [www.civilrightsproject.harvard.edu](http://www.civilrightsproject.harvard.edu) (last visited September 12, 2008); Reardon & Yun, *supra* note 3, at 52; Lawrence Hardy, *A New Minority 50 Years After “Brown”*, 191 AM. SCH. BOARD J. 42 (2004); Gary Orfield, Erica D. Frankenberg & Chungmei Lee, *The Resurgence of School Segregation*, EDUCATIONAL LEADERSHIP 16, (Dec. 2002/Jan. 2003); ORFIELD, *SCHOOLS MORE SEPARATE: CONSEQUENCES OF A DECADE OF RESEGREGATION*, *supra* note 3, at 34.

lower student achievement.”<sup>54</sup> The social and economic impacts of lower student achievement negatively influence all parts of society. Ironically, Dr. Martin Luther King uttered the following statement in 1956, which still accurately portrays the difficulties associated with completely integrating America’s public education: “we must face the tragic fact that we are far from the promised land . . . [H]istory has proven that social systems have a great last minute breathing power and the guardians of the status quo are always on hand with their oxygen tents to keep the old order alive.”<sup>55</sup>

#### IV. INTER- AND INTRA-SCHOOL DISTRICT RESEGREGATION

Resegregation is the common term for school districts with student demographics that are moving away from integration, after having previously worked on desegregation, but are now becoming more segregated.<sup>56</sup> Resegregation can occur between school districts (inter-district), between schools in the same district (intra-district), and within the same school. This section discusses inter- and intra-district resegregation.

Orfield referred to the resegregation that has occurred in America over the last 20 years as “virtually total apartheid.”<sup>57</sup> For example, more than half of all the African-American students in American public schools attend schools that consist of over 90% non-white student bodies.<sup>58</sup> This disproportionate representation of African-American students in certain schools is a result of large urban centers that are “epicenters for segregation,”<sup>59</sup> since it is impossible to desegregate a school district consisting of significant minority student populations based on current court law. Of the ten largest school districts in America, nine are composed of a majority of minority students.<sup>60</sup> Another example of the alarming distribution of

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54. Gary Orfield, Erica D. Frankenberg, and Chugmei Lee, *The Resurgence of School Segregation*, EDUC. LEADERSHIP 16, 19 (Dec. 2002/Jan. 2003).

55. Martin Luther King, Jr., Speech at the National Committee for Rural Schools: Desegregation and the Future (Dec. 15, 1956).

56. Clotfelter, Ladd & Vigdor, *supra* note 13, at 70 (defining resegregation as “an increase in racial disparities between schools”).

57. ORFIELD, *supra* note 3, at 30.

58. Hardy, *supra* note 53, at 25.

59. ORFIELD & LEE, *supra* note 53, at 2.

60. Erica Frankenberg et al., A Multiracial Society with Segregated Schools: Are We Losing the Dream? (2003) (describing the “patterns of racial enrollment and segregation in American public schools at the national, regional, state, and district

minority students in America's schools is illustrated by the fact that from 1996 to 1997, 70% of African-American students and 75% of Hispanic students enrolled in schools with 50-100% minority representation in the entire school population.<sup>61</sup>

A multitude of problems are associated with large, urban school districts<sup>62</sup> and these problems end up creating two types of costs. The first type of cost, a financial one, places additional monetary burdens on urban school districts as they struggle to meet various expectations, including increased demands in the areas of special education, limited English proficiency, security, remediation, and intervention efforts.<sup>63</sup> Additional costs are a direct result of the unique needs of large, less affluent student populations. A second cost, a performance or outcome one, stems from the fact that "peers generally exert a strong influence on student performance and that students from lower socioeconomic backgrounds in particular suffer from being surrounded solely or primarily by students from similarly impoverished backgrounds."<sup>64</sup> The opportunity for academic success is restricted when minority students attend school in large, urban school districts.

The pervasiveness of resegregation is not, however, limited to inter-district issues. As a result of housing patterns, intra-district resegregation can also occur and negatively impact student achievement. It is conceivable that a school district could have an overall distribution of students that mirrors the community's racial balance. On the surface, it would appear that the school district is desegregated; however, if all the white students attend one school and the minority students another, then the school district is actually quite far from becoming integrated. As was discussed earlier, the Supreme Court has not demonstrated a willingness to tackle the issue of *de facto* segregation.<sup>65</sup> Instead, the Court has argued that, if

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levels for students of all racial groups"), available at <http://www.civilrightsproject.harvard.edu/research/resseg03/reseregation03.php> (as cited in Michael Heise, *Brown v. Board of Education*, Footnote 11, and *Multidisciplinarity*, 90 CORNELL L. REV. 279, 285 (2005)).

61. *Id.* at 284.

62. ORFIELD, *supra* note 3, at 22.

63. Robert E. Slavin, *How Can Funding Equity Ensure Enhanced Achievement?* 24(4) J. EDUC. FIN. 519-24 (1999).

64. James E. Ryan, *Schools, Race, and Money*, 109 YALE L.J. 249, 257 (1999).

65. *Keyes*, 413 U.S. at 223 (Powell, J., concurring in part and dissenting in part); *Milliken*, 418 U.S. at 744; *Dowell*, 498 U.S. at 237; *Freeman*, 503 U.S. at 467.

the segregation occurs naturally, then it does not violate the *Brown* ruling. According to Orfield, Frankenberg, and Lee, there are three major contributors to intra-district resegregation: residential housing patterns, school choice, and court actions.<sup>66</sup>

The significance of all types of resegregation is that separating races strongly correlates with the quality of education students receive and that minority-dominated schools offer students unequal and inferior educational opportunities.<sup>67</sup> In his article studying the gap in mathematics and science achievement, Ikpa found that during the same time that schools in America began to resegregate at an accelerated pace, the achievement gap between African-American and white students grew.<sup>68</sup> The negative impact of segregation transcends student achievement. Segregation attacks “our democratic structure, reifying racial subordination in employment, health, wealth access, and political participation.”<sup>69</sup> To allow school districts to become more segregated is tantamount to condemning students to an inferior education for capricious reasons including skin color, zip code, and socioeconomics.

## V. RESEGREGATION WITHIN SCHOOLS

The civil rights movement attempted to improve the quality of education and the educational opportunities for African-American students.<sup>70</sup> The *Brown* ruling appeared to prove the realization of that goal. Over the years, however, Supreme Court rulings eroded the overall influence of *Brown* to the point that school districts and schools resegregated. This section discusses the process of resegregating schools, as opposed to school districts, after the *Brown* ruling.

On the surface, a school that has a racial balance that aligns with the community’s demographic make-up appears to

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66. Orfield, Frankenberg, & Lee, *supra* note 53, at 18.

67. ORFIELD & LEE, *supra* note 53, at 19; *see also* Chemerinsky, *supra* note 3, at 30.

68. V. W. Ikpa, *The Mathematics and Science Achievement Gap Between Resegregated and Desegregated Schools*, EDUC. 223 (Winter 2003).

69. John A. Powell, *A New Theory of Integrated Education: True Integration*, in SCHOOL RESEGREGATION: MUST THE SOUTH TURN BACK? 281, 283 (John Charles Boger & Gary Orfield eds., The University of North Carolina Press 2005).

70. Weinberg, *supra* note 23, at 3.

be an integrated school. Racial segregation, however, “persists inside nominally integrated schools”<sup>71</sup> when (1) the social patterns of racially different students are examined, and (2) when class compositions are scrutinized. To desegregate a school does not ensure that children receive an integrated educational experience.<sup>72</sup> Even in racially integrated schools “[b]lack students were less likely to be assigned to advanced or honors classes and more likely to be assigned to special education tracks.”<sup>73</sup>

Tracking based on ability proved to be an effective tool at separating races within schools. Dickens argued that tracking was reintroduced to public education in response to the order that schools must desegregate.<sup>74</sup> The idea behind ability tracking is to put all the “smart” students together so they learn at a pace appropriate to their intellect. It turned out that a majority of the white students were placed in the advanced and honors classes while most of the African-American students were placed in the remedial and special education classes.<sup>75</sup> The danger of ability grouping is best summarized in the following statement: “[a]lthough ability grouping does not hamper access to an education, it does deny equal educational opportunit[ies].”<sup>76</sup>

Providing students a segregated learning experience negatively impacts student achievement. Ability grouping could become a tool for resegregating an otherwise integrated school, unless educators are thoughtful about their students. If educators use ability grouping, they must align the composition of the advanced and honor classes to the overall school demographics. If the two are imbalanced, then educators must begin asking questions such as why minority students are underrepresented in advanced and honor classes and what the school can do to provide them with greater access to those courses. Failure to ask such questions would result in allowing students to receive an inferior education due to race. That is not acceptable.<sup>77</sup>

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71. STREET, *supra* note 5, at 17.

72. Clotfelter, Ladd, and Vigdor, *supra* note 13, 70.

73. CHARLES T. CLOTFELTER, *AFTER BROWN: THE RISE AND RETREAT OF SCHOOL DESEGREGATION* 137 (Princeton University Press 2004).

74. Dickens, *supra* note 4, at 472.

75. *Id.* at 472-505.

76. *Id.* at 479.

77. *Id.* at 470.

Public schools in America have been disaggregating data to ensure that no child fails to learn. Instead of exclusively focusing this data analysis on standardized criterion-referenced scores, educators should also examine the educational opportunities all students receive within their buildings. “[P]ublic schools should provide the mobility that is essential to prevent democratic society from ossifying into a hierarchical caste system marked by differences, such as race, ethnicity, and religion, which are passed from generation to generation.”<sup>78</sup>

#### VI. PROVIDING ALL STUDENTS ACCESS TO ADVANCED MATH CLASSES

Two years ago, an educator teaching in a high minority school began to examine student demographics in her advanced math courses and asked why Latino<sup>79</sup> students were underrepresented. The following is a case study presentation of this educator’s efforts to combat resegregation by providing all students at a high school in northern Colorado an opportunity to enroll in advanced math courses that would prepare them for college.

A few years ago in a northern Colorado school district, Mrs. Richard,<sup>80</sup> a mathematics teacher, participated in a cohort class on diversity with fellow teachers throughout her school district. While attending the emotional and enlightening evening sessions, Latino classmates opened Mrs. Richard’s eyes to problematic racial issues within the school district for both staff and students. Before beginning the diversity course, Mrs. Richard was completely unaware of, and immune to, the problems faced by many of her professional Latino colleagues, as well as those issues faced by Latino students. Anger and tears from the Latino participants became a common occurrence as the cohort class progressed. Understanding the concerns and, more importantly, finding solutions to the issues of racism in the district, became the Mrs. Richard’s focus. As the class continued over the course of the semester, she grew

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78. Morgan, *supra* note 21, at 277.

79. The term Latino/Latina contains many possible meanings. For the purpose of this paper Latino/Latina refers to people whose families (immediate or extended) originated from a Spanish-speaking nation in Central or South America.

80. Mrs. Richard is a pseudonym.

more frustrated, as there seemed to be a great deal of complaining, but few solutions. After the course was over, the Latino participants felt empowered; they were able to express deep concerns that they had experienced for a long time. Mrs. Richard felt frustrated. Although problems and concerns were discussed in great detail, no solutions were proposed.

As a classroom mathematics teacher, Mrs. Richard's questions revolved around the academic performance of students in the mathematics classroom. Having taught every possible mathematics course in the district, Mrs. Richard had experience with all types of students—from the low-level, special needs student to those gifted in mathematics. For the most part, mathematics courses were homogenous groupings of students, with Latino students in lower math classes and white students in advanced courses. If her school system was equitable, why did the lack of diversity exist in remedial and advanced mathematics courses? Mrs. Richard's school in northern Colorado has a 62% Latino population. Statistically speaking, math classes should reflect that same demographic breakdown. In reality, few Latino students enrolled in upper-level math classes; more than 70% of the Latino population enrolled in remedial mathematics courses. In addition, data for the 2007–2008 school year indicated that less than 6% of the students in Advanced Placement (AP) Calculus were Latino (one Latino for every seventeen Caucasian). Similarly, less than 10% of the 80 students enrolled in Mrs. Richard's AP statistics class were Latinos.

In 2006, while researching schools that had successfully implemented non-traditional mathematics programs, Mrs. Richard found a private school in Texas that had frontloaded<sup>81</sup> student schedules with double math classes in order to accelerate pathways to advanced mathematics courses. This Texas school found that students who successfully passed advanced mathematics courses sooner were more successful in science courses. Although her school was not a private school, the idea of providing access for all students to take more mathematics earlier in their high school made sense.

Too many of the students in Mrs. Richard's school begin their high school career hopelessly behind in mathematics and

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81. Frontloading, by definition, means enrolling students in more classes within a certain discipline and the classes are taken earlier in the educational process.

are consequently blocked from access to advanced and honors courses. At the start of the 2008-2009 school year, 70% of the school's 325 incoming freshmen were behind in mathematics.<sup>82</sup> Similar statistics were reported for the five previous freshman classes. These struggling freshmen were all placed in remedial mathematics courses; the majority of these remedial students were Latino.<sup>83</sup> Without intervention and systemic support, students beginning their high school career in a remedial math class never have the opportunity to take mathematics courses that prepare them for post-secondary education. Essentially, at a very young age, the students in remedial math courses are already much less likely to be prepared to attend post-secondary schooling.

Mrs. Richard realized that, in order to break this cycle, Latino students needed to be offered the possibility of acceleration in mathematics. Her hypothesis was that, if Latino students were given the opportunity, more would choose an accelerated mathematics pathway. In a meeting with her principal, she proposed to offer an accelerated summer program to all students in remedial mathematics classes.<sup>84</sup> Her plan was to personally invite students who were not currently in an accelerated pathway to take a summer geometry course. For high school students, successfully passing geometry early is a key to accessing upper-level mathematics coursework. Additionally, statistically speaking, the earlier students complete geometry, the higher they will perform on state assessments and college admissions exams, such as the ACT and the SAT. Unlike summer school for those students who need to retake a failed course, this opportunity would be offered at no cost to students. Initially, Mrs. Richard's principal was skeptical. He was concerned that few students would participate in a summer math program, but he agreed to let Mrs. Richard present the idea to students and, if enough signed up, the program would be funded.

Mrs. Richard presented the idea to every regular track

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82. Forty percent of the freshman class demonstrate a fourth-grade proficiency for math.

83. The actual percentage of Latino students who are underprepared for math is very close to eighty percent.

84. At the beginning of this case study, 2006-2007 school year, a male worked as the principal of this northern Colorado high school. After that year, the male was replaced by a female principal.

math classroom. The excitement in the rooms was unexpected. Students had many questions and were obviously interested in the idea. Part of that excitement was fueled by another opportunity. In addition to taking the summer course, students who successfully completed the summer geometry course would be offered a unique schedule the following school year. These students could enroll in a special combination course consisting of Algebra II, Trigonometry, and Pre Calculus. This double math course<sup>85</sup> would provide a fast track to AP coursework for students who, previously, were not even eligible to take such classes. Frontloading this level of rigorous mathematics early opens the door to a myriad of opportunities for students. Higher scores on college entrance exams, advanced science classes, and scholarship opportunities are just a few of the possible benefits for students choosing this pathway.

Mrs. Richard felt like some students at her high school were missing out on these types of advanced coursework opportunities because they lacked a sense of belonging. A middle school study of Latino students who were enrolled in AP coursework and given AP credit in the Spanish language reported an increased sense of belonging and tendency to choose good students as friends during a developmental period when peer choice can powerfully influence academic achievement and school success.<sup>86</sup> Mrs. Richard felt that part of the intimidation of taking AP classes for Latino students was the lack of Latino participation. During the spring of 2006, she invited a few promising Latino students to observe an AP Calculus course in an attempt to recruit them for the following year. Though academically prepared, the Latino students decided against enrolling in the rigorous course because when they visited the classroom, no students looked like them. Mrs. Richard believed that offering Latino students a way to accelerate together with their peers would provide a more appealing environment.

According to a study on identifying and serving diverse gifted students, minority and economically disadvantaged students are underrepresented in honors level and AP

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85. Algebra II is a full-year course and Trigonometry/PreCalculus is another full-year course. Trig/Pre Calc is considered to be one course, each a half of a semester. For this reason, the combination of three courses into one is called a double math class.

86. Todd Kettler, Alexandra Shiu & Susan K. Johnson, *AP as an Intervention for Middle School Hispanic Students*, GIFTED CHILD TODAY, Winter 2006, at 39, 40.

coursework in integrated schools and in minority-dominant schools across the nation.<sup>87</sup> These authors point out that, despite a long-standing awareness of minority and economically-disadvantaged student under-representation in honors-level coursework, the problem remained.<sup>88</sup>

To alleviate student concerns with the summer math program, Mrs. Richards also knocked down the cost barrier. With 63% of the students in her school qualifying for free and reduced lunch, Mrs. Richard felt that another profound inequity of access to advanced coursework for Latino students is cost. Advanced mathematics courses require expensive calculators that many families cannot afford. Mrs. Richard received approval to have calculators available for check out to students who could not afford to purchase one. As was mentioned above, the new geometry summer school program was also free of charge to students.

To recruit students into the program, two separate information nights were held at the school for interested students and their parents. Flyers were also sent to all eighth- and ninth-grade algebra students. In addition, Mrs. Richard visited the middle school that is the main feeder to the high school to recruit interested participants. Sixteen students initially signed up for the summer program. They were all mailed a letter stating the schedule for the course, the location of the course, the names and telephone numbers of the two teachers, and the fact that all supplies would be provided.

At the start of the course, each student checked out a book and was provided with a new notebook, paper, pencils, a compass, a protractor, and a ruler. Students were contacted by phone several days before the class began to encourage participation and to answer individual questions and concerns.

When the summer class began, all sixteen students were ready to take an entire year of geometry in six weeks. Most encouraging was the demographics of the summer class. Of the sixteen students, 50% were female and, best of all, 50% were Latino. The lesson from these numbers is that, when schools allow students to self-select, the overall diversity of the class increases. The demographics of advanced programs more

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87. Kriste L. Speirs Neumeister et al., *Fourth-grade Teachers' Perceptions of Giftedness: Implications for Identifying and Serving Diverse Gifted Students*, 30 J. EDUC. GIFTED 479, 479 (2007).

88. *Id.*

closely align with the school's demographics. Unfortunately, the school district could not afford to provide transportation for the summer program, eliminating the possibility of attendance for some Latino students.

The 2007 geometry summer class was a tremendous success. All sixteen students passed a full geometry course in six weeks (four hours a day, five days a week), with the majority earning As and Bs.<sup>89</sup> The course included the same chapter exams and district final exams given to students who take the year-long course. In addition to the academic success, friendships were formed that would provide students with the necessary peer support for the academic challenges associated with advanced mathematics coursework. Many teachers would not look forward to a summer school class, but the two teachers involved with the program enjoyed working with these enthusiastic students. The culminating celebration in Mrs. Richard's backyard included good food and Latino music enjoyed by all students.

Of the sixteen students in the summer geometry program, fourteen decided to take the accelerated Algebra II, Trigonometry, and Pre Calculus course for the 2007-2008 school year. One white male student moved out-of-state and one Latino male student decided to just enroll in Algebra II. Enrollment in the double mathematics class was also offered to any ninth- or tenth-grade student who had successfully completed geometry. Thirty-eight students elected to take the unique combination math class with the opportunity to accelerate.<sup>90</sup> Although the class was still predominately made up of white students, the demographics of the class improved since the Latino students represented 30% of the thirty-eight students.<sup>91</sup> All students were successful in the accelerated double mathematics class, with the majority earning As and Bs.<sup>92</sup>

Of the thirty-eight students that successfully completed the double math class, thirty-four enrolled in both AP Calculus and

89. Seven of the sixteen students earned an A grade, four earned a B, three earned a C, and two earned a D.

90. Of the thirty-eight students, ten were freshman and twenty-eight were sophomores.

91. Ten Latino students enrolled in the double mathematics course.

92. One Latina student had to drop the class at the semester due to attendance issues.

AP Statistics for the 2008-2009 school year. Of the students who completed the 2007 summer geometry class, twelve enrolled in both AP Calculus and AP Statistics for the 2008-2009 school year. The other two students enrolled in AP Statistics only. All thirty-four students enrolled in both AP Calculus and AP Statistics are also enrolled in advanced science courses such as chemistry, physics, and AP Physics. As a result of the first summer geometry class, Latino representation is increasing in both mathematics and science advanced courses.

Table 1: AP Calculus Enrollment

	2007–2008 School Year		2008–2009 School Year	
	Number	Percent	Number	Percent
White	17	94.5%	42	70%
Latino	1	5.5%	18	30%
Total Enrollment	18	100%	60	100%

Table 1 illustrates the overall impact of the summer geometry program on three significant aspects of AP Calculus demographics: the total enrollment in AP Calculus increased by 233% (eighteen students to sixty students in one school year), the increased Latino representation in AP Calculus (which grew from one student to eighteen in one school year), and the overall percentage of Latino students taking AP Calculus (increased from 5.5% to 30%).

An additional aspect of the accelerated double math program is leadership. Students in Mrs. Richard's program were encouraged to join clubs and other extra-curricular activities; all of the students in the program joined some type of extra-curricular school activity. For the first time in the history of the school, with a student body that consists of over 60% Latino, the National Honor Society club elected a Latino as its president for the 2008-2009 school year. Latino students are also joining the Student Council and other clubs in larger numbers. In addition to encouraging participation in extra-curricular activities, field trips to colleges and attendance in conferences are incorporated into the program to increase the students' knowledge of access to post-secondary opportunities. And recently, a school board member contacted several of Mrs. Richard's students from the summer program to write an

article about their success.

It is expected that this program's success will be repeated in subsequent years. Mrs. Richard's principal has enthusiastically agreed to continue both the summer geometry program and the accelerated double math class for the 2008-2009 school year. Mrs. Richard took several students from the summer geometry class to help recruit more students at the middle school and high school for the second summer geometry class, and these students who successfully completed AP Calculus in one year expressed tremendous pride to the possible new recruits in what they had accomplished in one year.<sup>93</sup> Mrs. Richard also offered two separate parent information nights and flyers were sent to algebra students in the eighth- and ninth-grades. The first year (summer 2007), only high-performing algebra students were recruited, while this second year (summer 2008) all ninth-grade students were offered the opportunity to accelerate.

Thirty-five students signed up for the second summer program. Although letters were sent home like the previous summer, personal phone calls were not made. Twenty-nine new students attended the first day of summer school (of the six that did not show up, four were Latino, and it was determined later that they could not find transportation). Of the twenty-nine enrolled for the second summer, twelve (41%) were Latino. It should be noted that if transportation were provided by the school district, Latino participation would again be near 50%.

The second accelerated geometry course was identical to the previous summer, except there were three teachers over the six-week period instead of two. Of the twenty-nine participants, five students (four of which were Latino) did not complete the program. Two Latino students came for several days and then had transportation difficulty, so they were forced to drop the program. The other three students were failing after three weeks and elected not to return for the last three weeks.<sup>94</sup> The twenty-four successful students earned eight As, seven Bs, three Cs, and six Ds.<sup>95</sup> Of those twenty-four students, twenty-three enrolled in Mrs. Richard's double mathematics program to learn Algebra II, Trigonometry, and Pre Calculus standards.

93. Normally, students enrolled in algebra as ninth-graders would never reach AP Calculus.

94. All three of these students were Latino.

95. Mean 80.2, standard deviation 12.4.

For the 2008-2009 school year, there are forty-four total students enrolled in the double mathematics class, eighteen of whom are Latino. After the first geometry summer course, the double mathematics class consisted of 27% Latino representation. After the second geometry summer class, Latino representation in the double mathematics class jumped to 41%.

All of these students are also required to take either biology or chemistry and are encouraged to be involved in extra-curricular activities. The program continues to offer field trips and guest speakers to increase post-secondary access information. A professor from Colorado State University recently spoke to the students in the program and some students have signed up for Women in Science and Technology, math competitions, trips to engineering fairs, and other enriching opportunities.

Teaching over the last twenty years has been an education for Mrs. Richard. Although she has taught thousands of students, she believes she has actually learned the most. Students have taught her the rewards of diligent work. The majority of her students enrolled in advanced mathematics courses are not geniuses, but they have a great work ethic and an intrinsic desire to achieve. Mrs. Richard believes that desire for success is not a unique attribute to one group of people—a desire observable in all cultures. Students' energy and enthusiasm for learning has inspired her to continue to grow and learn. Observing the success of the diverse students who took the opportunity to accelerate has taught Mrs. Richard an even greater lesson. Educators may not be the best judges of individual students' desire to accelerate. Given the opportunity and proper motivation, many students will make good decisions about self-image and life aspirations. Systemically, educators must continue to create opportunities for students to choose advanced courses. Mrs. Richard believes this systemic approach will generate more diversity in all advanced courses and create pathways to opportunities for all students.

## VII: IMPLICATIONS AND CONCLUSION

*Brown* was a landmark Supreme Court decision that changed public education in America by ending *de jure* segregation. Unfortunately, *Brown*, as a result of subsequent

Supreme Court rulings, failed to effectively eliminate *de facto* segregation. As a result, American public schools have actually become more segregated than they were in the 1970s.

One possible explanation for the current resegregation trend is an over reliance on judicial action to force large organizations, such as schools and school districts, to become socially responsible by integrating students into heterogeneous learning environments. It is possible that the courts did all they could do with the first *Brown* ruling, and the actual fulfillment of *Brown* is dependent upon individuals, such as Mrs. Richard. The environmentalist mantra of thinking globally and acting locally has application to the efforts to desegregate America's schools. *Brown* provided the global perspective and now educators committed to that ideal must begin to work with individual students, classes, and schools to make the necessary changes that will bring about a more integrated learning environment for all students.

In addition to actively creating an integrated learning environment, educators committed to the ideals established in *Brown* must begin to ask the same type of questions that Mrs. Richard did concerning the under-representation of minority students in advanced and honor courses, as well as the over-representation of minority students in remedial and special education classes. These types of questions are the prerequisite to becoming aware of the problem and making a difference in children's lives. Mrs. Richard became aware of a problem, began to ask questions related to that problem, and developed answers to those questions that positively impacted the lives of Latino students. This formula could be duplicated by any educator, whether a teacher, counselor, or administrator, with similar results.

The final implication of this study centers on how Mrs. Richard designed the summer geometry class and the double mathematics class. Mrs. Richard purposefully designed the program for all students, not just Latinos. As a result of this design, not only did Latino representation in advanced mathematics classes increase significantly, from 5.5% to over 40%, the overall enrollment numbers jumped from 18 to 60 students.

Mrs. Richard's experiences also illustrate that students, when allowed to self-select, will group themselves in a more diverse setting than when school officials control the process.

Possibly out of fear that students will fail, schools are reluctant to allow individuals who do not appear to possess the skills to excel in advanced or honor settings such an opportunity. However, when students in this case study self-selected advanced mathematics classes, they performed at a high level and even exceeded Mrs. Richard's expectations. As a result of the self-selection process, a high school in northern Colorado became less segregated and a greater number of Latino students began to obtain an equal educational experience by enrolling in multiple advanced and honor courses. Other educators can have this same type of impact that Mrs. Richard did by asking questions and formulating solutions.