

ARTICLE

The Extent and Duration of Primary Schooling in Eighteenth-Century America

Carole Shamas* 

Department of History, University of Southern California, Los Angeles, CA, USA

*Corresponding author. Email: shamas@usc.edu

Abstract

The educational attainment literature has brought back interest in early American primary schools, and much current research views those schools as superior to their European peers in the education offered to youth. Its emphasis, though, on using school enrollment as the prime indicator of attainment conflicts with the revisionist view of a previous generation of historians who argued that education in the heavily rural and agricultural society of the time should be considered as a process of social reproduction delivered by households, with schools being peripheral for most youth. This article, relying on evidence from statutes, indentures, and a 1798 New York State school survey, finds increased resort to primary schooling over the eighteenth century, attributable not to American exceptionalism but to a transatlantic movement away from scribal-dominated literacy and numeracy toward common use of a standardized written vernacular and “arithmetic by pen.” However, the dependence of households on child labor meant that the Three Rs did not get distributed in either an egalitarian or compact fashion. Small doses spread over a number of years—*educational sprawl*—best describes the system, and it lasted through much of the nineteenth century.

Keywords: primary schooling; educational attainment; child labor; handwriting; ciphering; Three Rs

The extent and duration of schooling, otherwise known as *educational attainment*, has emerged over the past few decades as a subject of considerable interest, because it serves as a prime indicator of what economists refer to as *human capital*, which, in turn, has been identified by some as the most important element in furthering economic growth and democratic institutions globally.¹ What is somewhat surprising, though, is the way primary schooling in North America over the long eighteenth century pops up in this educational attainment literature as setting the pace for further developments nationally and internationally.² A few examples from leading experts in

¹See Robert J. Barro and Jong-Wha Lee, *Education Matters: Global Schooling Gains from the 19th to the 21st Century* (New York: Oxford University Press, 2015); Claudia Goldin and Lawrence F. Katz, *The Race between Education and Technology* (Cambridge, MA: Harvard University Press, 2008).

²Barro and Lee, *Education Matters*, Table 2.8, 56–58 (data begin in 1870); Peter H. Lindert, *Growing Public: Social Spending and Economic Growth since the Eighteenth Century*, vol. 2, *Further Evidence*

the field will suffice: “Since the founding of the early colonies in the [*sic*] North America, democratic and egalitarian views, supported by strong Protestant principles, pervaded the development of mass schooling.” Another writes, “Basic democratic and egalitarian principles . . . influenced the educational system. . . . By the mid-nineteenth century the enrollment rate among children and youth in the United States exceeded that of any other nation in the world.” And a third states, “We know that the American colonies and the early United States were precocious in developing primary schools. . . . The much-heralded ‘common school’ movement of the 1830s-1840s is now known to have been only a continuation . . . of previous progress. . . . The non-pioneering nature of the common school movement carries an important message about the role of local versus state government in the early rise of public schools.”³

The absence of inclusive and systematically recorded evidence nearly everywhere as to the extent of primary schooling prior to the last third of the nineteenth century has not stopped speculation about the direction of the trend nor the reasons for it. The literature identifies a potpourri of reasons for the rise in primary schooling: namely, Protestantism, democracy, egalitarianism, and decentralization. That authority rested at the local rather than at the state/colony or national level is viewed as a good thing. Neither low density nor the nature of economic production (including the degree of reliance on child labor) merit much mention, despite the concerns of activists from the nineteenth century onward about the employment of youth blocking their educational attainment.

In contrast, the most influential books produced on early American education by a previous generation of historians discouraged thinking of the subject as being primarily about schools. Instead, they stressed how agricultural societies, such as those in the colonies, mainly passed on knowledge through what might be called *social reproduction*—that is, the younger generation was expected to adopt the beliefs and appropriate familial roles of their elders as well as receive training by way of working alongside them rather than through formal schooling.⁴

The prominence of early America in the educational attainment literature and the somewhat novel explanations for its accomplishments, combined with the absence of the usual types of national level data used to evaluate the extent and duration of schooling, suggest a closer look might be warranted at what sorts of evidence can be found that relate to the situation of youth generally. Diaries, autobiographies, biographies, and family histories provide insights into the educational experiences of individual schoolmasters, children, and households. But the question of how representative these sources are always surfaces. The main strategy employed when going backward in time to measure the educational attainment of a population has

(Cambridge: Cambridge University Press, 2009), Appendix A, 125–27. Lindert scoured printed material for 1830–1860 enrollment rates and made corrections where possible. But the problem of unrecorded private school enrollment remains, and the estimates for the U.S. are only “guesstimates.”

³Barro and Lee, *Education Matters*, 4; Goldin and Katz, *Race between Education and Technology*, 130; Lindert, *Growing Public*, 123.

⁴Bernard Bailyn, *Education in the Forming of American Society* (Chapel Hill: University of North Carolina Press, 1960), 15–17; Lawrence Cremin, *American Education: The Colonial Experience, 1607–1783* (New York: Harper and Row, 1970), x-xi. In Cremin’s chapters, social reproduction and societal institutions other than schools predominate.

been the analysis of signatory ability: that is, the ability to sign one's name rather than make a mark on official documents such as a marriage license.⁵ This research offers the best single indicator of general pre-twentieth-century national trends in educational level and has implications for who might have had some formal instruction. But, if one is looking for measures of and reasons for investment in schooling, signatory evidence has its limitations. Also eighteenth-century America, unlike England, lacks a single long-term series of signatures covering all the colonies.⁶

In the following pages, then, we look at three different sources. First, we will turn to the statutory record for the English-speaking mainland colonies in regard to primary schooling, noting those covered in the legislation and how that coverage compared to the whole population of youth. Second, we will examine the provisions for schooling in early American apprentice indentures, mainly those for orphaned and poor children. This source enables us to track changing educational standards and see how labor demands structured the duration of schooling. Third, we will analyze a 1798 educational survey from New York State, probably the first of its kind in the US. This document laid out school enrollment, days taught, and attendance statistics, and it allows us to discover the degree to which the length of terms depended upon district funding and parent willingness to send children to school. This end of the eighteenth-century document represents the most progressive, albeit short-lived, effort to make some primary schooling accessible to all free children, while at the same time illustrates a prime characteristic of the institutions—*educational sprawl*, a system of basic skills ingested in small doses and spread over a number of years in order to accommodate the widespread use of child labor.

These records suggest that Protestantism, democracy, and decentralization only contributed modestly to expanding and extending access to written and numeric literacy during the eighteenth century and, in some cases, actually hampered the spread of the skills. Nor does *egalitarian* seem a good adjective to use in regard to the provision of educational services. In the conclusion, we can review what the evidence reveals about these factors in terms of their impact on who received schooling and how much they received.

Primary Education Statutes in British America Colonies and Their Demographic Profiles

The early statutory regulations related to primary education in British colonial America did not specify duration of schooling but only who was to receive certain literacy and numeracy skills and who was not. In effect, however, the inclusion of

⁵For examples citing human capital measurement, see Sheilagh Ogilvie and Markus Kupker, *Human Capital Investment in a Late-Developing Economy: Evidence from Wurttemberg, c. 1600-c. 1900* (Cambridge: Cambridge Working Papers in Economics, 2015); and Alexandra M. de Pleijt, "Human Capital Formation in the Long Run: Evidence from Average Years of Schooling in England, 1300–1900," *Cliometrica* 12, no.1 (2018), 99–126. De Pleijt converts signatory evidence into an assumed two years of primary schooling.

⁶See the range of signatory evidence collected in Farley W. Grubb, "Growth of Literacy in Colonial America: Longitudinal Patterns, Economic Models, and the Direction of Future Research," *Social Science History* 14, no. 4 (1990), Table 1; and E. Jennifer Monaghan, *Learning to Read and Write in Colonial America* (Amherst: University of Massachusetts Press, 2005), Appendix 1.

instruction beyond reading meant most parents and guardians would need to go outside of their household and church to educate their sons and eventually their daughters. Requiring children in the eighteenth century to be offered handwriting and what was commonly called “arithmetic by pen,” or ciphering, almost always involved the employment of a tutor or schoolmaster along with the purchase of textbooks and stationery supplies. Table 1 summarizes these regulations by mainland colonies. None of the colonies in the British West Indies, where the free population amounted to no more than 15 percent of the total, seemed to have passed legislation, and many on the mainland also left it up to parents. The local authorities only stepped up with Three Rs requirements in the case of orphans or the indigent. The widespread colonial practice of indenturing orphan and pauper children at young ages to masters eager for labor led to the passage of most of these prescriptive laws by states and counties: parents who either as a result of death or indigence could not support their dependents lost their authority over their children’s primary schooling.⁷

The need to encourage the acquisition of written literacy and numeracy for boys and later girls followed a trend observed circa 1700 in Great Britain. At that point, a charity school movement sponsored by Anglican clergy and laymen swept through England, Wales, Scotland, and parts of Ireland. Charity school leaders recommended that boys be taught all Three Rs over a *four-year-long period*. Also, in keeping with British customs, girls merited less academic instruction than their male counterparts—which, until after midcentury, usually entailed only reading. Sewing, spinning, knitting, and other needlework supplemented their prescribed education.⁸ These British reformers expressed the fear that poor youth would be unable to engage in “useful employments” without such instruction. None of these prescriptions, of course, meant children actually received these skills, or did so over a full four years. But it appears the association of these skills with societal progress did take off broadly and crossed the Atlantic.

The colonial acts in Table 1 passed in the eighteenth century provided for boys to receive both reading and writing instruction, and by 1741 Massachusetts also required ciphering. Often schoolmasters set up classroom space in their own residence or rented rooms to teach. In rural areas of colonial America, they took over plantation outbuildings or empty space in a local farmhouse or meetinghouse. One method colonists employed to lessen the cost of schooling orphan and poor children was to follow the British example and limit free girls to reading and sewing taught by poorly paid schoolmistresses, who, prior to the Revolution, rarely were allowed to teach the full Three Rs. None of the colonies required writing for girls until at least midcentury. Excluded from almost all schooling were enslaved boys and girls, and some colonies specifically forbade anyone to teach them handwriting. Another 1–2 percent of children east of the Mississippi lived outside colonial settlements in their own Indigenous communities. Aside from a reference in a 1727 Connecticut

⁷Ruth Wallis Herndon and John E. Murray, eds., *Children Bound to Labor: The Pauper Apprentice System in Early America* (Ithaca, NY: Cornell University Press, 2009).

⁸M. G. Jones, *The Charity School Movement: A Study of Eighteenth-century Puritanism in Action* (Cambridge: Cambridge University Press, 1938); James Talbot, *The Christian School-Master: or, the Duty of Those Who Are Employ’d in the Publick Instruction of Children: Especially in Charity-Schools* (London: Downing, 1707), 78–86.

Table 1. Statutory Requirements for the Education of Youth in Mainland British Colonies

| Colony | Free Boys | Free Girls | Indigenous | Enslaved |
|----------------|--|------------------|------------|----------------------|
| Massachusetts | 1642 r; 1647 w&r*; 1710 r&w; 1741 r, w&c | 1642 r; 1771 r&w | | |
| Connecticut | 1650 w&r* | 1650 r | 1727 r | |
| New Hampshire | 1712 r&w | 1766 r | | |
| Rhode Island | Local level only | Local level only | | |
| New York | Local level only | Local level only | | |
| New Jersey | 1758 r&w | 1758 r&w | | |
| Pennsylvania | Local level only | Local level only | | |
| Delaware | Local level only | Local level only | | |
| Maryland | Local level only | Local level only | | |
| Virginia | 1705 r&w** | 1748 r&w** | | |
| North Carolina | 1762 r&w | 1762 r&w | | |
| South Carolina | Local level only | Local level only | | 1740 w ban |
| Georgia | Local level only | Local level only | | 1755 w 1770 r ban |

Notes: r = read; w = write; c = cipher (basic arithmetic). Ban refers to legislation prohibiting the teaching of writing and/or reading to the enslaved population.

*The placement of “write” before “read” in the seventeenth-century statutes makes it likely that “write” was being used in the older sense of spelling out words, not as in handwriting.

** Until 1769, the statutes did not apply to pauper apprentices born to unwed mothers.

Sources: Elsie W. Clews, *Legislation and Administration of Colonial Governments* (New York: Macmillan, 1899). For the New England colonies and Virginia: Marcus Wilson Jernegan, *Laboring and Dependent Classes in Colonial America, 1607–1783*, 2nd ed. (New York, Frederick Ungar, 1956), chapters 6–11. For New Jersey: “Act for the Settlement and Relief of the Poor,” in *The Acts of the General Assembly of the Province of New Jersey from the Year 1753* (Woodbridge, NJ, 1761), 228. For North Carolina: Karin L. Zipf, *Labor of Innocents: Forced Apprenticeship in North Carolina, 1715–1919* (Baton Rouge, LA: LSU Press, 2005), 16–17. For South Carolina: David J., McCord, ed., *The Statutes at Large of South Carolina*, vol. 7, *Containing the Acts Relating to Charleston, Courts, Slaves, and Rivers* (Columbia, SC: A. S. Johnston, 1840), 397. For Georgia: *Watkins Digest of Statutes* (Philadelphia: R. Aitken, 1800), 177.

statute on reading, probably related to religious conversion, the Indigenous population escaped specific mention in any legislation. Many Native peoples had mixed feelings about English literacy and ciphering, believing them to undercut their own languages and cultural systems.⁹

To comprehend more fully the demographic context for these statutes, Table 2 provides a breakdown by age, gender, and race in each colony circa 1770. The second column of numbers indicates the percentage of the population aged 0 to 15. It constituted an estimated 48.7 percent, almost half of inhabitants. For purposes of comparison, those ages today constitute 18.5 percent of the US population.¹⁰ Even by

⁹Hilary E. Wyss, *English Letters and Indian Literacies: Reading, Writing, and New England Missionary Schools, 1750–1830* (Philadelphia: University of Pennsylvania Press, 2012).

¹⁰US Census Bureau, *National Population by Characteristics: 2010–2019* (Washington, DC: Governmental Printing Office, 2019), <https://www.census.gov/data/tables/time-series/demo/popest/2010s-national-detail.html>.

Table 2. Estimated Population, Ages 0–15, British Colonial and Indigenous, ca. 1770

| Colony | Total population | % of population 0–15 | % of 0–15 population White males | % of 0–15 population White females | % of 0–15 population non-White |
|-----------------------|------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|
| Massachusetts | 290,900 | 47.7% | 50.2% | 48.2% | 1.6% |
| Connecticut | 197,842 | 44.4% | 49.3% | 47.1% | 3.7% |
| New Hampshire | 62,396 | 50.8% | 49.6% | 48.9% | 1.0% |
| Rhode Island | 59,607 | 46.0% | 46.4% | 45.0% | 8.6% |
| New York | 162,920 | 45.9% | 45.4% | 43.7% | 10.9% |
| New Jersey | 117,431 | 49.1% | 47.9% | 46.0% | 6.1% |
| Pennsylvania | 240,057 | 49.1% | 49.9% | 47.9% | 2.2% |
| Delaware | 35,496 | 50.0% | 49.1% | 45.4% | 5.5% |
| Maryland | 202,599 | 51.5% | 35.1% | 32.4% | 32.5% |
| Virginia | 447,016 | 50.2% | 28.9% | 26.7% | 44.5% |
| North Carolina | 197,200 | 50.2% | 32.6% | 30.0% | 37.4% |
| South Carolina | 124,244 | 51.6% | 19.6% | 18.1% | 62.4% |
| Georgia | 23,375 | 51.6% | 27.6% | 25.5% | 46.9% |
| TOTAL British ruled | 2,161,083 | 48.9% | 39.7% | 37.6% | 22.7% |
| Indigenous controlled | 50,000 | 40.0% | | | 100% |
| TOTAL All | 2,211,083 | 48.7% | 39.0% | 36.9% | 24.1% |

Sources: Carole Shammas, "Defining and Measuring Output and the Workforce in Early America," paper delivered at the Economy of Early British America: The Domestic Sector conference, Huntington Library, October 27–29, 1995; John J. McCusker, "Colonial Statistics," in Susan B. Carter et al., *Historical Statistics of the United States*, vol. 5, *Government and International Relations* (New York: Cambridge University Press, 2006), 651–64; Robert V. Wells, *The Population of the British Colonies in America* (Princeton: Princeton University Press, 1975). Indigenous estimate for northeastern and southeastern Indians, see Douglas H. Ubelaker, "North American Indian Population Size, A.D. 1500 to 1985," *American Journal of Physical Anthropology* 77 (1988), 289–94, esp. 292. Subtracted from the total Indigenous are his estimates of Florida and eastern Canadian Indians.

early modern European standards, the colonies' proportion of youth ranked high and imposed a special economic burden. The equivalent figure of those aged 0–15 for England at the time stood at about 35 percent.¹¹ Under the circumstances, the colonies should be credited for their concern about the Three Rs.

On the other hand, a side-by-side comparison of the table on population and the statutes in Table 1 shows that the concern tended to be selective. About 37 percent of youth consisted of girls of European descent, and the savings that came from not including handwriting and arithmetic were considerable, a practice very common in Europe as well. The Indigenous population, which had shrunk over the course of the colonial period, preferred largely to live outside British settlements.¹² Close examination of missionary activities directed at Native communities reveal that their monetary support almost entirely depended on fundraising in England and Scotland.¹³

The most obvious lacunae in educational provisions related to the over 90 percent of enslaved African American and mixed-race children, who represented nearly 23 percent of mainland children ages 0–15. Thus, the reading and writing statutes in Virginia and North Carolina did not apply to nearly half of Virginia children and over a third of those in North Carolina. South Carolina only had bans on education at the colony level. Residents were forbidden to teach writing to 62 percent of the children in the colony. Unlike Indigenous youth, the records indicate that free Black children expressed enthusiasm for charity schooling when rare opportunities arose.¹⁴

Evidence on Schooling Duration in Children's Indentures

The statutes reveal that over time, the academic skills that colonial governments set as minimums for free children, including the poor, increased or were instituted. We know that to meet writing and arithmetic requirements, most households would have needed to rely on tutors, schoolmasters, or schoolmistresses of some type. But we must look elsewhere to find out how the increased standards affected the amount of time children spent in class. As mentioned above, the British charity school standard set the length of time for boys to learn the Three Rs at four full years, not too different from modern prescriptions. But that standard was aspirational. One source for information about the actual changing minimum requirements for skills and the duration allowed for children to learn them is apprentice indentures, including those for orphans and indigent youth. In Britain and in its colonies, parish, poorhouse, or

¹¹E. A. Wrigley and R. S. Schofield, *The Population History of England 1541–1871* (Cambridge: Cambridge University Press, 1989), 528–29.

¹²David J. Silverman, *Red Brethren: The Brothertown and Stockbridge Indians and the Problem of Race in Early America* (Ithaca, NY: Cornell University Press, 2010).

¹³Carole Shammass, "Three Rs Schooling on a Shoestring Budget in British America," paper presented at the USC Huntington Library EMSI American Origins Seminar, Los Angeles, CA, Sept. 24, 2022. Copy available from author.

¹⁴For example, the New York Society for the Propagation of the Gospel catechists, Thomas Bray Associates, and Anthony Benezet, teacher for the Society of Friends, all write of the interest that African Americans, free and enslaved, expressed. Shammass, "Three Rs Schooling on a Shoestring Budget in British America."

county authorities placed or sometimes auctioned off children whose parent(s) had died, abandoned them, or could not afford to maintain them. This system reduced the cost of a locality's poor relief. Such youth, called "parish apprentices" or "pauper apprentices," had to work for their new master and mistress up to the age of twenty-one if a boy, or sixteen to eighteen if a girl. In England, with a smaller percentage of children fifteen and under, and masters who often balked at taking on young pauper children unless paid a premium to do so, indentures did not include any Three Rs provisions. Most of the indentured had attained the age of ten or more and already received whatever education they might be given by the parish or a charity school. As mentioned above, the situation differed somewhat in the colonies. In America, with its greater proportion of the population under 15, more demand for labor, and less of a stockpile of charitable school endowments, localities depended more heavily on the use of pauper indentures at younger ages. Thus, one finds education clauses in the indentures that do not appear in those for Britain.¹⁵

Given early modern mortality rates, many children not born into poverty later fell into it, owing to the death of one or more parents. A detailed study of colonial Massachusetts townships found that on average, 44 percent of children had been orphaned before they reached the age of twenty-one, and thus were more at risk to be put into the households of others.¹⁶ This statistic surprises, because New England possessed one of the longest life expectancy rates in early America. Children whose father died were viewed as orphans even if their mother survived. If their mother lacked the means to keep them, some of these children might work for relatives or friends of the family. The rest fell into forced apprenticeship to strangers who needed servants or farmhands.

Indentures, both the voluntary form agreed to by parents, guardians, and apprentices and the so-called pauper or parish apprentice contracts, which local authorities drew up to get children off the relief rolls and into households, survived in substantial numbers in eighteenth-century early America. Records indicate that many officials took the instructional obligations seriously, because clerks inserted into the printed forms any deviations in the provisions, such as parents agreeing to pay for all or part of schooling costs. Local and even appellate courts heard cases charging a breach in apprenticeship agreements, including those pertaining to the education clauses.¹⁷ To be clear: the indenture clauses dealt with elementary instruction, not a liberal education designed to prepare free White boys for leadership roles in society. Most

¹⁵Steve Hindle, *On the Parish? The Micro-Politics of Poor Relief in Rural England c. 1550–1750* (New York: Oxford University Press, 2004), 191–223; Herndon and Murray, *Children Bound to Labor*; Karin L. Zipf, *Labor of Innocents: Forced Apprenticeship in North Carolina, 1715–1919* (Baton Rouge, LA: LSU Press, 2005).

¹⁶Barry Levy, *Town Born: The Political Economy of New England from Its Founding to the Revolution* (Philadelphia: University of Pennsylvania Press, 2009), 237–63.

¹⁷Lyon Gardiner Tyler, "Education in Colonial Virginia, Part I: Poor Children and Orphans," *William and Mary Quarterly* 5, no. 4 (April 1897), 219–23; Jernegan, *Laboring and Dependent Classes*, chap. 11; Christine Daniels, "Liberty to Complain: Servant Petitions in Maryland, 1652–1797," in *The Many Legalities of Early America*, ed. Christopher Tomlins and Bruce H. Mann (Chapel Hill: University of North Carolina Press, 2001), 230–33, 241–42; and "Houser v. Reynolds," in John Haywood, Reporter, *Cases Adjudged in the Superior Courts of Law and Equity of the State of North Carolina*, vol. 1, in *North Carolina Reports*, vol. 2, 103–104, <https://digital.ncdcr.gov/digital/collection/p16062coll14/id/30422/>.

colonial legislation regarding the *public* funding of schools concerned Latin grammar schools, academies, and colleges that provided an institutional base for a liberal education, but only a minute proportion of youth actually attended them.¹⁸

Tables 3 and 4 display the kinds of education clauses that appear in eighteenth-century indentures for boys and for girls. Most of the locations in the tables are cities, but in a number of them, the masters who contracted for the apprentices lived in the countryside. The most common educational clause inserted into the indenture described the specific Three Rs skill or skills being promised to the apprentice or servant. If the colony had passed a statute, the indenture usually conformed to the law. In the absence of statutes, the local authority had more flexibility but often also adhered to what had become common assumptions during the eighteenth century: namely, that boys should receive reading and writing instruction and, after midcentury and in some places, also ciphering instruction. Girls were promised reading as well as needlework lessons and, after midcentury, writing. Free children of color or mixed race often had fewer skills promised than their free White counterparts and yet longer terms of service, if anyone bothered to write up a contract at all. Because the samples had relatively few non-White boys and girls, I did not break the numbers down by race in Tables 3 and 4, but will discuss race later. Mixed-race and free Black children appear to be under-represented in the surviving indentures, and boys, when indentured, received fewer skills than Whites and longer terms of service.

For our purposes here—to understand the early American work-study regime for children—the most important information in Tables 3 and 4 concerns the alternative method of promising basic education and setting the amount of time masters would pay for the schooling of their apprentice. These provisions have been viewed as the more serious and verifiable commitment to education, because provisions simply enumerating skills to be acquired could be more easily evaded through claims of home schooling than could the pledge to pay a quarter's tuition for school each year.

Tables 3 and 4 also provide the ratio of the average number of quarters promised to the average number of years apprentices had to serve. There is little evidence of any long-term trend upward over the century. More important was the status of the apprentice, whether parents or guardians had contributed money to the master to take the child or s/he were a pauper. Poorhouse apprentices would not have that support. In this early eighteenth-century sample, for boys, the highest number of quarters were found in New York City. On average, 6.5 quarters total or a little less than one quarter per year of service on average prevailed. In the New York pauper apprenticeships, at the end of the century the authorities had begun requiring a quarter a year. Most of the other samples averaged about three quarters total for apprenticeship

¹⁸It is estimated that as late as the 1830s, Massachusetts, with 60 percent of its under-twenty population enrolled in school, sent 15 percent of these enrollees to secondary and tertiary educational institutions, meaning about 9 percent of the total age group. See J. M. Opal, "Exciting Emulation: Academies and the Transformation of the Rural North, 1780s-1820s," *Journal of American History* 91, no. 2 (Sept. 2004), 462; and Carl F. Kaestle and Maris Vinovskis, *Education and Social Change in Nineteenth-Century Massachusetts* (Cambridge: Cambridge University Press, 1980), 34. Given the near absence of colonial girls at such institutions in the eighteenth-century and the small number of those schools for boys, except in half a dozen cities, a range of 2–4 percent of children attending over the period seems reasonable. Not all students in Latin grammar schools were studying Latin.

Table 3. Education Type and Duration in Indentures with Education Clauses, 1695–1811: Eighteenth-Century Boys' Apprenticeship Indentures

| | N | % read only | % read, write | % read, write, cipher | % with quarters of school | Average # qtrs / average # yrs of term | % of schooling evening when indicated |
|---------------------------------|-----|-------------|---------------|-----------------------|---------------------------|--|---------------------------------------|
| Md. East. Shore poor, 1700–1729 | 233 | 48.1 | 51.9 | 0.0 | 0.0 | NA | NA |
| NYC, 1695–1727 | 155 | 1.3 | 19.4 | 16.1 | 63.2 | 6.5/7.4 | 100.0 |
| Md. East. Shore poor, 1730–59 | 376 | 12.8 | 87.2 | 0.0 | 0.0 | NA | NA |
| Boston poor, 1740–51 | 122 | 0.0 | 0.0 | 100.0 | 0.0 | NA | NA |
| Piedmont Va. Parishes, 1742–85 | 88 | 0.0 | 73.9 | 3.4 | 22.7* | NA | NA |
| Phila., 1745–46 | 62 | 1.6 | 27.4 | 14.5 | 56.5 | 3.3/6.8 | 93.2 |
| Phila. poor, 1751–71 | 202 | 0.5 | 6.4 | 74.2 | 18.8 | 3.2/7.0 | 72.0 |
| Boston poor, 1752–79 | 352 | 0.0 | 0.3 | 99.7 | 0.0 | NA | NA |
| Phila., 1771–73 | 529 | 0.0 | 5.7 | 23.3 | 70.7 | 3.5/6.3 | 92.1 |
| Boston, 1780–1805 | 231 | 0.0 | 0.0 | 100.0 | 0.0 | NA | NA |
| Phila poor, 1779–97 | 99 | 2.1 | 7.1 | 38.3 | 52.5 | 4.3/6.7 | 88.6 |
| NYC poor, 1792–94 | 134 | 0.0 | 0.0 | 30.6 | 69.4 | 5.6/6.1 | NA |
| Wash. DC, 1801–11 | 231 | 0.0 | 1.7 | 54.5 | 43.7 | 2.8/5.6 | 86.8 |

Note: *These Virginia parishes indicated years, not quarters, and duration ranged between one and two years. It is unclear whether this denotes a full year or one quarter each year.

Sources: Maryland Eastern Shore (Talbot and Somerset counties) in Jean B. Russo and J. Elliott Russo, "Responsive Justices: Orphans and Illegitimate Children in Colonial Maryland," in Herndon and Murray, eds., *Children Bound to Labor*, 161–62; "New York Indentures 1694–1707," Department of Records and Information Services, Municipal Archives, New York City; "Indentures of Apprenticeship" (incomplete abstracts) in *Collections of the New York Historical Society for the Year 1885* (New York: Trow & Smith 1886), 565–622; New York Indentures, 1718–1727, in "New York Historical Society, New York, Subseries I: Colonial Indentures v.1" (incomplete abstracts) in *Collections of the New York Historical Society*, . . . 1909 (New York, 1910); *Boston Overseers of the Poor*, 6 vols. Rare Books and Manuscripts room, Boston Public Library; Lawrence W. Towner, "The Indentures of Boston's Poor Apprentices," *Publications of the Colonial Society of Massachusetts: Transactions*, vol. 43 (1956–1963) (Boston: Colonial Society of Massachusetts, 1966), 417–68; Ruth Wallis Herndon, "'Proper' Magistrates and Masters: Binding Out Poor Children in Southern New England, 1720–1820," in Herndon and Murray, *Children Bound to Labor*, 39–51; "Philadelphia indentures, 1745–1746," in George W. Neible, ed., "Servants and Apprentices Bound and Assigned before James Hamilton, May of Philadelphia, 1745," *Pennsylvania Magazine of History and Biography* 30–32 (1906–1908); Philadelphia indentures, 1771–1773, in *Records of Indentures of Individuals Bound out as Apprentices, Servants, Etc. . . . 1771 to . . . 1773* (Lancaster, PA, 1907), American Philosophical Society, vol. 1, missing pp. 66–83, which along with the whole volume are abstracted in *Pennsylvania German Society* 16 (1907), online at <http://www.archive.org/stream/recordofindentur16phil>; *Bonds of Indemnity and Memorandum of and Indentures of the Poor, 1751–1797*, Philadelphia City Archives; New York City Indentures, subseries 2, v.2, Boys (1792–1794) Almshouse and Bridewell, New York Historical Society; Washington, DC Indentures in Indentures of Apprenticeship Recorded in the Orphans Court, Washington Co., District of Columbia 1801–1811, RG 21 National Archives, NARA microfilm roll M2011.

Table 4. Education Type and Duration in Indentures with Education Clauses, 1695–1811: Eighteenth-century Girls' Apprenticeship Indentures

| | N | % read only | % read, write | % read, write, cipher | % with quarters of school | Average # qtrs. / average # yrs. of term | % of schools evening when indicated |
|---------------------------------|-----|-------------|---------------|-----------------------|---------------------------|--|-------------------------------------|
| Md. East. Shore poor, 1700–1729 | 119 | 95.8 | 4.2 | 0.0 | 0.0 | NA | NA |
| NYC, 1695–1727 | 17 | 70.6 | 29.4 | 0.0 | 0.0 | NA | NA |
| Md. East. Shore poor, 1730–59 | 114 | 92.1 | 7.9 | 0.0 | 0.0 | NA | NA |
| Boston poor, 1740–51 | 87 | 3.4 | 86.3 | 10.3 | 0.0 | NA | NA |
| Piedmont, Va., 1742–85 | 33 | 72.7 | 24.2 | 0.0 | 3.3* | NA | NA |
| Phila., 1745–46 | 18 | 27.7 | 61.1 | 0.0 | 11.1 | 3.5/5.0 | 0.0 |
| Phila. poor, 1751–71 | 158 | 7.0 | 48.7 | 41.8 | 2.5 | 2.3/3.7 | 0.0 |
| Boston poor, 1752–79 | 237 | 1.3 | 97.9 | 0.8 | 0.0 | NA | NA |
| Phila., 1771–73 | 188 | 9.0 | 55.9 | 12.2 | 22.9 | 2.9/7.2 | 16.6 |
| Phila poor, 1779–97 | 46 | 19.6 | 21.7 | 30.4 | 28.3 | 4.0/7.4 | 25.0 |
| Boston poor, 1780–1805 | 174 | 0.0 | 45.4 | 54.6 | 0.0 | NA | NA |
| Wash. DC, 1801–11 | 25 | 16.0 | 48.0 | 20.0 | 16.0 | 1.75/4.1 | 0.0 |

Note: Girls' indentures usually included sewing as well. Va. parishes indicate one year; it is unclear whether this denotes a whole year or one quarter in the year. Sources: See [Table 3](#) above.

Table 5. Percentage of Apprenticeship Indentures Promising Either 3Rs Skills or Quarters Schooling, by Age of Youth

| | Boys < 10 | Boys 10–14 | Boys 15 & > | Girls <10 | Girls 10–14 | Girls 15 & > |
|----------------------------|------------|------------|-------------|------------|-------------|--------------|
| NYC, 1695–1727 | 76.5 (17) | 62.2 (185) | 37.0 (73) | 43.7 (16) | 50.0 (20) | 0.0 (0) |
| Phila., 1745–46 | 100 (19) | 75.0 (28) | 59.4 (37) | 91.7 (12) | 100.0 (7) | 0.0 (0) |
| Phila. poor, 1751–71 | 67.4 (135) | 79.5 (83) | 71.4 (63) | 75.4 (138) | 85.5 (55) | 87.5 (8) |
| Phila., 1771–73 | 99.0 (87) | 86.0 (242) | 59.8 (392) | 98.9 (94) | 90.9 (88) | 53.6 (28) |
| Phila. poor, 1779–97 | 87.1 (31) | 88.9 (36) | 81.7 (49) | 92.9 (28) | 86.4 (22) | 50.0 (3) |
| NYC poor, 1792–94 | 100.0 (8) | 100.0 (59) | 98.5 (68) | NA | NA | NA |
| Washington, DC, 1801–11 | 84.6 (26) | 83.5 (115) | 57.1 (198) | 44.4 (18) | 63.0 (27) | 0.0 (2) |

Note: The number of total observations for each cell appears in parentheses.

Sources: See [Table 3](#) above.

terms that were twice as long. Moreover, practically all quarters were to be taken at night during the slow winter period, meaning they were more like half or even one-third of a day of instruction. Night schools went from six p.m. to eight or nine p.m. during weekdays. A quarter of night school amounted to about 180 hours a year of schooling, or the equivalent today of about a month and a half of school. The urban locales were rapidly accepting the standard of specifying the skills being offered—reading, writing, and ciphering—or setting the number of quarters such skills would be offered. All the voluntary (non-poor) indenturing favored pledges of formal schooling, something that seldom appears in the pauper apprenticeships until after the Revolution. The Piedmont Virginia indentures did not specify quarters but years or fractions of years between one year and two years, and rural areas were much less likely to feature night schools. One suspects, however, that a year of schooling meant a quarter of a year. Clearly, the amount of time promised fell short of the standard four full years of instruction that the English charity school recommended though not necessarily followed for itself.

Less had to be invested in girls' education. Also, a comparison by locale of the number of girls' labor contracts with the number for boys reveals that the former much less often merited indentures, meaning most likely that more girls at young ages went into service without any promise of schooling. Until the mid-eighteenth century, even those girls with written agreements received instruction in sewing rather than handwriting. Consequently, the mistress of the house could probably provide all the educational services in the contract. After 1750, writing instruction came to be added in most places, but seldom did girls get promised quarters of schooling or arithmetic. The Boston indentures show how closely the Overseers of the Poor followed the Massachusetts law. Only when the legislation changed, at the end of the 1780s, did the Boston overseers require masters to offer ciphering for females, something the Philadelphia authorities frequently demanded from the 1770s on. Boys in the Washington, DC area at the beginning of the nineteenth century received education similar to their counterparts in more northern cities, but that was not the case with girls in and around the nation's capital, even though they were not, technically at least, paupers.

Could it be that apprentices might not have received all Three Rs or more quarters of schooling because they already knew how to read, write, or do basic arithmetic? Looking at the ages of apprentices should provide some insight into that question. [Table 5](#) shows the percentage of boys and of girls in three age groups—under ten years of age, ten to fourteen years, and those fifteen and over—with education clauses (i.e., either one or more Three Rs skills or quarters of schooling) in those data sets where the age could be estimated. By no means did all children, even under ten, have education clauses, but over the course of the eighteenth century the proportions increased. As observed in [Table 3](#), many fewer girls merited indentures, and not until the last half of the eighteenth century did any show up for girls after age fourteen. Presumably most just went into household service without any contract.

With one exception, racial discrimination cannot be blamed for the absence of educational clauses in these data because few children of color received indentures. In most of the samples, those for New York and Philadelphia and for boys in Washington, DC, the proportion of those children described as Black, mulatto, or

Indian constituted less than a few percentage of all children. Only in the case of girls indentured in Washington, DC, did the education provided or lack thereof affect the results, and that was at least partially because of the small number of girls of any race indentured in comparison to boys. There were 345 boys with indentures but only 47 girls with them, and out of that number 10, or over 20%, were of color. None of the latter received *any* promise of education. Thus, the reporting in Table 4 shows in all age groups a lower proportion of apprenticed girls receiving indentures with education clauses in Washington, DC, than in other later eighteenth-century urban locales. This educational situation did not apply as much to boys of color in the capital city.¹⁹

The most enlightening pieces of schooling information in Table 5 concern the relatively high proportion of boys fifteen and over whose indentures included educational clauses. In every sample except the first one, well over half included them. As masters were responsible for no more than the teaching of the Three Rs, that curriculum could be completed by age ten or twelve, depending on when they began their schooling. Training apprentices for an artisanal or commercial trade would commonly begin around age fourteen, and at that point it would be expected that a boy would be literate.²⁰ For those going into agriculture, it might have been thought that colonials, anxious to employ youth, would try to cram all instruction into the years before age ten. In the pauper indentures one often sees the statement that youth would learn the “mystery” of “husbandry” or “housewifery,” which was a fancy way of saying that they would be performing agricultural or domestic service. The learning being promised in these eighteenth-century indentures consisted *at most* of reading the Bible, writing legibly, and basic arithmetic, skills that today are largely mastered by the fourth grade. That was not the case here. The indentures made for those age ten to fourteen contained almost as high a percentage of education clauses or in some cases a higher percentage than those under ten, while even in the voluntary [non-poor] samples, a majority of the contracts for boys fifteen and over still had the provisions. For girls, in most of the samples the prime time for provisions concerning their education occurred in the ten-to-fourteen age bracket, not the under-ten one. Little in the way of clauses appear in the fifteen-and-older category, as their period of service had to terminate at age eighteen (sixteen in the South) while boys continued until twenty-one.

The mystery of superannuated children being promised literacy training is partially solved by resorting to the two samples of boys’ indentures containing signatory evidence, one at the beginning of the eighteenth century and the other at the start of the nineteenth. Both involve voluntary indentures, not pauper apprenticeships. Table 6

¹⁹Herndon, “Magistrates and Masters,” pp. 49–50 notes the absence of indentures for children of color in Boston when placed in households, despite their presence in the almshouse. The records in Rhode island and Connecticut, however, did include indentures for Black, Mulatto, and Indigenous children.

²⁰Just as with the pauper apprenticeships, regular apprenticeships in England made this assumption. See Sylvia L. Thrupp, *The Merchant Class of Medieval London* (Ann Arbor: University of Michigan Press, 1948), 155–63; Joan Lane, *Apprenticeship in England, 1600–1914* (London: Routledge, 1996), 65 and Appendix 1. At least some English workhouses did maintain a schoolroom. See E. E. Butcher, *The Bristol Corporation of the Poor 1696–1834* (Bristol Record Society, 1931), 6, 17–18, 68, 75, 92, 102, 109.

Table 6. Percentage of Boys' Indentures Bearing a Signature Rather than a Mark

| Age Group | New York, 1694–1727 | Washington, DC, 1801–11 |
|--------------|---------------------|-------------------------|
| Under 10 | 0.0 (16) | 0.0 (7) |
| 10–14 | 18.9 (106) | 25.0 (44) |
| 15 and above | 52.4 (63) | 62.4 (109) |

Note: The numbers in parentheses are the total observations.

Sources: See references to New York Indentures, 1694–1707 and 1718–1727, and Washington, DC Indentures of Apprenticeships in the Orphans Court, 1801–1811, in [Table 3](#) above.

reveals that all of the boys under the age of ten had a mark after their name. It is a small group, though. In contrast to the Overseers of the Poor and the county courts whose largest clientele were under ten, only a limited numbers of parents or guardians opted to put their sons into a trade at such a young age, and many masters did not want them. Those ages ten to fourteen, however, constitute a much larger portion of those voluntarily indentured, and only 19 percent in early eighteenth-century New York City and 25 percent in the first decade of the nineteenth century in the Washington, DC area could write their name on the contract. The percentage improved considerably with the fifteen and over age group: 52 percent and 62 percent, respectively, could sign in the New York and Washington, DC samples. Probably the improvement is somewhat exaggerated, as many of those who began their indentures late were apprenticed to goldsmiths, merchants, navigators, or similar types of masters who would not have taken on boys who lacked literacy skills. In other words, one cannot assume that those apprenticed below age fifteen would have had the same signatory ability when they themselves reached their later teens. On the other hand, it is hard to imagine that some of the jump does not come from later learners. The issue is moot with girls, as only one female, an apprentice in the Washington, DC sample, signed her indenture.²¹

The evidence from indentures suggests that the amount of schooling masters had to provide would seldom have placed major impediments in the way of work, and that a child who grew old enough to be indentured—many children apprenticed by Overseers of the Poor were under ten—was a child mature enough to be considered a worker.²² What this educational regime did seem to do was to stretch out primary schooling into the later teens. But the evidence mainly covers those, often poor, indentured in urban areas. What do we know about the situation for the more general population of children who overwhelmingly lived in the countryside, where no night schools existed and the work schedule might be even more seasonal? To answer that question, let us turn to a statewide survey at the end of the eighteenth century.

²¹Gloria L. Main, "An Inquiry into When and Why Women Learned to Write in Colonial New England," *Journal of Social History* 24, No. 3 (Spring, 1991), 579–589 finds later learners in her group of New England women signers.

²²Fifty-one percent of the Boston poor apprentices were under ten years old, as were 57 percent of those in Philadelphia, 1751–1771, and 35 percent of those in the same city in 1779–1797.

The New York State Survey of Schooling in 1798

Most attendees of schools offering the Three Rs had parents or guardians who paid for their tuition, textbooks, and stationery supplies, and covered the cost of fuel to heat the classroom. British philanthropists associated with the Anglican Church and the Society of Friends in Philadelphia had provided some support to local schoolmasters taking in some charity students, and even opened up a few actual charity schools in the main cities. The British funding, however, ended with the American Revolution. In the early national period, most states debated whether to offer more governmental support for primary schooling, but no national program emerged, and states offered little systematic information about enrollment and attendance. The best data the end of the eighteenth century has to offer came out of New York State—from a short-lived egalitarian educational initiative subsidizing teacher pay. This subsidy occasioned a 1798 survey attempting to cover all those going to school in the state's townships, and thereby encompassing a variety of socio-economic classes, not just the rich or the poor or the urban. It includes statistics on the length of school terms, enrollments, and children's attendance.²³

Table 7 reveals the level of school participation in those 114 townships in sixteen counties that responded to questions regarding the number of schools, the number of students, and the total number of days of instruction. By the latter, the state apparently meant the number of days students actually were present. Twenty-two of the townships, however, interpreted days of instruction as the number of days teachers taught classes. The statistics for both of these measures of instructional days are shown.²⁴ The experience of about sixty thousand students and 1,352 schools was submitted. One hundred seventy-six townships failed to report, seven counties having not a single township filling out the forms. The schools were largely elementary-level schools and charged tuition, as was the case all over the early United States.

At first glance, Table 7 shows New York in 1798 to be quite advanced educationally, measuring up well with later time periods. To draw points of comparison with the nineteenth century: the federal census of 1850 reported that 74.1 percent of all free children in the state ages five to fifteen had enrolled in school, whereas in 1798 the proportion reached 64.1 percent, and slightly higher (66.2 percent) if enslaved children five to fifteen are removed from the denominator, as they are in the 1850 statistics. Average days of attendance in New York in 1870, according to the first annual report of the US Commissioner of Education, stood at 76.9 days, very near the 73 days in 1798. And if one takes the number of days taught per school as an indication of the days available for township students to go to school, then it exceeds New York's average of 176 days in 1870. Before popping out the cork and pouring the champagne, however, a few points should be noted. First, less than

²³On this legislation, see Elsie Garland Hobson, *Educational Legislation and Administration in the State of New York from 1777 to 1850* (Chicago: University of Chicago Press, 1918), 25–29; and Carl F. Kaestle, *The Evolution of an Urban School System: New York City, 1750–1850* (Cambridge, MA: Harvard University Press, 1973), 64–69.

²⁴New York had twenty-three counties and 289 rural townships and three cities (New York City, Albany, and Schenectady) in 1800. The *Assembly Journal* noted that nineteen townships provided information on instructional days taught rather than days attended, but they missed three—Orange, North Hempstead, and Charleston.

Table 7. 1798 New York Survey of Schools, Students, and Days of Instruction, by Townships

| | % of children 5–15 enrolled* | Students per school | # Days attended per student | # Days taught per school |
|--------|------------------------------|---------------------|-----------------------------|--------------------------|
| N | 114 | 114 | 92 | 22 |
| Mean | 64.1 | 44.2 | 73.0 | 182.1 |
| Median | 63.5 | 44.7 | 70.4 | 185.1 |

*Population 5–15 calculated by assuming 45 percent of the 1800 free White males and females under 10 were 5–9, adding those 10–15, and assuming that 30 percent of other free persons and 30 percent of slaves were 5–15. The percentage for White children 5–9 is based on the 1830 census proportions, and that for other free persons and slaves is based on the 1850 census.

Sources: New York State, *Journal of the Assembly . . . 21st Session* (Albany, NY: Loring Andrews & Co., 1798), 282–85; United States Bureau of the Census, *Return of the Whole Number of Persons . . . of the United States . . . Second Census [1800]* (Washington, DC, 1801), 27–33.

half of the townships participated: were they more likely to be those with few schools and students? Probably many were, although New York City and Clermont township in Columbia County are among the missing, and we know that the former had relatively good enrollments and the latter good attendance.²⁵ Thus we cannot assume that all those not reporting were below the average. The numbers reported, however, may have been affected by the fact that the authorities took this survey in order to distribute a pot of money for schooling. The townships received subsidies according to their share of the state’s taxable inhabitants, but they distributed the funds to the schools on the basis of attendance. The state legislature possessed little means to check on reports submitted, and in fact no other statewide count exists until later in the nineteenth century. We have to assume that the figures are upper-bound estimates.

In the case of some townships, the number enrolled exceeded the number of children ages five to fifteen reported in the 1800 census—not a good sign. Census undercounts and the crossing of township and county lines to attend a particular school may explain some of these odd results, but it is also probable that inflation in the number of enrolled students occurred. Another problem that plagues enrollment numbers from schools until the later nineteenth century is the double counting of students who attended multiple terms. Many early American communities hosted a winter school and a summer school where women taught reading to small children. These seasonal schools could even be broken up in parts in order to reduce the cost to parents.²⁶ Thus some students that attended more than one term could have been counted twice.

Attendance statistics suffer from a different problem. Whether a student’s attendance occurred at one school or two schools or more mattered little for this set of numbers, but students during this period might have only attended school for a

²⁵Kaestle, *The Evolution of an Urban School System*, 185; John L. Brooke, *Columbia Rising: Civil Life on the Upper Hudson from the Revolution to the Age of Jackson* (Chapel Hill: University of North Carolina Press, 2010), 254–55.

²⁶On the breaking up of a winter school term into two parts, see William J. Gilmore, “Truants and Scholars: Daily Attendance in the District School: A Rural New England Case, 1828–1829,” *Vermont History* 53, no. 2 (1985), 95–103.

half day for a substantial percentage of the days. Many children exercised this option, whether it be on an ad hoc basis or on specific days to cut down on tuition costs.²⁷ It is unclear if those reporting in 1798 differentiated between full-day and half-day instruction. Although originally the money voted for schools was to be directed only to elementary-level schools, as colleges and academies had more funding options, the supporters of the secondary- and tertiary-level institutions prevailed in amendments. Consequently, some higher attendance in townships may reflect the presence of these type of schools in the statistics.

Schools teaching the Three Rs were small, not yet organized into larger bureaucratic school districts, and usually synonymous with a teacher. Note in [Table 7](#) both the average and the median size of schools came to forty-four students, a large group for one classroom but only if everyone attended every day, which, as we know, was not the case. The number of days taught per school amounted to the total number of days taught by teachers. Twenty-two townships provided this information rather than attendance information. Unlike the statistics put out from 1870 on by the Office of Education, this number does not represent the days that all schools had to be open, but more likely the total number of days during the year that some school was in session, with students not necessarily enrolled in all the sessions. Some might go just during the winter session, frequently boys, and others, frequently girls and small children, just during the summer session. If the average days of attendance in [Table 7](#) are divided by the average days taught, it results in a 40 percent attendance rate, very similar to the rate John Brooke found in a set of records for a model school in Clermont township, Columbia County, compiled but never submitted to the state authorities in 1798.²⁸ This school's attendance records, among the earliest available, also show that girls, only a quarter of the pupils, seldom enrolled unless a brother also went, and that only boys studied arithmetic.

Breaking down the average days of attendance by county provides some insight into the factors that determined how many days children five to fifteen went to school. [Table 8](#) shows attendance by county and region and links them with the period of settlement and the fertility rate. Agricultural communities with greater numbers of children born to women of childbearing age would be more likely to need child labor than those with lower fertility. Thus one would expect lower attendance levels in such places. Past research has found this variable is a good proxy for density and household wealth. Poorer men tended to move with wives in tow to sparsely settled regions because the cost of living was lower.²⁹ Studies of late

²⁷On half days, see Carole Shammass, "Child Labor and Schooling in Late Eighteenth-Century New England: One Boy's Account," *William and Mary Quarterly* 70, no. 3 (July 2013), [Table 1](#). Also see Alice Morse Earle, ed., *Diary of Anna Green Winslow: A Boston School Girl of 1771*, (Boston and New York: Houghton, Mifflin, 1894); and William C. Kashatus, "Franklin's Secularization of Quaker Education," in *Good Education of Youth*, ed. John H. Pollack (New Castle: Oak Knoll Press and University of Pennsylvania Libraries, 2009), 61.

²⁸Note that the averages in the New York survey for attendance and days taught come from different townships. The attendance for Clermont township is found in Brooke, *Columbia Rising*, 255. Children from neighboring townships who attended the Clermont schools had a lower rate, 29 percent. When combined, it amounted to 36.6 percent.

²⁹Carole Shammass, "The Housing Stock of the Early United States: Refinement Meets Migration," *William and Mary Quarterly* 64, no. 3 (July 2007), 549–90, 579–87.

Table 8. New York State Average Days Attended and County Characteristics, 1798

| Region & County | # of Townships | Average Days Attended | Period settled by Europeans | Fertility Rate* |
|----------------------|----------------|-----------------------|-----------------------------|-----------------|
| NYC Area | | | Pre-18th century | |
| Kings | 3 | 183.4 | | 1.73 |
| Queens | 3 | 113.4 | | 1.51 |
| Richmond | 4 | 98.4 | | 2.00 |
| Suffolk | 1 | 92.4 | | 1.69 |
| Hudson River Valley | | | Pre-18th century | |
| Orange | 6 | 72.1 | | 2.00 |
| Dutchess | 13 | 79.6 | | 1.85 |
| Columbia | 5 | 81.4 | | 1.49 |
| Rensselaer | 8 | 91.1 | | 1.97 |
| Albany | 6 | 78.3 | | 2.10 |
| Upstate North & West | | | Post-1750 | |
| Saratoga | 7 | 64.8 | | 2.32 |
| Washington | 7 | 52.1 | | 2.18 |
| Clinton | 4 | 47.1 | | 2.23 |
| Montgomery | 4 | 84.7 | | 1.92 |
| Otsego | 7 | 59.6 | | 2.39 |
| Herkimer | 7 | 55.3 | | 2.18 |
| Onondaga | 7 | 43.2 | | 2.14 |

*Note: Fertility rate estimated as the ratio of children under ten to women sixteen to forty-four.

Sources: New York State. *Journal of the Assembly*. . . 21st Session (Albany, 1798), 282–85; US Census, *Return of the Whole Number of Persons . . . of the United States . . . Second Census [1800]* (Washington, DC, 1801), 27–33.

eighteenth-century urban schooling tend to find increased educational opportunities for a broad spectrum of children.³⁰ Nonetheless, a number of scholars have argued that urban areas had *no* advantage over rural ones when it came to schooling in New York State and in Massachusetts, so the question of this correlation merits closer examination.³¹

Table 8 certainly shows a close relationship between children's attendance, the degree of urban development, the length of settlement, and fertility. The area around New York City, not necessarily urban but relatively near to the metropolis, settled for a long time and having comparatively low fertility, had the highest averages of attendance. The numbers for Kings County (today the borough of Brooklyn) are

³⁰Sharon Braslaw Sundue, *Industrious in Their Stations: Young People at Work in Urban America, 1720–1810* (Charlottesville: University of Virginia Press, 2009), 90; Kaestle, *Evolution of an Urban School System*.

³¹See Nancy Beadie, *Education and the Creation of Capital in the Early American Republic* (New York: Cambridge University Press, 2010), 9–10, for the references she mentions in regard to rural areas being in the forefront of providing greater schooling.

somewhat suspect. Attendance days per student were very high, while enrollment rates were very low, owing to an abnormally small number of boys and girls identified as students. The other townships, however, did not have these anomalies and they show average attendance levels between 4.5 to almost 6 months a year (on the basis of twenty days of schooling equaling one month). In the Hudson River Valley region, also settled for well over a century but more fully agrarian, except for Albany, attendance averaged from 3.5 to 4.5 months and fertility came in a bit higher. In the more recently settled upstate area, both north (Saratoga, Washington, Clinton) and west (Montgomery, Otsego, Herkimer, and Onondaga), the correlation between lower attendance and higher fertility is quite stark. Both Clinton, at the northmost reaches of the state, and Onondaga, which at that point was in the far west, averaged attendance days of under two and a half months.

The 1798 New York survey, regardless of its shortcomings, confirms to an amazing degree the characteristics of elementary schooling laid out in the later eighteenth-century apprenticeship indentures: broad-based enrollment but short doses of education—an average of seventy-three days attended per student—which as indicated before is an upper-bound number, being about eight days longer than the sixty-five-day standard of a quarter of a year for the indentures. Even in the 1790s, teachers organized against the lackadaisical attendance patterns that, if they were paid by the number of days students attended and the number of days in the term, often deprived them of a living wage.³²

The Achievements and Limits of Early American Primary Schooling

The educational attainment literature is not mistaken in pointing to the achievements in early America primary schooling given the low density and heavily agricultural economy of the British colonies and the early republic. Globally, most youth spent their days as workers, not as students.

Insistence on the clear superiority of the early United States over western Europe, however, may be a step too far. Financial support for charity schooling, the most substantial boost Protestantism gave to the provision of the Three Rs, came almost exclusively from Anglicans not in the colonies but in England; it had very limited geographic scope; and it ended with the American Revolution. Only the Quakers in the greater Philadelphia area had anything similar. In terms of politics, the Democratic-Republicanism that emerged out of the American Revolution produced one notable achievement in the mid-1790s New York state legislation analyzed above. Unfortunately, that legislation lasted one session and then ended. State-sponsored charity schooling replaced it.

Nor can the rules and methods adopted to provide primary schooling in early America really be characterized as egalitarian. Almost all localities expected parents or guardians to pay some part of the expenses of maintaining the school as well as the costs for books and supplies. The indentures show that those children whose parents could not cover these expenses either because of death or indigency had to

³²Kaestle, *Evolution of an Urban School System*, 64–71.

apprentice themselves to masters who could pay. In effect, these children's education was self-funded by their own labor.

In addition, the data confirm that White girls and free Blacks of both sexes typically received less of the Three Rs than free White boys. The prevalence of slavery ranks as being particularly inegalitarian, as nearly all enslaved African American youth spent their minority laboring without any education at all, and the population table reveals just how large a proportion of youth this group comprised in the southern region of what became the United States.

Education in early America certainly can be described as decentralized, and that allowed colony and state governments to avoid specifying who had to attend school and for how long. However much local control might have encouraged parents to send children to a neighborhood school, it also contributed to the limitations on school terms, curriculum, and teachers' compensation in rural and less affluent areas.

So what prompted the eighteenth-century provisions for writing and arithmetic? The emergence of primary schooling for children not destined for scribal or clerical careers was unusual, but less so for those areas of Europe that experienced an early modern switch to the vernacular in print and the standardization of alphabetic script, spelling, and punctuation. In addition, the transition from roman numeral notation to "arithmetic by pen" simplified calculations but required the learning of new algorithms to keep accounts and issue invoices and receipts. Printed forms such as marriage licenses, military recruitment forms, and indentures replaced scribal products and required ordinary citizens to fill in the blanks. Postal services emerged to circulate written communications. The British Atlantic community was a central part of this transformation, which equaled if not exceeded the current digital revolution. It occurred among Catholic as well as Protestant populations and those under monarchies and in republics.

The statutes, indentures, and state survey do not only document the efforts of colonial authorities during the eighteenth century to move more of the training of free youth, especially boys, from work-related tasks in the household to formal instruction in written literacy and numeracy; they also permit us to zero in on the limitations. The indentures reveal a norm of about thirteen weeks of instruction annually for several, but not necessarily consecutive, years. Some students might have continued to learn handwriting and basic arithmetic in their later teens—part of a pattern of schooling I have labeled "educational sprawl." Unless students worked on their academic skills in between increments of schooling, it seems highly likely that a lot of students' class time was spent re-learning what had been mastered in the previous year. Compared to the situation in Britain, the higher percentage of the American population aged 0–15 made it more difficult to pull children out of the workforce for a number of months, especially given the size of the agricultural sector. The exclusion of enslaved children from schooling eased the immediate burden, but at an extraordinarily high cost to the nation and the African American population in the long run. Also, the sparse numbers of White students in plantation regions made filling the seats in a local school difficult.³³ Low density, generally, in

³³This problem led to plantation schools and the hiring of indentured servants as tutors. See Hunter Dickinson Farish, ed., *Journal and Letters of Philip Vickers Fithian, 1773–1774: A Plantation Tutor of the Old Dominion* (Charlottesville: University of Virginia Press, 1968); and Edward Miles Riley, ed., *The*

comparison with Western Europe, proved a constant problem in North America. A majority of free children in late eighteenth-century English-speaking America could claim to be schooled, but whether they could write “a legible hand” and do arithmetic through the Rule of Three, which along with reading constituted the core of primary education, is doubtful.

The New York State schools survey, when juxtaposed with county characteristics, as it is in [Table 8](#), suggests strong demand for child labor in agrarian, high-fertility, and low-density communities and a heightened tolerance for short schooling sessions and irregular attendance. Although child labor in industrial settings became an issue in the late nineteenth century, its effects have been less noted when children served in agricultural households. If the modern standard of designating as part-time workers in a family business those laboring for fifteen hours or more per week, it is probably safe to estimate that by 1800, 75 percent of boys ages ten to fifteen were in the labor force. Calculating a comparable figure for girls at that time is more difficult, because modern adult female labor force statistics only count work outside of the household. However, no reason exists for not assuming that the proportion of girls working in households mirrored or exceeded that of boys, because of the earlier age they performed domestic work, the more limited education provided them, and the void young girls had to fill due to the high fertility of adult women. Putting all of this together suggests that the proportion of the labor force comprised of those boys and girls between ten and fifteen years old stood at 22 percent in 1800.³⁴ Any major retreat from the workforce by those youth would have been noticed.

In addition, efforts to increase the supply of or demand for schooling in the eighteenth century and to reduce child labor to allow mastery of the educational standards being promulgated would have had to contend with three demographic developments that had the potential to diminish overall class time and educational levels of youth in largely rural America: (1) the increase in the population’s share of enslaved persons from 11 percent to 19 percent between 1700 and 1800; (2) a ten-point increase by 1750 in the percentage of the population under sixteen; and (3) exceedingly high rates of westward migration in the last third of the century.³⁵ Any increase in the proportion of the population 0–15 put greater pressure on children to contribute their labor, and lower density made the provision of teachers and schools more difficult.

Journal of John Harrower: An Indentured Servant in the Colony of Virginia, 1773–1776 (Williamsburg, VA: Colonial Williamsburg, 1963).

³⁴In calculating that percentage, I used Thomas Weiss’s raw workforce numbers for 1800: “Estimates of White and Nonwhite Gainful Workers in the United States by Age Group, Race, and Sex: Decennial Census Years, 1800–1900,” *Historical Methods* 32 (Winter 1999), 21–36. I assumed 50 percent of those ages ten to eleven and 90 percent of those twelve to fifteen were in the workforce for at least fifteen hours per week.

³⁵Percentage of the population enslaved calculated from US Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970* (Washington DC, Government Printing Office, 1975), vol. 1, at 14, and vol. 2, at 1168. Changes in youth’s share of the population can be found in Carole Shammass, “Putting Early Americans Back to Work: A Long-term Perspective on U.S. Labor Force Participation,” unpublished paper delivered at Johns Hopkins American History Seminar, April 2008; and changes in migration rates in Carville Earle, “Place Your Bets: Rates of Frontier Expansion in American History, 1650–1890,” in *Cultural Encounters with the Environment: Enduring and Evolving Geographic Themes*, ed. Alexander B. Murphy and Douglas L. Johnson with Viola Haarmann (Lanham, MD: University Press of America, 2000), 79–105.

The first development mainly affected education in the tidewater South, where enslaved children often predominated; the second affected all parts of colonial and early national America because of high fertility rates and the importance of the agricultural sector; and the third had an impact on nearly all colonies/states because most of them had a backcountry. Interestingly, the extant early American accounts for the primary education of youth from even comfortably situated rural families also reveal that labor obligations regularly interrupted attendance during the school terms.³⁶

Educational sprawl was the norm. Because youth typically enrolled over such a long period of years for short periods of actual instructional time, some have assumed that the early United States had much higher rates of schooling than in almost any other country. That is probably not the case, especially when one includes the unfree population.³⁷

The work-study regime that evolved in the eighteenth century eventually became the target of the mid-nineteenth-century common-school reformers who complained about the inefficient, ungraded classrooms and poorly compensated teaching corps in rural schools with short school terms and irregular student attendance. Even by the end of the nineteenth century, about a third of states and territories still had not passed legislation compelling parents to send their children to school, and those that did found it impossible to mandate more than a three- to four-month attendance period, even though schools remained open an average of seven months.³⁸ The demographics, geography, and the agricultural economy kept the colonial norm in place for a long time in many US communities, where parents fought to retain their local one-room schoolhouses and the old system.³⁹ This situation undoubtedly prevailed in many parts of the Western Hemisphere.

Carole Shammass holds the John R. Hubbard Chair in History emerita at the University of Southern California. Her current project concerns the triumph of text and the Three Rs. She thanks Stephanie Schnorbus and Jenna Ross-Glemser for their research assistance. An earlier version of this paper was presented at the University of Pennsylvania's McNeil Center for Early American Studies.

³⁶See Ross W. Beales Jr., "Boys' Work on an Eighteenth Century New England Farm," in *The American Family: Historical Perspectives*, ed. Jean E. Hunter and Paul T. Mason (Pittsburgh: Duquesne University Press, 1990), 75–89; and Shammass, "Child Labor and Schooling," 539–58.

³⁷Carole Shammass, "Did Democracy Give the United States an Edge in Primary Schooling?," *Social Science History* 39, no. 3 (Sept. 2015), 315–38.

³⁸*Report of the Commissioner of Education for the Year 1894–95*, vol. 1 (Washington, DC: Government Printing Office, 1896), 1121–22.

³⁹For a recent discussion of "the rural school problem," see Tracy L. Steffes, *School, Society, & State: A New Education to Govern Modern America, 1890–1940* (Chicago: University of Chicago Press, 2012), 47–82.