

**WHEN FIVE HOURS EQUALS FIVE DAYS:  
BRINGING SECTION 504 EDUCATION PLANS INTO THE 21<sup>ST</sup>  
CENTURY**

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*According to federal regulations, all students have a right to a free appropriate public education in the most integrated, least restrictive environment appropriate. Discrimination based upon disabilities is a violation of civil rights. An estimated 10.2 million children in the United States have special healthcare needs, accounting for 13.9% of all children. Some students who are medically-fragile receive their educational services from a teacher at home because attending traditional school could exacerbate their medical problems. At least 23,000 students across the country are homebound or hospitalized each school year. This Recent Development explores the need for a re-interpretation of the Section 504 Education Plans and Title II of the Americans with Disabilities Act as it applies to public education because of the advances in distance-learning technology. This Recent Development argues that medically-fragile students who are homebound long-term should use technology to attend a traditional school class, rather than receive instruction from a teacher personally sent to each student's home, because of advances in distance-learning technology.*

**I. INTRODUCTION**

When does five hours equal five days? Only in educational regulations.<sup>1</sup> Many states have statutes requiring that medically-fragile

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<sup>1</sup> Relativity of time might also be dealt with in astrophysics or some other field in which the author is entirely ignorant.

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(or “homebound”)<sup>2</sup> students receive five hours of educational instruction per week rather than the traditionally-mandated five days of class.<sup>3</sup> Schools could easily remedy this inequality—and potential violation of federal disability law—by allowing students to participate in classrooms via distance-learning technologies such as video conferencing.

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<sup>2</sup> While the ADA and the Rehabilitation Act protect all disabled individuals from discrimination, this Recent Development will specifically focus on children who are intellectually capable of being in an integrated classroom but are medically disabled—such as having severe reactions to airborne allergens, agoraphobia, or a weakened immune system—and are thus unable to attend class. *See* Introduction.

<sup>3</sup> The California Education Code specifies that, for attendance accounting, each hour of individualized instruction counts as one day of attendance. *See* CAL. EDUC. CODE § 48206.3 (2015). The Illinois “School Code” states, “eligible [homebound] children . . . must regularly receive a minimum of one hour of instruction each school day . . .” 105 ILCS 5/14-13.01(a) (2014). Likewise, in New York, the legislature has mandated that instruction should be provided for a minimum of five hours per week at the elementary level and for a minimum of ten hours per week at the secondary level. *See* 8 N.Y.C.R.R. § 175.21 (2015). Some states do not mandate a specific amount of time that teachers must spend with homebound students to qualify as a full school day. The minimum number of hours required for homebound students differs greatly from the required hours per day in a traditional classroom. The length of an average instructional day varies by state, but the average minimum number of minutes in a high school day (9th–12th) across the fifty states is five hours and fourteen minutes, which is longer than the average minimum day in an elementary school (1st–5th) (five hours and two minutes), and longer than the average day in middle school grades (6th–8th) (five hours and eight minutes). Michael Colasanti, *Minimum Number of Instructional Minutes/Hours in a High School Day*, EDUC. COMM’N OF THE STATES, (Nov. 2007), <http://www.ncsl.org/documents/educ/ECSMinInstructiondays2007.pdf>. In New York, the minimum length of a school day for purposes of generating State Aid is two hours and thirty minutes for half-day kindergarten, five hours for full-day kindergarten through grade 6, and five hours and thirty minutes for grades 7–12. These hours are exclusive of the time allowed for lunch. Student Support Services, *Section 175.5 Length of School Day*, N.Y. STATE EDUC. DEP’T, (Mar. 31, 2010), <http://www.p12.nysed.gov/sss/lawsregs/175-5.html>. For a state-by-state list of the minimum required hours for a traditional school day, see Julie Rowland, *Number of Instructional Days/Hours in the School Year*, EDUC. COMM’N OF THE STATES, (Oct. 2014), <http://www.ecs.org/clearinghouse/01/15/05/11505.pdf>.

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An estimated 10.2 million children in the United States have special healthcare needs, accounting for 13.9% of all children.<sup>4</sup> Some students who are medically-fragile receive their educational services at home from a teacher because attending traditional school could exacerbate their medical problems. At least 23,000 students across the country are homebound or hospitalized each school year.<sup>5</sup>

Congress passed the Americans with Disabilities Act (“ADA”)<sup>6</sup> in 1990, before the prevalence of e-mail and cell phones. In many ways, the ADA has failed to keep up with recent technological advances such as video conferencing and the Internet, thus remaining a law stuck firmly in the twentieth century. Implementing new ADA policies that reflect current technologies would not be financially burdensome to schools, yet of paramount importance to homebound students who would be able to engage with their peers in an interactive classroom setting.

This Recent Development argues that Section 504 of the Rehabilitation Act of 1973 (“Rehabilitation Act”)<sup>7</sup> and Title II of the ADA are currently misapplied in light of easily accessible technologies capable of integrating homebound students into the classroom with distance-learning technologies. Part II introduces federal disability laws, describing their history and legislative intentions. Part III assesses the current interpretations of Section 504 and Title II as they are applied to public education. Part IV examines distance-learning technologies that are currently available. Finally, Part V analyzes Section 504 and Title II in light of these recent technologies.

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<sup>4</sup> See U.S. DEP’T HEALTH AND HUM. SERVICES, HEALTH RESOURCES AND SERVICES ADMIN., MATERNAL AND CHILD HEALTH BUREAU, THE NATIONAL SURVEY OF CHILDREN WITH SPECIAL HEALTH CARE NEEDS CHARTBOOK 2005-2006, 10 (2007), available at <http://mchb.hrsa.gov/cshcn05/MI/NCSHCN.pdf>.

<sup>5</sup> See Robbie Brown, *A Swiveling Proxy That Will Even Wear a Tutu*, N.Y. TIMES (Jun. 7, 2013), <http://www.nytimes.com/2013/06/08/education/for-homebound-students-a-robot-proxy-in-the-classroom.html>.

<sup>6</sup> Americans with Disabilities Act, 42 U.S.C. § 12101 *et seq.* (2012).

<sup>7</sup> 29 U.S.C. § 701 *et seq.* (2012).

## II. DEVELOPMENT OF DISABILITY RIGHTS

The Rehabilitation Act was Congress's first attempt at extending anti-discrimination civil rights to disabled persons.<sup>8</sup> The Act prohibited the federal government and federal contractors from engaging in discriminatory hiring practices against disabled persons.<sup>9</sup> Section 504 of the Act created the first federal civil rights protections for persons who are classified as disabled.<sup>10</sup>

Congress expanded on the Rehabilitation Act in 1990 when it enacted the ADA to "remedy widespread discrimination against disabled individuals."<sup>11</sup> The ADA did not replace the Rehabilitation Act, hence entitling plaintiffs to remedies under either applicable law.<sup>12</sup> When considering language for the ADA, Congress borrowed from the Rehabilitation Act, expanding coverage to more individuals and to all workplaces with fifteen or more employees.<sup>13</sup> The ADA

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<sup>8</sup> See M. Christine Fotopolus, *Civil Rights Across Borders: Extraterritorial Application of Information Technology Accessibility Requirements Under Section 508 of the Rehabilitation Act*, 36 PUB. CONT. L.J. 95, 96 (2006).

<sup>9</sup> See 29 U.S.C. § 705(9) (defining "disability" as "a physical or mental impairment that constitutes or results in a substantial impediment to employment.").

<sup>10</sup> See 29 U.S.C. § 794 ("No otherwise qualified individual with a disability in the United States, as defined in section 705(20) of this title, shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance . . ."); see also Kitty Cone, *Short History of the 504 Sit In*, DISABILITY RTS. EDUC. & DEF. FUND, <https://dredf.org/504site/histover.html> (last visited Feb. 17, 2015).

<sup>11</sup> See, e.g., *PGA Tour, Inc. v. Martin*, 532 U.S. 661, 674 (2001).

<sup>12</sup> Mark Weber, *Procedures and Remedies Under Section 504 and the ADA for Public School Children with Disabilities*, 32 J. NAT'L ASS'N L. JUD. 611, 642-47 (2012).

<sup>13</sup> PAUL M. SECUNDA & JEFFREY M. HIRSCH, *MASTERING EMPLOYMENT DISCRIMINATION LAW* 150 (2010). In a series of decisions, the U.S. Supreme Court narrowed the scope of the ADA and excluded some of the individuals that it was originally designed to protect. To combat this, a Congressional bi-partisan group passed the ADA Amendments Act of 2008, which went into effect on January 1, 2009. Emily A. Benfer, *The ADA Amendments Act: An Overview of Recent Changes to the Americans with Disabilities Act*, THE AM. CONST. SOC'Y FOR LAW AND POL'Y, 1 (Sept. 2009), [http://www.acslaw.org/sites/default/files/Benfer\\_ADAAA.pdf](http://www.acslaw.org/sites/default/files/Benfer_ADAAA.pdf). Since the ADA Amendments Act only amends the ADA, this Recent Development will refer to the ADA in its post-amendment form.

prohibits both public and private entities from discriminating against a disabled individual because of that person's disability.<sup>14</sup> The essence of the current interpretation of the ADA is that disabled individuals are entitled to a reasonable accommodation that does not impose an undue hardship upon the entity being sued.<sup>15</sup> Under the ADA, the term "disability" means "a physical or mental impairment that substantially limits one or more major life activities of such individual."<sup>16</sup> The ADA's definition draws from the Rehabilitation Act's definition of "handicapped individual," because Congress intended the new law to apply to the same individuals, while expanding the breadth of entities that must comply.<sup>17</sup> There are three major provisions of the ADA. Title I

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<sup>14</sup> Benfer, *supra* note 13, at 3. The ADA and the Rehabilitation Act sync with the two other major federal discrimination statutes: Title VII of the Civil Rights Act of 1964 and the Age Discrimination in Employment Act of 1967 ("ADEA"). Between these four statutes, all of the protected classes currently recognized by federal employment discrimination law are: race, color, religion, sex, and national origin (Title VII); age (ADEA); and disability (Title I of the ADA and the Rehabilitation Act). Fotopolus, *supra* note 8, at 112.

<sup>15</sup> See SECUNDA & HIRSCH, *supra* note 13, at 150.

<sup>16</sup> 42 U.S.C. § 12102(1)(A) (2012). The ADA further defines the term "disability" to mean an individual with "(A) a physical or mental impairment that substantially limits one or more major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment." *Id.* § 12102(1)(A)–(C). The ADA then defines major life activities as:

In general . . . major life activities include, but are not limited to, caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, lifting, bending, speaking, breathing, learning, reading, concentrating, thinking, communicating, and working [as well as] (B) . . . includ[ing] the operation of a major bodily function, including but not limited to, functions of the immune system, normal cell growth, digestive, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine, and reproductive functions.

*Id.* § 12102(2)(A)–(B).

<sup>17</sup> 29 U.S.C. § 794(8)(B) (2012); see *Bragdon v. Abbott*, 524 U.S. 624, 631–32 (1998) ("The ADA's definition of disability is drawn almost verbatim from the definition of 'handicapped individual' included in the Rehabilitation Act of 1973 . . . Congress' repetition of a well-established term carries the implication that Congress intended the term to be construed in accordance with pre-existing regulatory interpretations. In this case, Congress did more than suggest this construction; it adopted a specific statutory provision in the ADA directing as

relates to private employment<sup>18</sup> and Title III addresses public accommodations.<sup>19</sup> Title II of the ADA prohibits discrimination against individuals with disabilities by public entities, including public school systems,<sup>20</sup> when providing services, programs, or activities.<sup>21</sup>

One of the primary goals of the ADA is to ensure the equal participation of individuals with disabilities in “mainstream” American society.<sup>22</sup> According to the U.S. Department of Justice’s (“DOJ”) Civil Rights Division, disabled individuals must be integrated to the maximum extent appropriate, and cannot be excluded from regular programs or required to accept special services of benefits.<sup>23</sup> A public entity may not refuse to allow a

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follows: ‘Except as otherwise provided in this chapter, nothing in this chapter shall be construed to apply a lesser standard than the standards applied under title V of the Rehabilitation Act of 1973’. . . . Th[is] directive requires us to construe the ADA to grant at least as much protection as provided by the regulations implementing the Rehabilitation Act.’”

<sup>18</sup> See generally 42 U.S.C. §§ 12101–189 (2012).

<sup>19</sup> *Id.*

<sup>20</sup> “Public entity” includes all departments, agencies, special purpose districts, and other instrumentalities, which encompasses public schools. *Id.* § 12132 (2014); Nina Golden, *Access This: Why Institutions of Higher Education Must Provide Access to the Internet to Students with Disabilities*, 10 VAND. J. ENT. & TECH. L. 363, 367 (2008).

<sup>21</sup> *Cmtys. Actively Living Indep. & Free v. City of L.A.*, No. CV 09-0287 CMB (RZx), 2011 U.S. Dist. LEXIS 118364, at \*33 (granting summary judgment for plaintiffs in a class action alleging that the city had breached the ADA and Rehabilitation Act by not accounting for disabilities in its disaster planning). The City of Los Angeles disaster relief plan did not incorporate any way to “rescue” disabled residents in the case of a natural disaster, like earthquakes. Relief was granted in the form of an injunction, in which the city had to adequately update its sorely out-of-date plan. *See id.* at 52–53.

<sup>22</sup> U.S. DEP’T JUST. CIV. RTS. DIV., THE AMERICANS WITH DISABILITIES ACT: TITLE II TECHNICAL ASSISTANCE MANUAL, II-3.4000, available at <http://www.ada.gov/taman2.html>.

<sup>23</sup> *Id.* at II-3.6000. While “appropriate” is not explicitly defined in the ADA, the DOJ has stated that “[d]enying a license to all individuals who have missing limbs, for example, would be discriminatory if an individual who could operate a vehicle safely without use of the missing limb were denied a license. A public entity, however, could impose *appropriate* restrictions as a condition to

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person with a disability to participate in a service, program, or activity simply because that person has a disability.<sup>24</sup> Public entities must provide all programs and services in an integrated setting, unless separate or different measures are necessary to ensure equal opportunity.<sup>25</sup> Requirements that screen out individuals with disabilities (such as requiring a driver's license as the only acceptable means of identification) are prohibited, but safety requirements may be imposed if such requirements are necessary for the safe operation of a program and are based on actual risks and not on speculation, stereotypes, or generalizations about individuals with disabilities.<sup>26</sup>

To cement this interpretation of the ADA, the U.S. Attorney General issued 28 C.F.R. § 35.130(d) in 1991, requiring public entities to administer programs in the most integrated setting appropriate to the needs of qualified individuals with disabilities.<sup>27</sup>

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obtaining a license, such as requiring an individual who is unable to use foot controls to use hand controls when operating a vehicle.” *Id.* at II-3.7200 (emphasis added). The Equal Employment Opportunity Commission attempts to define appropriate by noting that “[t]he decision as to the *appropriate* accommodation must be based on the particular facts of each case. In selecting the particular type of reasonable accommodation to provide, the principal test is that of effectiveness, i.e., whether the accommodation will enable the person with a disability to do the job in question.” EQUAL EMP’T OPPORTUNITY COMM’N, THE ADA: QUESTIONS AND ANSWERS, <http://www1.eeoc.gov/eeoc/publications/adaqa1.cfm> (last visited Feb. 17, 2015) (emphasis added).

<sup>24</sup> See, e.g., U.S. DEP’T JUST. CIV. RTS. DIV., *Title II Highlights 2* (2002), <http://www.ada.gov/t2hlt95.htm> (“For example, a city may not refuse to allow a person with epilepsy to use parks and recreational facilities.”).

<sup>25</sup> *Id.* at 4. The DOJ adds that:

Integration of individuals with disabilities into the mainstream of society is fundamental to the purposes of the Americans with Disabilities Act. Public entities may not provide services or benefits to individuals with disabilities through programs that are separate or different, unless the separate programs are necessary to ensure that the benefits and services are equally effective. Even when separate programs are permitted, an individual with a disability still has the right to choose to participate in the regular program.

*Id.*

<sup>26</sup> See *id.* at 2.

<sup>27</sup> See 28 C.F.R. § 35.130(d) as amended through 2014. The “most integrated setting” appropriate is a setting that “enables individuals with disabilities to

If a public entity is unable to provide its services in an integrated manner, resulting in a fundamental change, then it should take “every effort to ensure that alternative methods of providing programs access do not result in unnecessary segregation.”<sup>28</sup>

The Individuals with Disabilities Educational Act (“IDEA”),<sup>29</sup> which Congress also passed in 1990, requires that all students receive a free appropriate public education in the least restrictive environment.<sup>30</sup> The IDEA’s main focus is on students with learning disabilities and requires that schools provide these students with Individualized Educational Programs (“IEPs”) to ensure that they are receiving an appropriate education.<sup>31</sup> Because the IDEA’s focus is on students with learning disabilities and not students who have physical disabilities, the IDEA is only applicable to some homebound students.

### III. CURRENT INTERPRETATION OF DISABILITY LAW IN EDUCATION

In order to establish a violation of Title II of the ADA, the disabled plaintiff must show that “(1) he is a qualified individual

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interact with nondisabled persons to the fullest extent possible.” 28 C.F.R. § 35, App. B (2014); *see also* 29 U.S.C. § 794 (2012); 28 C.F.R. § 41.51(d) (2014); Civil Rights Division, *Statement of the Department of Justice on Enforcement of the Integration Mandate of Title II of the Americans with Disabilities Act and Olmstead v. L.C.*, U.S. DEP’ JUST., [http://www.ada.gov/olmstead/q&a\\_olmstead.htm](http://www.ada.gov/olmstead/q&a_olmstead.htm) (last visited Feb. 18, 2015).

<sup>28</sup> *See* U.S. DEP’T JUST. CIV. RTS. DIV., *supra* note 22, at 3.4200. As an illustration:

A school system should provide for wheelchair access at schools dispersed throughout its service area so that children who use wheelchairs can attend school at locations comparable in convenience to those available to other children. Also, where ‘magnet’ schools, or schools offering different curricula or instruction techniques are available, the range of choice provided to students with disabilities must be comparable to that offered to other students.

*Id.*

<sup>29</sup> 20 U.S.C. § 1400 (2012).

<sup>30</sup> *See id.* § 1400(d).

<sup>31</sup> *Id.* § 1414(d).



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with a disability;<sup>32</sup> (2) he was either excluded from participation in or denied the benefits of a public entity's services, programs or activities, or was otherwise discriminated against by the public entity; and (3) such exclusion, denial of benefits, or discrimination was by reason of his or her disability.”<sup>33</sup> To establish a Section 504 violation, a plaintiff must make a prima facie showing of an ADA case, and also show that the program receives federal funding.<sup>34</sup>

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<sup>32</sup> As defined in 42 U.S.C. § 12131(2):

The term ‘qualified individual with a disability’ means an individual with a disability who, with or without reasonable modifications to rules, policies, or practices, the removal of architectural, communication, or transportation barriers, or the provision of auxiliary aids and services, meets the essential eligibility requirements for the receipt of services or the participation in programs or activities provided by a public entity.

See 42 U.S.C. § 12131(2) (2014).

<sup>33</sup> Weinreich v. L.A. Cnty. Metro. Trans. Auth., 114 F.3d 976, 978 (9th Cir. 1997); see also 42 U.S.C. § 12132 (2014). Various courts apply different standards. The U.S. Court of Appeals for the Fourth Circuit has stated that in order to establish a violation of the ADA, a plaintiff must only show “(1) that he has a disability; (2) that he is otherwise qualified for the benefit in question; and (3) that he was excluded from the . . . benefit due to discrimination solely on the basis of the disability.” See, e.g., Doe v. University of Md. Med. Sys. Corp., 50 F.3d 1261, 1265 (4th Cir. 1995). However, the U.S. Court of Appeals for the Eighth Circuit applies a “bad faith or gross misjudgment standard” to Section 504 and ADA claims, reasoning that such a standard balances “the rights of handicapped children, the responsibilities of state educational officials, and the competence of courts to make judgments in technical fields.” See Monahan v. Nebraska, 687 F.2d 1164, 1171 (8th Cir. 1984). The Eighth Circuit gives “deference to experts dealing with the special needs of disabled children, reasoning that [Section] 504 was not intended to create general tort liability for educational malpractice.” That court has held that the “deference, and the reasoning behind it, is as appropriate under the ADA as it is under Section 504.” See Hoekstra v. Indep. Sch. Dist., 103 F.3d 624, 626–27 (8th Cir. 1996). Across all circuits, specific to the context of education, it has been held that 20 U.S.C. § 1415(l) requires that alternatives such as mediation with the school be exhausted before a civil claim may be filed unless they would be “futile.” See generally Komninos v. Upper Saddle River Bd. of Educ., 13 F.3d 775 (3rd Cir. 1994). For an in-depth review of procedural steps to take when filing an educational Section 504 or ADA claim, see Weber, *supra* note 12, in its entirety.

<sup>34</sup> 29 U.S.C. § 794(a) (2014).

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Section 504 and the ADA observe the existence of a disability in a child according to that child's condition in an unmitigated state.<sup>35</sup> Specifically, this means that in an unmitigated state, the child's condition will substantially limit one or more major life activities.<sup>36</sup> The list of major life activities explicitly covered by these statutes "includes several activities that are closely tied into education: reading, concentrating, thinking, and communicating, as well as hearing, speaking, and learning."<sup>37</sup> But if the student is medically-fragile, their illness will most likely fall under one of the listed impairments of major bodily functions, which include "functions of the immune system, normal cell growth, digestive, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine," and others.<sup>38</sup> In sum, a medically-fragile child would be considered "disabled" under Section 504 and Title II as a result of having an impairment of a major bodily function.

The plaintiff bears the initial burden of establishing a prima facie case, including that a reasonable accommodation is available.<sup>39</sup> The defendant (public entity) may rebut the plaintiff's showing by demonstrating that the "requested accommodation would require a fundamental alteration" of the government program or cause an undue burden.<sup>40</sup> The remedy for a violation of the ADA can include a withdrawal of federal funding for the public entity, an injunction to specifically compel the desired accommodation, actual and punitive damages, civil penalties as high as \$50,000 for a first violation and as high as \$100,000 for subsequent violations, as well as attorney fees for the plaintiff.<sup>41</sup>

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<sup>35</sup> Weber, *supra* note 12, at 618–20.

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

<sup>38</sup> 42 U.S.C. § 12102 (2)(B) (2012).

<sup>39</sup> *Pierce v. Cnty. of Orange*, 519 F.3d 985, 1011 (9th Cir. 2008).

<sup>40</sup> *Id.*

<sup>41</sup> *Penalties for ADA Violations*, CAL. DISABILITY RITS. CTR. (Mar. 9, 2011), <http://californiadisabilityrights.org/wordpress/2011/03/penalties-for-ada-violations/>. A particularly fascinating Section 504 remedy occurs in the case of *Am. Council of the Blind v. Paulson*. Plaintiffs alleged that the ability to use U.S. bank notes in a fast and easy manner is an essential ingredient to independent living, and

A. *Right to a Free Appropriate Public Education*

Section 504 of the Rehabilitation Act “seeks to assure evenhanded treatment of, and the opportunity for, handicapped individuals who participate in, and benefit from, programs receiving federal assistance.”<sup>42</sup> Because virtually all public schools receive federal funding, they must comply with Section 504.<sup>43</sup> Section 504 Education Plans ensure that medically-fragile (disabled) children receive equal access to a free appropriate public education (“FAPE”) in the least restrictive setting possible.<sup>44</sup> Under Section 504 regulations, a FAPE is defined as “the provision of regular or special education and related aids and services that . . . are designed to meet individual educational needs of handicapped persons as adequately as the needs of non-handicapped persons are met and . . . are based upon adherence to [specified] procedures.”<sup>45</sup> For a FAPE to be “equally effective,” it must afford students with disabilities an equal opportunity to obtain the same result, gain the

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that, because of this, it was essential that vision-impaired individuals are able to decipher American bills. Plaintiffs alleged that the United States is the only country of more than 180 countries to print bills without any features that would aid visually impaired individuals in differentiating values of currency. The District Court found for the plaintiffs and declared injunctive relief requiring the Department of the Treasury to redesign dollar bills. On appeal, the Circuit Court for the District of Columbia affirmed the District Court’s decision. In 2011, the Secretary of the Treasury approved new methods to provide the blind and visually impaired with meaningful access to U.S. currency. *See* Am. Council of the Blind v. Paulson, 581 F. Supp. 2d 1 (D.D.C. 2008); Am. Council of the Blind v. Paulson, 525 F.3d 1256 (D.C. Cir. 2008); *see generally* Lauren LaRochelle, *Dollars and Sense: Designing a Reasonable Accommodation under Section 504 of the Rehabilitation Act*, 69 OHIO ST. L. J. 545 (2008); BUREAU OF ENGRAVING AND PRINTING, U.S. DEP’T OF THE TREASURY, MEANINGFUL ACCESS, <http://www.bep.treas.gov/uscurrency/meaningfulaccess.html> (last visited Feb. 19, 2015).

<sup>42</sup> Am. Council of the Blind v. Snow, 311 F. Supp. 2d 86 (D.C. Cir. 2004); *see generally* 29 U.S.C. § 794 (2012).

<sup>43</sup> *The PEER Project, Section 504, the Americans with Disabilities Act, and Education Reform*, WRIGHTSLAW (Mar. 2, 2008), <http://www.wrightslaw.com/info/section504.ada.peer.htm>.

<sup>44</sup> *See generally* 34 C.F.R. § 104 (2014).

<sup>45</sup> 34 C.F.R. § 104.33(b)(1) (2014).

same benefit, or reach the same level of achievement as other students.<sup>46</sup>

Title II of the ADA also contains a communication regulation that requires public schools to communicate “as effective[ly]” with disabled students as with other students.<sup>47</sup> In addition, Title II contains a requirement that disabled students are provided with “appropriate auxiliary aids and services necessary to afford an individual with a disability an equal opportunity to participate in, and enjoy the benefits of” the school program.<sup>48</sup>

#### B. *Least Restrictive, Most Integrated Setting*

In 1999, the Supreme Court held that unjustified institutional isolation is discrimination if based on disability.<sup>49</sup> The Court reasoned that separation of disabled persons who can benefit from communal settings perpetuates assumptions that the isolated persons are incapable or unworthy of participating in community life.<sup>50</sup> This institutionalized isolation “severely diminishes the everyday life activities of individuals, including family relations, social contracts, work options, economic independence, educational advancement, and cultural enrichment.”<sup>51</sup> The “most integrated setting” appropriate is a setting that “enables individuals with disabilities to interact with nondisabled persons to the fullest extent possible.”<sup>52</sup> Under 28 C.F.R. § 35.130, public entities, including schools, are required to administer programs “in the most integrated setting appropriate to the needs of qualified individuals with disabilities.”<sup>53</sup> Because of this mandate, if a school provides

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<sup>46</sup> *The PEER Project*, *supra* note 43.

<sup>47</sup> 28 C.F.R. §§ 35.160(a)(1)–(b)(1) (2014).

<sup>48</sup> *See id.*

<sup>49</sup> *Olmstead v. L.C. ex rel. Zimring*, 527 U.S. 581, 597, 600–01 (1999). This case was in reference to mentally unstable persons being put in a facility for people with similar issues. *See id.*

<sup>50</sup> *Id.*

<sup>51</sup> *Id.* at 601.

<sup>52</sup> 28 C.F.R. § 35, App. B (2014); *see also* 29 U.S.C. § 794 (2012); 28 C.F.R. § 41.51(d) (2014).

<sup>53</sup> 28 C.F.R. § 35.130(d) (2014).

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services to a disabled individual, they must do so in the most integrated setting.<sup>54</sup> The IDEA mandates that students should be educated in the “least restrictive environment,” but does not define the term, and so courts have been on their own to define it.<sup>55</sup>

C. *Without Undue Hardship or Fundamental Alteration*

Title II’s limitations do not require a public school to “take any action that it can demonstrate would result in a fundamental alteration in the nature of a service, program, or activity or in

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<sup>54</sup> See Civil Rights Division, *Statement of the Department of Justice on Enforcement of the Integration Mandate of Title II of the Americans with Disabilities Act and Olmstead v. L.C.*, U.S. DEP’T OF JUSTICE, [http://www.ada.gov/olmstead/q&a\\_olmstead.htm](http://www.ada.gov/olmstead/q&a_olmstead.htm), (last visited Feb. 18, 2015).

<sup>55</sup> See 20 U.S.C. § 1406(b)(2) (2012). In *Daniel R.R. v. State Board of Education*, the court held that students with disabilities (under IDEA) have a right to be included in academic and extracurricular programs. 874 F.2d 1036 (5th Cir. 1989) The court noted that IDEA does not require an all-or-nothing educational system in which students with disabilities attend either regular or special education, but requires schools to offer a continuum of services. *Id.* at 1050. The court explained schools must take intermediate steps, such as placing the student in regular education for some academic classes and in special education for others, mainstreaming the child for nonacademic classes only, or providing interaction with non-disabled children during lunch and recess. *Id.* In *Sacramento City Unified Sch. Dist., Bd. of Educ. v. Rachel H.*, the court applied a four-factor balancing test to determine an appropriate least restrictive environment for a student. 14 F.3d 1398, 1400–01 (9th Cir. 1994). The factors were:

- (1) the educational benefits available to [the student] in a regular classroom, supplemented with appropriate aids and services, as compared with the educational benefits of a special education classroom;
- (2) the non-academic benefits of interaction with children who were not disabled;
- (3) the effect of [the student’s] presence on the teacher and other children in the classroom; and
- (4) the cost of mainstreaming [the student] in a regular classroom.

*See id.* The court came out on the side of the plaintiff-student because of Congress’ strong preference for integrated classrooms. *See id.* at 1405. (“More importantly, the District’s proposition that [the student] must be taught by a special education teacher runs directly counter to the congressional preference that children with disabilities be educated in regular classes with children who are not disabled.”).

undue financial and administrative burdens.”<sup>56</sup> The Supreme Court in *Alexander v. Choate*<sup>57</sup> stated that, to ensure access to a program or benefit, “reasonable accommodations” needed to be made, but it need not make fundamental or substantial modifications to its standards or programs.<sup>58</sup> A school’s available affirmative defense—to a student’s proposed accommodation—is that the accommodation would result in a fundamental alteration or undue burden.<sup>59</sup> The school’s showing of an undue burden must be made considering all resources available for use in the funding and operation of the service, program, or activity.<sup>60</sup> The school must take any action “that would not result in . . . an alteration or such burdens but would nevertheless ensure that, to the maximum extent possible, individuals with disabilities receive the benefits or services provided . . . .”<sup>61</sup>

A school can successfully defend itself against a claim that it failed to reasonably accommodate a student's request for modifications by showing that the modifications allowing the student access to its programs or services would fundamentally alter the nature of those programs or services.<sup>62</sup> Many educational programs include a key visual or auditory component such as examining the use of color in an art appreciation class or identifying certain symptoms by sound in a medical school class. The schools are not required to modify these key-learning goals, which would likely fundamentally alter the program, and therefore the school would not be compelled to make the requested changes.<sup>63</sup>

In sum, the current state of federal educational disabilities law is that disabled students are entitled to a free appropriate public education in the least restrictive, most integrated setting possible

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<sup>56</sup> 28 C.F.R. § 35.164 (2014).

<sup>57</sup> 469 U.S. 287 (1985).

<sup>58</sup> *Id.* at 300–01.

<sup>59</sup> *Id.*

<sup>60</sup> *K.M. v. Tustin Unified Sch. Dist.*, 725 F.3d 1088, 1097 (9th Cir. 2013).

<sup>61</sup> 28 C.F.R. § 35.164 (2014).

<sup>62</sup> *Darian v. University of Mass. Bos.*, 980 F. Supp. 77 (D. Mass. 1997).

<sup>63</sup> For further discussion of the fundamental alteration defense in general, *see* Peter Blanck, et al., *DISABILITY CIVIL RIGHTS LAW AND POLICY* § 13.6(E) (2004).

unless the result is an undue hardship or fundamental alteration to the nature of the service provided by the school.

#### IV. TECHNOLOGY ADVANCES IN EDUCATION

When Congress passed the ADA the most advanced widespread communication technologies were telephones, VCRs, and audiocassette tapes. Back then, a homebound student would probably have received a much better education by meeting one-on-one with a teacher, even for just five hours a week, than by listening to class five days a week over the telephone.

Since 1990, the Internet has increased the number and variations of educational technologies available. The Internet officially emerged in 1992 when Congress passed the Scientific and Advanced-Technology Act, which allowed the National Science Foundation to support access by the research and educational communities to computer networks which were not used exclusively for research and education purposes, thus permitting interconnection with commercial networks.<sup>64</sup> Universities developed the Internet as a research tool in the 1970s and 1980s, and use of the Internet became widespread around the time that President Bush signed the ADA into law.<sup>65</sup> By the end of the 1990s, one researcher stated, that use of “the Internet as a teaching aid is literally exploding.”<sup>66</sup> In 2004, one study even concluded that “[r]emote learners can outperform traditional classroom students.”<sup>67</sup>

##### A. Videoconferencing

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<sup>64</sup> 42 U.S.C. § 1862(g) (2012).

<sup>65</sup> See MANUEL CASTELLS, *Lessons from the History of the Internet*, in THE INTERNET GALAXY: REFLECTIONS ON THE INTERNET, BUSINESS, AND SOCIETY 9–35 (2001).

<sup>66</sup> Jerome Young, *Computers and Teaching: Evolution of a Cyberclass*, 31 PS: POL. SCI. & POL. 568, 568 (1998).

<sup>67</sup> Donsong Zhang et al., *Can E-learning Replace Classroom Learning?*, 27 COMMUNICATIONS OF THE ACM 5 (May 2004).

Videoconferencing is a mode of communication between two or more parties where persons can see and hear one another, essentially permitting them to have a normal face-to-face conversation through video displays. A webcam is a video camera that transmits its video image live through the Internet to be displayed by a user on the other side.<sup>68</sup> Videoconferencing software includes Skype and FaceTime, which offer free video calls between users from their computers or smartphones.<sup>69</sup> Skype supplies the software that enables users to turn their computers into video-phones with the simple addition of a webcam.<sup>70</sup> Users can also set up webcams so parties on each side can see each other via their computer screens. Most modern laptops, tablets, and phones come with a webcam built in. However, for students without access to more recent technology, a small camera can easily be purchased and hooked up to even older computers. In order for this technology to work, the user and the classroom each need to have a computer or smartphone with a webcam, and access to a high-speed Internet connection.<sup>71</sup>

Videoconferencing technology is cheap and relatively easy to troubleshoot. It is so reliable that the legal profession has accepted it for taking depositions and testimony during trial.<sup>72</sup> Some colleges

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<sup>68</sup> *What is a Webcam?*, WEBCAMWORLD.COM, <http://www.webcamworld.com/setupawebcam/intro.htm> (last visited Jan. 27, 2015).

<sup>69</sup> Adam Clay, *Unlocking the Wireless Safe: Opening Up The Wireless World for Consumers*, 61 FED. COMM. L.J. 715, 715 (2008–09).

<sup>70</sup> *Id.*

<sup>71</sup> There are a large number of homes that do not have access to computers or the Internet. ROBERT W. FAIRLIE, *Are We Really A Nation Online? Ethnic and Racial Disparities in Access to Technology and Their Consequences*, REPORT FOR THE LEADERSHIP CONFERENCE ON CIVIL RIGHTS EDUCATION FUND (2005).

<sup>72</sup> Courts have noted that the concept is so similar to closed circuit cameras that it does not violate the Confrontation Clause and therefore witnesses may use webcams to testify during trial. *See* U.S. CONST. amend. VI (“In all criminal prosecutions, the accused shall enjoy the right . . . to be confronted with the witnesses against him.”). Courts have found that two-way video meets the face-to-face-requirement of the Confrontation Clause. *See* *Acevedo v. State, Tex. App. LEXIS 8109, 23* (2009) (concluding “testimony by remote two-way video conferencing or in determining the system used by the State did not deprive appellants of his Sixth Amendment rights.”); *see also* *Witness in Zimmerman*



and universities offer courses where students, and even faculty, may “virtually attend” class using webcam technology, which helps to prove its viability in an educational context.<sup>73</sup>

Admittedly, webcam technology is not without limitations. First, the webcam is limited to the location where it is set up. While a stand-alone webcam recording and transmitting the teacher’s class is possible, that arrangement limits the student’s point of view and the student’s interaction with classmates. If the teacher wanders outside the area of the webcam’s aim the student would be unable to readjust the camera to see the teacher.<sup>74</sup> The teacher could readjust the camera, if he or she remembers, but constant webcam adjustments disrupt class for all.

The cost of webcams has dropped due to widespread proliferation of the technology. But, the low cost may be offset by the added expense of high-speed Internet connections for both the students and schools.<sup>75</sup>

#### B. *Personal Roving Presence (“PRoP”)*

A PRoP is a mobile two-way, wireless webcam, which a student can “drive” around the school.<sup>76</sup> The physical tele-robot serves both as an extension of its operator and as a visible, mobile

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*Case Testifies By Skype*, NATIONAL PUBLIC RADIO (Jul. 13, 2013, 8:00 A.M.), <http://www.npr.org/2013/07/13/201735247/witness-in-zimmerman-case-testifies-by-skype>.

<sup>73</sup> Jeffrey Young, *Absent Students Want to Attend Traditional Classes Via Webcam*, THE CHRONICLE OF HIGHER EDUCATION (Jan. 30, 2011), available at <https://chronicle.com/article/New-Question-for-Professors-/126073>.

<sup>74</sup> There are however, more advanced webcams that allow the user to adjust where it is looking.

<sup>75</sup> See Fairlie *supra* note 71 (explaining that Internet access differs drastically by demographic). Because schools are required to provide FAPE to all children, regardless of their Internet access, it might be necessary to pay for Internet access to the homebound student’s house.

<sup>76</sup> VGO COMMUNICATIONS, INC., SCHOOL’S NOW IN SESSION—FOR EVERYONE, 4, [http://www.vgocom.com/sites/default/files/vgo\\_homebound\\_student\\_whitepaper.pdf](http://www.vgocom.com/sites/default/files/vgo_homebound_student_whitepaper.pdf) (last visited Jan. 26, 2015); see also Eric Paulos & John Canny, *PRoP: Personal Roving Presence*, ACM SIGCHI 296, 297 (1996), available at <http://repository.cmu.edu/cgi/viewcontent.cgi?article=1218&context=hcii>.

entity with which other people can interact.<sup>77</sup> PRoPs enable their users to perform a wide gamut of human activities in the remote space from conversing with people, to reading, examining objects, and wandering around.<sup>78</sup> Telepresence robots are becoming more popular in the business world and even television shows.<sup>79</sup> A wide variety of brands sell PRoPs, ranging from obscure flying blimp-esque PRoPs<sup>80</sup> to drivable toy-like tank iPhone holders.<sup>81</sup>

Despite the wide variety of PRoP models, ranging widely in price, features, and support, only some brands have proven themselves and found their way into schools. One particularly popular brand of PRoP is the VGo, which is used in many schools around the country.<sup>82</sup> The company that produces the VGo has placed more than forty units in school settings.<sup>83</sup>

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<sup>77</sup> See Paulos, *supra* note 76.

<sup>78</sup> *Id.*

<sup>79</sup> One popular television show, “The Big Bang Theory,” aired an episode during which one of the main characters (“Sheldon Cooper”) is sick, and he uses a telepresence robot to go about his everyday tasks. *The Big Bang Theory: The Cruciferous Vegetable Amplification* (CBS Sept. 30, 2013). In “The Good Wife,” one of the lawyers uses a telepresence robot to go to work at the law firm. *The Good Wife: Everything is Ending* (CBS Sep. 29, 2013).

<sup>80</sup> Paulos & Canny, *supra* note 76, at 297.

<sup>81</sup> See “Romo,” TELEPRESENCEROBOTS.COM, [http://telepresencerobots.com/robots/romotive\\_romo](http://telepresencerobots.com/robots/romotive_romo) (last visited Feb. 18, 2015). Romo the Robot is only \$150. The website, [www.telepresencerobots.com](http://www.telepresencerobots.com), has an extensive list of 20 PRoPs. See *id.*

<sup>82</sup> *Meet Some of the Students Using VGo*, VGO COMMUNICATIONS, INC., <http://www.vgocom.com/meetstudents> (last visited Jan. 26, 2015).

<sup>83</sup> Robbie Brown, *A Swiveling Proxy That Will Even Wear a Tutu*, N.Y. TIMES, (June 7, 2013), <http://www.nytimes.com/2013/06/08/education/for-homebound-students-a-robot-proxy-in-the-classroom.html> (explaining that “[t]he company’s big break came during this year’s Super Bowl. Verizon, which provides the LTE wireless connection for the robot, ran a commercial about a student using VGo. Before the ad, VGo had sold about 10 robots to schools. Since then, they have sold about 40.”). The company has likely sold many more since 2013. The VGo website has fifteen case studies on students who utilize the VGo to attend classes. See *Meet Some of the Students*, *supra* note 82. VGo is not necessarily the best PRoP solution on the market; however, it is the one with the most information about its use in schools.

### VGo Robotic Telepresence



Figure 1 – VGo Telepresence Robot<sup>84</sup>

Students navigate the VGo robot and adjust the camera to keep the teacher in view.<sup>85</sup> Each student also has a webcam at home that broadcasts his or her image to a screen on the VGo.<sup>86</sup> Additionally, students can participate in class and “raise their hand” by

<sup>84</sup> Image reproduced from [http://cache.freescale.com/files/graphic/block\\_diagram/VGOROBO\\_TN.jpg](http://cache.freescale.com/files/graphic/block_diagram/VGOROBO_TN.jpg) (last visited Jan. 26, 2015).

<sup>85</sup> See Richard Bloss, *High School Student Goes to Class Robotically*, 38 INDUS. ROBOT: AN INT’L J. 465 (2011) (finding that “A service robot can really enhance the educational experience of students by allowing them to be ‘at school’ when previously they were precluded from joining in with fellow students in the classroom and other school venues. The service robot gives humans the ability to independently see, hear, join in and move about the school . . . when otherwise they might not be able to be present when they want or are needed somewhere else.”).

<sup>86</sup> See SCHOOL’S NOW IN SESSION, *supra* note 76, at 6.

activating a light on top of the VGo.<sup>87</sup> Furthermore, some students who use this technology have reported that they use the VGo to travel between classes and “chat with . . . friends.”<sup>88</sup> Students using telepresence robots can participate in group projects and even classroom discussions.<sup>89</sup> This capability suggests a level of social interaction that a homebound student may never come to develop without this proven technology.<sup>90</sup>

One of the downsides of telepresence robots is similar to the disadvantages of a webcam in that the student is required to have access to both the Internet and a laptop.<sup>91</sup> An additional drawback is that the VGo unit costs roughly six thousand dollars (\$6,000.00), with an additional one hundred dollars (\$100.00) per month for maintenance and support.<sup>92</sup> The final challenge is that a student must learn to “drive” their PRoP. For example, if the student has a medical condition that makes fine motor control difficult or is extremely young, then the sensitive controls for the PRoP may make it difficult to operate. Furthermore, some schools are inherently more difficult to navigate than others.<sup>93</sup>

The Garland Independent School District in Texas recently provided a homebound student with a VGo.<sup>94</sup> The program was so

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<sup>87</sup> *Id.* at 8.

<sup>88</sup> *Id.* at 12.

<sup>89</sup> *Id.* at 5.

<sup>90</sup> *See id.* at 8.

<sup>91</sup> *Id.* at 10–11.

<sup>92</sup> Mike Flacy, *The VGO Robot Attends Work or School While You Stay at Home*, DIGITAL TRENDS (May 9, 2012), <http://www.digitaltrends.com/cool-tech/the-vgo-robot-attends-work-or-school-while-you-stay-at-home>; *see* Evan Ackerman, *VGo Telepresence Robot*, IEEE SPECTRUM (June 2, 2010), <http://spectrum.ieee.org/automaton/robotics/industrial-robots/vgo-telepresence-robot> (last visited Jan. 26, 2015).

<sup>93</sup> An elementary student using the VGo might spend the entire day in a single classroom, alleviating some of the difficulties of driving through complex hallways. However, a high school student might have to navigate several hallways and floors to get from one class to another.

<sup>94</sup> William Taylor, *With Reggie’s Robots, Homebound GISD Students Can Visit Campus From Home*, ROWLETT LAKESHORE TIMES (Dec. 2, 2014), <http://>

successful that neighboring Region 10 purchased five VGo for students to use as part of a “Reggie’s Robots” initiative.<sup>95</sup> Region 10’s Distance-Learning Consultant Lori Aden noted that “[h]aving a district-owned robot is actually cheaper than hiring a homebound teacher.”<sup>96</sup> She also emphasized that the VGo “enables students to receive instruction that homebound teachers may not be able to provide, such as Advanced Placement, International Baccalaureate, or . . . Technical Education courses.”<sup>97</sup>

### C. *Virtual Public School (“VPS”)*

In the United States, “cyber schools” or “virtual schools” have been growing in popularity, with their number tripling between

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starlocalmedia.com/rowlettlakeshoretimes/with-reggie-s-robots-homebound-gisd-students-can-visit-campus/article\_71c9cc02-7a45-11e4-b0a7-678d80655ebe.html.

<sup>95</sup> *Reggie’s Robots*, REGION 10 EDUCATION SERVICE CENTER, <http://www.region10.org/reggies-robots/> (last visited Feb. 19, 2015). Region 10 recently stated that:

Region 10 Education Service Center is excited to announce a new program called Reggie’s Robots. This program will utilize VGo Robots, an innovative solution that allows students to attend classes via interactive video conferencing while recovering from long-term illness, injury, or other factors requiring the student to be homebound or not able to be present in the classroom.

From home or the hospital and using a computer and mouse, the student is able to ‘drive’ the robot to school assemblies as well as to each of his classes. In class, the student will be able to actively participate in lessons, discussions and group work. This allows the student to develop strong teacher and peer relationships, stay socially connected, boost morale providing tangible health benefits, and receive quality instruction without falling behind on coursework.

*See id.*

<sup>96</sup> Taylor, *supra* note 94. Region 10 enables individuals, foundations, and corporate sponsors to make tax-deductible donations toward providing homebound students with VGos. This is one method of reducing the base cost for schools. They even allow donors to place their company logo on the PRoP. *Reggie’s Robots Donations/Sponsorships*, REGION 10 EDUCATION SERVICE CENTER, <http://www.region10.org/reggies-robots/reggies-robots-donations/> (last visited Feb. 19, 2015).

<sup>97</sup> Taylor, *supra* note 94.

2003 and 2009.<sup>98</sup> “These schools [tend to] offer most or all of their instructional programs over the Internet.”<sup>99</sup> Remarkably, as of 2007, more than thirty-one states had established VPSs.<sup>100</sup> The North Carolina VPS is the second largest state virtual school in the country serving over 25,000 middle and high school students<sup>101</sup> and offering more than 100 courses ranging from basic courses like Algebra, to hard-to-staff language courses like Arabic and Mandarin, and Advanced Placement (“AP”) courses.<sup>102</sup> Students log in to the website and watch a pre-recorded lecture. The students participate in both live discussions with the teacher and in message boards with their classmates to trade thoughts and ideas, achieving part of the social aspect of education.

One benefit of VPSs is that students perform better on average than those learning the same material through traditional face-to-face instruction.<sup>103</sup> An analysis by the Department of Education found that “students doing some or all of the course online would rank in

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<sup>98</sup> See Kevin Brady, et al, *Unchartered Territory: The Current Legal Landscape of Public Cyber Charter Schools*, 2010 BYU EDUC. & L. J. 191, 191 (2010).

<sup>99</sup> *Id.*

<sup>100</sup> See Amy Dickers et al., *Virtual High School Teacher and Student Reactions to the Social Media Presence Model*, 12 J. INTERACTIVE ONLINE LEARNING 3, 157 (2013), available at <http://www.ncolr.org/jiol/issues/pdf/12.3.4.pdf>. In Washington State, VPSs are available only to “eligible students” who are “likely to be expelled or who are enrolled in the school district but have been suspended, are academically at risk, or who have been subject to repeated disciplinary actions due to behavioral problems.” WASH. REV. CODE § 28A.150.305 (2013).

<sup>101</sup> See Eliz Colbert, *Director’s Welcome*, N.C. VIRTUAL PUB. SCH., <http://www.ncvps.org/index.php/about-us/directors-welcome> (last visited Feb. 18, 2015).

<sup>102</sup> *See id.*

<sup>103</sup> See Barbara Means et al., *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies*, OFFICE OF PLANNING, EVALUATION, AND POLICY DEV., U.S. DEP’T OF EDUC. IX (2010), available at <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>.

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the 59th percentile in tested performance compared with the average classroom student scoring in the 50th percentile.”<sup>104</sup>

One educational downside of VPSs is that students miss the face-to-face social development that they would normally receive from their peers.<sup>105</sup> Another is that VPSs are typically not cost efficient for an individual school to host on its own. Rather, VPSs have found more success in three unique models: (1) the state-based model, providing access to students across the state;<sup>106</sup> (2) the virtual charter school model,<sup>107</sup> providing access only to select charter school members; and (3) outsourcing the VPS to a

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<sup>104</sup> See Steve Lohr, *Study Finds That Online Education Beats the Classroom*, N.Y. TIMES (Aug. 19, 2009), <http://bits.blogs.nytimes.com/2009/08/19/study-finds-that-online-education-beats-the-classroom/>.

<sup>105</sup> In studies of normal (healthy) homeschooled students, the importance of peer socialization is noted. Scott Turansky, *Social Development and the Homeschooled Child*, HOMESCHOOLERS SUPPORT NETWORK, (Apr. 6, 2009), <https://www.homeschool-life.com/sysfiles/member/pubsarts/pubsarts.cfm?memberid=475&public=1&pubid=6525&keywords=&orderby=section>. Dr. Turansky states that

[o]n the practical side, the school is not the only place children can find friends and peer group interaction. Churches and communities offer other activities, many of which focus more on healthy social interaction than the school does. Sports, music, youth groups and service groups teach children how to be productive in relationships and to use good social interaction to be a positive influence on society. These activities may offer enough or even more than enough peer contact. [C]hildren need to interact with their peers; the decision becomes how much and what kind is best.

*Id.* However, many homebound students do not have access to the same outside socialization options as their homeschooled peers, for the same reasons that they are not in school. As such, this important socialization aspect may be missing if they learn solely from a computer. *See id.*

<sup>106</sup> See Dikkers, *supra* note 100.

<sup>107</sup> See Brittney Parker, *Wake County Court Rules Against Virtual School*, THE MACON COUNTY NEWS (July 5, 2012), <http://www.maconnews.com/news/education/3263-wake-county-court-rules-against-virtual-school>. (The charter school “was expected to serve 2,750 students and could double its enrollment within seven years, according to the school’s original application to the state. If the school met that projected enrollment the first year, it would equal about \$18 million in state funding . . .”).

private company to provide the necessary resources.<sup>108</sup> VPSs naturally depend on a large amount of technology, which is typically not native to an individual school or school district.

Economies of scale matter. Individual schools or school districts cannot efficiently run VPS classes because the low number of students does not justify the high costs of the technology to run the VPS. Additionally, the infrastructure costs for a VPS are relatively static, so the cost does not increase much as the number of students increases. Thus, running a VPS on a larger scale, such as through a statewide infrastructure, is more feasible. However, for an individual school trying to provide VPS as an alternative to

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<sup>108</sup> Companies like NovaNet, provide educational outsourcing for individual schools and school districts. *Some Example Alternative to Suspension Programs in North Carolina Sponsored by Public Schools and Community Initiatives*, N.C. CHILD ADVOCACY INSTITUTE (2005), <http://www.njcn.org/uploads/digital-library/examples.pdf> (noting that “[Suspended] students are able to continue the courses that they were enrolled in while they were in the public school system though a computer based Curriculum Resource called NovaNet. The curriculum is based on the Standard Course of Study for North Carolina and contains all of the courses offered through Wake County Public Schools. It is self-directed and self-paced, giving the students the opportunity to move on to the next course level after showing mastery of the current course, if they choose to do so. However, since this is a pilot program and it is certified, the principal has the discretion of whether to accept the course credits when the student returns to school.”). Students at one high school that outsourced its VPS to NovaNet enrolled in only 106 credits. MULTIMEDIA SCH., *A Pearson Digital Learning Success Story* (2002), <http://www.infotoday.com/MMSchools/SuccessStories/PearsonWakeCounty.htm>. There are also free, online, non-government learning centers like Khan Academy, which homebound students could use to take classes in areas that are unable to provide state or school VPSs. The Khan Academy has received significant financial support from the Bill & Melinda Gates Foundation and Google, and it hosts digital tutorials for medical school students, teachers, and computer scientists, in addition to material for elementary, high school, and college students. The Khan Academy was founded in 2007 and by 2012 had delivered more than 240 million lessons. The founder was recognized by *Time* as one of the one hundred most influential people in the world. W. Warren Binford, *New Ideas in Law and Legal Education: Envisioning a Twenty-First Century Legal Education*, 43 WASH. U. J.L. & POL’Y 157, 165 (2013).



homebound learning, the technology may be too costly.<sup>109</sup> This is why VPSs are better relegated to non-traditional schools rather than “brick and mortar schools,” where the money is arguably better spent on infrastructure and essentials.

#### **V. THE CASE FOR LEGAL ENTITLEMENTS UNDER SECTION 504 AND THE ADA DUE TO TECHNOLOGICAL ADVANCEMENTS**

Federal law requires that a school provide all students—including homebound students—with a free, appropriate public education in the most integrated, least restrictive environment possible unless it is an undue hardship for the school or results in a fundamental alteration to the program in question.<sup>110</sup> The Department of Education notes that a school that receives federal funding “shall place a handicapped person in the regular educational environment operated by the [school] unless it is demonstrated by the [school] . . . that the education of the person in the regular environment with the use of supplementary aids and services cannot be achieved satisfactorily.”<sup>111</sup> Because distance-learning technologies for homebound students are helpful, this mandate potentially places the burden on the school to “demonstrate” that the student is incapable of using distance-learning technology to access a regular classroom before considering more segregated options like homebound teaching.

Similar in nature to the ADA, IDEA requires that children with disabilities<sup>112</sup> receive IEPs, which are “reasonably calculated to

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<sup>109</sup> N.C. VPS spent \$2,167,742 to operate the program in the 2010–2011 school year. This figure does not include the \$16,263,730 in teacher salaries that the program spent. TRANSPARENCY IN NORTH CAROLINA VIRTUAL PUBLIC SCHOOL (NCVPS) (2010–2011), PUBLIC SCH. OF N.C., <http://www.ncpublicschools.org/docs/fbs/finance/ncvps/admin2010-11.pdf>, (last visited Feb. 27, 2015).

<sup>110</sup> *The PEER Project*, *supra* note 43.

<sup>111</sup> 34 C.F.R. § 104.34(a) (2015).

<sup>112</sup> In the IDEA statute, the “child with a disability” language refers to a child having “intellectual disabilities, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), [a] serious emotional disturbance . . ., orthopedic impairments, autism, . . . traumatic brain

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enable the child[ren] to receive educational benefits.”<sup>113</sup> The IDEA requires the educational team, who creates the student’s IEP, to “consider whether the child needs assistive technology devices and services.”<sup>114</sup> While the IDEA only applies to learning-disabled students, it creates a precedent requiring the consideration of technological aid for disabled students.

A. *The Most Integrated, Least Restrictive Environment for Homebound Students Involves Distance-Learning Technology*

The most widespread educational curriculum is Common Core. Forty-three states, the District of Columbia, and four territories have adopted it.<sup>115</sup> The National Board of Governors, an association of state governors, also endorses the Common Core curriculum, which establishes “common learning goals for each grade level.”<sup>116</sup> The Common Core is a unified set of standards, which then permits individual member states to choose how to enforce them, if at all.<sup>117</sup> For example, the English Language Arts standard emphasizes academic discussion in one-on-one, small-group, and whole-class settings.<sup>118</sup> These academic discussions can take place as formal

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injury, other health impairments, or specific learning disabilities . . .” See 20 U.S.C. § 1401 (3)(A)(i) (2012).

<sup>113</sup> *K.M. v. Tustin Unified Sch. Dist.*, 725 F.3d 1088, 1095 (9th Cir. 2013); *Board of Education of Hendrick Hudson School District, Westchester County v. Rowley*, 458 U.S. 176, 206–07 (1982).

<sup>114</sup> 20 U.S.C. § 1414(d)(3)(B)(v) (2012).

<sup>115</sup> The only states not following Common Core are Texas, Oklahoma, Nebraska, Virginia, Minnesota, Indiana, and Alaska. See *Standards in Your State*, COMMON CORE STATE STANDARDS INITIATIVE, <http://www.corestandards.org/standards-in-your-state/> (last visited Feb. 18, 2015).

<sup>116</sup> See *About the Standards*, COMMON CORE STATE STANDARDS INITIATIVE, <http://www.corestandards.org/about-the-standards/> (last visited Jan. 26, 2015).

<sup>117</sup> See *Frequently Asked Questions*, COMMON CORE STATE STANDARDS INITIATIVE, <http://www.corestandards.org/about-the-standards/frequently-asked-questions/> (last visited Feb. 18, 2015).

<sup>118</sup> *College and Career Readiness Anchor Standards for Speaking and Listening*, COMMON CORE STATE STANDARDS INITIATIVE, <http://www.corestandards.org/ELA-Literacy/CCRA/SL/> (last visited Jan 26. 2015) (“To build a foundation for college and career readiness, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small

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presentations as well as informal discussions during student collaboration.<sup>119</sup> A traditionally homebound student would only be able to engage in one-on-one conversations with his or her homebound teacher, with whom he or she interacts for only one hour per day. The same homebound student, without the use of distance-learning technology, would not be able to engage in small group or whole-class discussions or presentations, both of which are Common Core educational standards.<sup>120</sup>

Courts have interpreted “most integrated,” in the educational context, to mean that students should be in the most “mainstream” class possible.<sup>121</sup> In this context, “most integrated” means students are receiving as close to the same educational opportunities as they would if they were not disabled.<sup>122</sup> One hour of at-home educational instruction is not an equal time substitute for the traditional five and a half hour<sup>123</sup> school day.

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groups, and with a partner. Being productive members of these conversations requires that students contribute accurate, relevant information; respond to and develop what others have said; make comparisons and contrasts; and analyze and synthesize a multitude of ideas in various domains.”).

<sup>119</sup> See COMMON CORE STATE STANDARDS INITIATIVE, COLLEGE AND CAREER READINESS ANCHOR STANDARDS FOR SPEAKING AND LISTENING 1, <http://www.corestandards.org/ELA-Literacy/CCRA/SL/1/> (last visited Jan 26, 2015) (“Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.”).

<sup>120</sup> *College and Career Readiness Anchor Standards for Speaking and Listening*, *supra* note 118.

<sup>121</sup> THE AMERICANS WITH DISABILITIES ACT: TITLE II TECHNICAL ASSISTANCE MANUAL, *supra* note 22, at 3.4000 (“The major principles of mainstreaming are—1) Individuals with disabilities must be integrated to the maximum extent appropriate. 2) Separate programs are permitted where necessary to ensure equal opportunity. A separate program must be appropriate to the particular individual. 3) Individuals with disabilities cannot be excluded from the regular program, or required to accept special services or benefits.”)

<sup>122</sup> *Id.* at 3.4200.

<sup>123</sup> Student Support Services, *Section 175.5 Length of School Day*, N.Y. STATE EDUC. DEP'T (Mar. 31, 2010), <http://www.p12.nysed.gov/sss/lawsregs/175-5.html>. (“The daily sessions for pupils in grades seven through 12 shall be a minimum of five and one-half hours including time spent by students in actual

In addition, researchers have found that the disruption to schooling and the absenteeism associated with a medical condition can create a range of academic, social, physical, and developmental problems for disabled students.<sup>124</sup> Keeping homebound students connected to school and learning is critical to avoid a trajectory of school absence, disengagement from schoolwork and peers, reduced achievement in education, and dropping out of school early.<sup>125</sup> Studies have found that distance-learning technology, such as videoconferencing, can provide effective mechanisms for homebound students to maintain connections with a class, which has the potential to overcome some of the negative outcomes associated with absence from school.<sup>126</sup> One Dutch project, KlasseContact, found that telepresence devices allowed students to be successfully immersed in the classroom.<sup>127</sup> Overall, videoconferencing and PRoPs are effective tools for improving student connectedness, which is one of the Common Core learning goals.<sup>128</sup>

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instructional or supervised study activities, exclusive of time allowed for lunch.”).

<sup>124</sup> Liza Hopkins et al., *Staying Engaged: The Role of Teachers and Schools in Keeping Your People with Health Conditions Engaged in Education*, 41 AUSTRALIAN EDUC. RESEARCHER 25, 27 (2014).

<sup>125</sup> *Id.*

<sup>126</sup> *Id.* at 35.

<sup>127</sup> See KLASSECONTACT, OFF SICK . . . BUT STILL IN THE CLASSROOM! (2012), available at [http://www.ziezon.nl/wp-content/uploads/downloads/2013/03/Flyer-Klassecontact-engelstalig\\_cert.pdf](http://www.ziezon.nl/wp-content/uploads/downloads/2013/03/Flyer-Klassecontact-engelstalig_cert.pdf). KlasseContact’s ICT (Information and Communication Technology) setup for homebound students is provided free of cost to the school. The setup can either be used through the Internet or through 4G cell phone lines. *Information for School*, KPN KLASSE CONTACT, <http://www.kpnklassecontact.nl/informatie-over-kpn-klassecontact/kpn-klassecontact-voor-schoolbesturen/> (last visited Feb. 26, 2015). KPN KlasseContact ensures that sick students are connected with school and classmates. Using the ICT, sick students can continue to participate actively in the lessons and communicate through words and images. Students may even use the ICT to ask questions. KPN KlasseContact makes it possible to keep in touch inside and outside of school with classmates, which is important for sick students. Children feel less lonely and less behind in classes. *Welcome to the website of KPN KlasseContact*, KPN KLASSE CONTACT, <http://www.kpnklassecontact.nl/> (last visited Feb. 26, 2015).

<sup>128</sup> See generally Patrice Weiss et al., *PEBBLES: A Personal Technology for Meeting Educational, Social and Emotional Needs of Hospitalized Children*,

For the states that allow some students to engage in VPSs as part of a FAPE, offering these services to homebound students just makes sense. In these states, it would be hard to argue that an educational method approved for some students would be denied to a medically-fragile student.

If the same students were to use videoconferencing to access their classroom, they would receive the same five and a half hours of instruction a day as their peers, less the time allotted for activities like lunch and recess. Additionally, if the students had access to a PRoP, like a VGo, they would be able to attend lunch, recess, and assemblies with their peers. Attending these activities could result in superior social development and education compared to meeting with a homebound teacher for one hour a day.

B. *Providing a Homebound Student with Distance-Learning Technology is Neither a Fundamental Alteration nor an Undue Hardship*

Distance education technology neither changes the fundamental nature of education nor places an undue hardship on the school facility. A chronically homebound student will receive a better education interacting with peers by attending class for five and a half hours a day, than by meeting with a single teacher for one hour a day.

School concerns over videoconferencing and PRoP technologies revolve around four main arguments.<sup>129</sup> Schools' primary and most common concern is that students will receive a better education from

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PERSONAL UBIQUITOUS COMPUTING, 5, 157–68 (2001) (discussing benefits of Wayne Gretsky's PEBBLES video conferencing system for hospitalized students); Kourosh Parsapour et al., *Connecting Hospitalized Patients With Their Families: Case Series and Commentary*, INT'L J. OF TELEMEDICINE & APPLICATIONS (2011); David Nicholas et al., *Evaluation of Videophone Communication for Families of Hospitalized Children*, 50 SOC. WORK IN HEALTH CARE 3, 215–29 (2011). These studies use students who are in the hospital as the test subjects, rather than homebound students. However, there are many similarities as both are unable to attend school due to medical conditions.

<sup>129</sup> See SCHOOL'S NOW IN SESSION, *supra* note 76.

their homebound teacher than they would through distance-learning technology.<sup>130</sup> Second, the cost of these technologies and the technical support worries schools officials.<sup>131</sup> Third, schools express privacy and security concerns because the video is transmitted over the Internet.<sup>132</sup> Finally, schools have noted their concern regarding disruptions to the classrooms hosting these technologies.<sup>133</sup>

The first concern, that students will receive a better education from their homebound teacher than they would through distance-learning technology, may hold weight in the cases of some students, especially those who function below their grade level. However, in the case of a student disabled solely because of a medical condition such as severe allergies to airborne allergens, agoraphobia, or a weakened immune system, one hour of teacher interaction a day is failing that student. A student who could operate a PRoP and interact in a normal classroom would benefit greatly from experiencing a full five and a half hour school day. The parents of students who used videoconferencing to attend class reported an increased motivation by the student to do schoolwork, and the students reported that visual explanation of concepts by teachers was helpful.<sup>134</sup> A study of medically-fragile children found reduced school attendance could result in a detrimental impact on academic performance.<sup>135</sup> However, the same study also noted that distance-learning technology could ensure the student maintained access to school.<sup>136</sup> To reiterate, Section 504 and Title II of the ADA are designed to ensure that disabled students have access to a free appropriate public education in the least restrictive, most integrated setting possible to ensure academic success.

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<sup>130</sup> *Id.*

<sup>131</sup> *Id.* at 9.

<sup>132</sup> *See id.*

<sup>133</sup> *Id.*

<sup>134</sup> Sarah Ellis et al., *Results of a Nurse-Led Intervention: Connecting Pediatric Cancer Patients From the Hospital to the School Using Videoconferencing Technologies*, 30 J. OF PEDIATRIC ONCOLOGY NURSING 333, 336 (2013).

<sup>135</sup> *Id.* at 333.

<sup>136</sup> *Id.*

Schools' second concern, regarding the high cost of distance-learning technologies, is unmerited because the cost of these technologies is minimal in comparison to the current homebound system. In light of recent cuts to education, such as Congress cutting the Head Start program's budget by \$400 million,<sup>137</sup> finding money to increase educational funding can be difficult. In many schools, a homebound teacher does not have a traditional classroom and has a workload of only homebound students. Assuming *arguendo* that a single teacher educating homebound students works forty hours a week, not including travel time between the students' homes, and sees each child for the required five hours a week, then this teacher would only be able to see eight students a week.<sup>138</sup> The lowest paid teachers in the country are first year teachers in South Dakota who make \$26,988 a year, not including expensive benefits such as health insurance and pension.<sup>139</sup> A South Dakotan homebound teacher teaching eight students would result in a cost of \$3,373.50 per South Dakotan homebound student. A VGo costs \$6,000 for the initial purchase of the unit, plus an additional \$100 per month for support and maintenance, with a five-year warranty—though the units are expected to last much longer.<sup>140</sup> Assuming that VGos last only five years, they cost the school a mere \$2,400 per year each to own and operate. If each of those eight homebound students were indeed provided with a VGo rather than receiving homebound services, the net total cost would only be \$19,200 per year for all eight

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<sup>137</sup> Adrienne Lu, *Head Start Hit With Worst Cuts in its History*, USA TODAY (Aug. 20, 2013, 10:24 AM) <http://www.usatoday.com/story/news/nation/2013/08/19/stateline-head-start/2671309>.

<sup>138</sup> A homebound teacher likely drives between the student's homes, assuming he or she spends 15 minutes between each student's home, they would add roughly two hours to their day, and be working 10 hours days to see eight children. They may only be assigned to see six children a day.

<sup>139</sup> Melissa Kelly, *Lowest Pay for Beginning Teachers*, ABOUT.COM, [http://712educators.about.com/od/jobopenings/tp/low\\_new\\_teacher\\_pay.htm](http://712educators.about.com/od/jobopenings/tp/low_new_teacher_pay.htm), (last visited Feb. 27, 2015).

<sup>140</sup> See Flacy, *supra* note 92.

students combined.<sup>141</sup> As the school already has traditional teachers and classrooms in place, integrating these students into a normal classroom would mean a net savings of \$7,788 for the South Dakotan school. These savings are drastically higher if you include the total cost of a teacher's benefit package or the student and teacher in any other state.<sup>142</sup>

The third major concern—the privacy of students and teachers—is not a viable reason to deny a student access to a FAPE. Many schools prohibit students from video recording the class for fear that the teacher's performance could be monitored.<sup>143</sup> But unlike cell phone cameras, which many students carry in their pockets, some of these videoconferencing software and PRoPs cannot record without custom modifications.<sup>144</sup> In addition, many of these technologies are highly encrypted, thereby providing greater security.<sup>145</sup> However, at the end of the day, neither privacy

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<sup>141</sup> Traditional homebound instruction in Delaware is outsourced to tutors who cost \$50 an hour. In a state like Delaware that requires two hours per day, \$50 x 10 (hours per week) results in a cost of \$500 per homebound student per week. Just one student using it for 12 weeks would make up the cost of a VGo. *Homebound Student Case Study & ROI*, VGO COMMUNICATIONS, INC., <http://www.vgocom.com/homebound-remote-student-case-study-roi> (last visited Feb. 19, 2015). In addition, other cheaper PRoPs cost roughly \$2,500 and might be suitable for educational purposes. *Id.*

<sup>142</sup> For example, the National Center for Education Statistics estimates that the average teacher in 2009–2010 made \$56,069 in salary (not including benefits). DIGEST OF EDUC. STATISTICS, *Estimated Average Annual Salary of Teachers in Public Elementary and Secondary Schools: Selected Years, 1959–60 Through 2010–11* (May 2011), available at [http://nces.ed.gov/programs/digest/d11/tables/dt11\\_083.asp](http://nces.ed.gov/programs/digest/d11/tables/dt11_083.asp). Replacing the average-costing teacher (who teaches homebound students) with VGos would save \$36,869 per year. However, the average teacher in Ohio costs \$86,200 per year (including benefits). See Tom Zawistowski, *The Cost of Ohio's Teachers*, COLUMBUS TEA PARTY, <http://columbusteaparty.com/the-cost-of-ohios-teachers> (last visited Jan. 26, 2015). That is a cost of roughly \$10,775 per Ohioan homebound student, which results in the school saving \$67,000 per year by replacing a homebound teacher (making an average salary and benefits) with VGos.

<sup>143</sup> See SCHOOL'S NOW IN SESSION, *supra* note 76, at 9.

<sup>144</sup> *Id.*

<sup>145</sup> Skype videoconferencing software uses 256-bit encryption. *Does Skype Use Encryption?*, SKYPE SUPPORT, <https://support.skype.com/en/faq/FA31/does->



nor information security concerns truly result in a fundamental alteration of education or an undue hardship.

Finally, schools argue that distance-learning technology results in a fundamental alteration to the rest of the student's education because of the potential for classroom disruption. In one research study, teachers expressed concern about exercising control in classrooms and worried real-time video connections could distract their students.<sup>146</sup> The teachers wanted to restrict the use of PROPs during particular times because of this potential for class distraction.<sup>147</sup> The teachers, and the authors of the study, agreed that neither the hypothetical sick child nor the technology could be allowed to become the whole focus of the class.<sup>148</sup> Teachers can and must ultimately control the distance-learning technology by switching off the units when situations require.<sup>149</sup>

In another study, four out of five teachers using videoconferencing technology in the classroom reported that the program had an educational benefit for the class because the class learned about their classmate's disease.<sup>150</sup> As such, a PROp or a webcam would not harm the education of classmates because students adapt to distance-learning technologies and learn about both technology and different life experiences as a result.<sup>151</sup>

In sum, providing a homebound student with distance-learning technology does not result in a fundamental alteration of the student's education; rather, it enables students to receive the education that they would receive otherwise. The inclusion of distance-learning

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skype-use-encryption (last visited Feb. 18, 2015). MyVPN suggests that it would take  $5.42 \times 10^{52}$  years for the world's fastest supercomputer to break that level of encryption (which is billions of billions times longer than our universe has existed). *It Will Take Billions of Billions Times Longer Than Our Universe Exists*, MYVPN, <http://www.myvpn.com/how-long-it-takes-to-break-256-bit-encrypted-data> (last visited Feb. 18, 2015).

<sup>146</sup> See Hopkins, *supra* note 124, at 282.

<sup>147</sup> See *id.* at 285.

<sup>148</sup> *Id.*

<sup>149</sup> *Id.*

<sup>150</sup> See Ellis, *supra* note 134, at 336.

<sup>151</sup> See generally SCHOOL'S NOW IN SESSION, *supra* note 76.

technology for homebound students is not an undue hardship for the schools. The cost for these distance-learning technologies is minimal. Schools already have access to the Internet, and most have laptops for student use. In order to allow homebound students to attend class with videoconferencing-only technology, schools would incur significant costs only if the homebound student did not already have the access to the Internet in their home, or if the school did not have a device, such as an iPad, with which the class could watch the video feed. PRoPs would require the same costs per student, with the addition of approximately six thousand dollars for the cost of a PRoP unit.<sup>152</sup> However, with the distinct social interaction advantages that the telepresence robot provides to students, the increased educational value might make an option like the VGo a required assistive technology due to Section 504 and Title II.

## VI. CONCLUSION

Federal law requires schools to make reasonable accommodations for students, so long as these accommodations do not change school programs or create an undue burden. Accordingly, federal law should always consider distance-learning technologies for homebound students in the reasonable accommodation phase of Section 504 Plans. This approach to educational disability law and policy puts these students “back in the classroom” and ensures them access to the same educational material as their non-disabled peers. These changes could be brought about by schools using these new technologies or by litigation. Courts would likely interpret distance-learning technology to be an important part of the least restrictive, most integrated setting for homebound students as per applicable statutes. These new accommodations would increase the overall potential of homebound students while invigorating the American economy through the integration of disabled persons into the workforce.

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<sup>152</sup> See Flacy, *supra* note 92.