

Joseph Mayer Rice: Educational Researcher and Reformer

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Abstract

Joseph Mayer Rice has been called the father of educational research. His articles published in the magazine *The Forum*, in 1892-1893, are seen by many scholars as the beginning of the Progressive movement in education. His work popularized notions of educational reform which helped to launch the progressive education movement, and transformed both curriculum and pedagogy in ways that are still evident today.

Joseph Mayer Rice has been called the “father of research on teaching” and “empirical classroom-based research” (Ayers 1918; Englehart & Thomas 1966; Kliebard 1982; Gurung & Schwartz 2009). His articles published in the magazine *The Forum*, between October 1892 and June 1893, popularized notions of educational reform and are seen by many scholars as the beginning of the Progressive movement in education (Cremin 1961; Graham 1966; Kliebard 1993).

Rice first began publishing his ideas about education in the weekly periodical *Epoch* in 1891, but for most scholars, it is his articles published in *The Forum*, between October, 1892, and June, 1893, for which he is remembered. He also published several books and continued writing articles for *The Forum*, for over a decade. Rice also served as editor of *The Forum*, which was owned by his brother, from 1897-1907. His collected *Forum* articles provided the basis for the book, *The Public School System of the U.S.* This book, like the articles, contained a withering critique of

schools and teaching practices in a number of northern cities. In each case, Rice recounted in detail what he considered the most egregious example of poor pedagogy he witnessed in the schools of that locality. He also questioned why superintendents allowed such teaching to persist. Rice’s exposé of pedagogical practices in schools placed him among the early practitioners of a journalistic style that would become known as muckraking journalism.

Rice was born in Philadelphia, Pennsylvania, in 1857 two years after his parents immigrated to America from Germany. He attended public schools in Philadelphia and New York City, where the family relocated in 1870. He received a degree in medicine from the College of Physicians and Surgeons at Columbia University in 1881, and built a successful pediatrics practice in New York City. Rice closed his pediatric practice in 1888 to pursue the study of education and psychology. In 1888, Rice traveled to Germany where he remained until 1890. While there he studied experimental psychology at the University in Leipzig, and studied Herbartianism at the laboratory school at the University of Jena. Herbartianism is an educational philosophy developed by Johann Freidrich Herbart, who also did pioneering work in psychology. After initiating his famous study of American schools, Rice returned to the University of Jena briefly in the summer of 1893, before resuming his educational reform efforts. Rice married Deborah Levinson in October of 1900, they had two children.

The dawn of the progressive era was a period during which the urban social values of the expanding cities triumphed over the traditional social mores of the countryside. Charles Sellers observed that throughout the nineteenth century the spread of the market economy pitted an agrarian “old timer” oral culture and local subsistence farming economy against the wealth, culture, and market oriented economy of the rising cities (Sellers 1991). During the last third of the nineteenth century the mantle of civic virtue passed from the Jeffersonian yeoman farmer to the urban middle-class professional. The social position of the farmer changed from being the foundation of society to that of a backward “hayseed” as urban life assumed a larger role in the direction of social norms. Rural folk resisted these changes to be sure. During the 1890s Grangers, Greenbackers, and Silverites united in the Populist party in 1892, and then under William Jennings Bryan fused with the Democracy in the election of 1896. This election arrayed the monied interests of the East against the agrarian interests of the South and West. Out of the political turmoil of the 1890s the progressives would emerge to carry the banner of reform. Cremin argues that much of the Progressive agenda was based upon “support that derived from a half-century of agrarian protest and innovation” by the Granger and Populist movements (Cremin 1961, 42). In the end, however, the Progressives found the “scientific ballast” that the earlier Grangers and Populists lacked (Cremin 1961, 164). A number of prominent historians have argued that the Progressive movement began with the series of articles in the journal *The Forum*, by educational reform advocate John Mayer Rice (Curti 1951; Cremin 1961; Kliebard 1986).

Indeed, Rice pioneered the use of empirical data in the study of schools helping to provide that scientific ballast.

Rice began his educational odyssey, “to discover the marked variation in the general degree of excellence of the schools of various localities” seeking to “permanently rais[e] the standard of schools ... b[y] the eradication of the causes of their inferiority” (Rice 1893, 1-2). For six months in early 1892, he travelled through 36 cities observing schools and classrooms. He collected data and compared practices in different schools to determine why some schools were more successful than others. Determined to base his ideas “on a foundation of science rather than mere opinion,” Rice sought the answers to these problems through observations in schools (Kliebard 1993). Although others had collected educational data before him, His innovative use of the data made him “the acknowledged father of comparative methodology in educational research” (Kliebard 1982).

Rice clearly did not approve of teachers who taught “on a purely mechanical basis,” by which he meant schools in which teachers “conduct sing-song recitations in spelling and arithmetic, hear children recite lessons verbatim from a text-book, or conduct concert lessons in geography” (Rice 1893, 5-6). Rice favored schools “conducted on scientific principles,” observing that, “in the progressive schools” mechanical “methods are never tolerated for any length of time after they have been detected” (Rice 1893, 6). He indicated, in his early articles, that this was his primary criteria for judging schools. Later however, he developed a more refined and somewhat different criterion. Rice strongly advocated “the unification of studies,” and “that the sciences can and should

be taught in organic connection with the other branches of the curriculum” (Rice 1893, 212, 215), what today we might call interdisciplinary or thematic teaching. Rice based his rankings of city schools on the prevalence of recitation versus thematic teaching he observed (Rice 1893, 229). He then proceeded to publish articles condemning what he perceived to be poor teaching practices in a school district.

Rice opened a discussion of the schools of Philadelphia with the observation; “The public schools of Philadelphia offer a striking example of the difficulties involved in advancing the schools when those in authority use their offices for selfish motives ... instead of for the purpose of furthering the welfare of the children intrusted [sic] to their care” (Rice 1893, 147). He commented that in Chicago; “some of the teaching was the most absurd I have ever witnessed” (Rice 1893, 170). In New York, he insisted that “the school has been converted into the most dehumanizing institution I have ever laid eyes upon” (Rice 1893, 31). He found: “A hard, unsympathetic, mechanical-drudgery school, a school into which the light of science has not yet entered. Its characteristic feature lies in the severity of its discipline of enforced silence, immobility, and mental passivity” (Rice 1893, 39). He went on to note that; “The schools of Baltimore compare unfavorably even with those of New York” (Rice 1893, 55), and “until a material change is effected, those attending the schools of that city [Baltimore] will be doomed to a miserable childhood” (Rice 1893, 64). He reserved his harshest condemnation for the schools of St. Louis, Missouri where he found; “The treatment of the children cannot be considered otherwise than barbarous” (Rice 1893, 98). Indeed, he concluded, “The schools of St Louis ... in my

opinion are the most barbarous schools in the country” (Rice 1893, 220-221). He found; “In some cities the schools have advanced so little that they may be regarded as representing a stage of civilization before the age of steam and electricity” (Rice 1893, 218). There were, however, schools that met his approbation and teachers who were doing good work in a humane and thoughtful manner. He found such classrooms in Indianapolis and La Porte, Indiana and in Minneapolis and St. Paul Minnesota.

The harsh rhetoric in Rice’s articles increased the circulation of the *Forum* and roused educational reformers, but it also raised the indignation of educational professionals. Perhaps finding the harsh tone of his *Forum* articles hindered his research, Rice retreated somewhat in the summary of his book compiling those articles. He wrote:

My general impression of our elementary schools is not so unfavorable as might be inferred from some of the earlier chapters. That I may have conveyed a more pessimistic view of the situation than I actually possess is owing entirely to force of circumstances, and not to any desire on my part to do so. It was because I deemed it necessary to direct the attention of the public primarily to those children who are most grievously wronged, and consequently to the schools most urgently in need of reform, that I was led to devote so much space to the discussion of such schools as are a disgrace to an enlightened nation (Rice 1893, 229-230).

Rice continued to write for the *Forum*, but his days as a so-called muckraking journalist were over by 1894. His subsequent work focused not on exposés, but on reforming curriculum, pedagogy and school governance.

In his first tour of schools in 1892, Rice examined “the spirit of schools,” in 1895 he set out again, this time to “study the results of instruction” (Rice 1913, 147). Rice collected samples of student work in a variety of subject areas from thousands of students. He also used the first comparative survey administered to students to obtain information on demographics. Rice noted that most educators assumed educational outcomes “are largely influenced by the heredity, nationality and home environment of the pupils,” but in fact, he found that these “were found to exert an exceedingly small amount of influence” (Rice 1913, 228). He concluded that teaching methods mattered far more than ethnicity in obtaining high student outcomes. In the same study, Rice found that in spelling after fifteen minutes of study students experienced rapidly diminishing returns from additional study time. In arithmetic, however, this did not occur. He concluded that teachers were wasting time on long spelling exercises that might be better spent on the study or other subjects.

Rice’s second book, *The Rational Spelling Book* appeared in 1898, based on an article in an 1897 edition of *The Forum* titled “The Futility of the Spelling Grind.” Rice asserted that “not more than fifteen minutes daily be devoted to spelling, including both study and recitation.” He insisted that “additional time given to the subject is not rewarded by additional return” (Rice 1898, 6). Basing his work on spelling tests administered to over 33,000 pupils, he created a spelling text

that utilized only the most commonly used words as a way of increasing the efficiency of spelling instruction. His primary focus was not on the difficulty of the material to be learned but rather on minimizing the amount of study time expended to learn the material. Rice’s *Rational Spelling Book* began with the fourth grade and contained all of the lessons through the eighth grade, thus students could work from the same book year after year. This proved to be extremely popular in an era when parents still had to purchase the school textbooks their children used.

Rice utilized a business vocabulary to criticize the educational system of the time. He sought to understand the management of schools and to suggest ways to make them more efficient and less prone to political interference from elected school boards and committees which often had day-to-day management responsibilities for municipal schools. In 1913, he released *Scientific Management*. In this book he addressed school governance and pedagogy, particularly elementary arithmetic. Rice concluded that the “differences in the results” among schools “were due to differences in the quality of the teaching” and he looked at how school governance and pedagogy could be altered to enhance the quality of schooling (Rice 1913, ix). Rice observed that even if educators had the knowledge and knew the best teaching methods results were not guaranteed. He wrote: “The attainment of the best possible results in the class-room ... cannot be depended upon ... unless the proper thing is done by the educational workers after they have been given their pedagogical freedom” (Rice 1913, xii). The solution Rice eventually endorsed was “scientific management,” a system of insuring that schools produced the greatest educational

gains in the least possible time, thus operating “efficiently.” Rice embraced the social efficiency movement sweeping the business world at the dawn of the twentieth century. He introduced a spelling primer which he believed could significantly reduce the time spent in memorization and recitation. Indeed, his work in spelling was still being cited a century later to refute supposed “truisms” masked as research (Gage 1993).

Rice condemned the influence of ward politicians in cities such as New York and Chicago. Reformers soon wrested control of the schools in both cities with varying results (Tyack 1974). He advocated changes in both the measurement and testing of student learning. By the close of the first decade of the twentieth century he noted that, “The current standard” called for measuring success based on “what the teacher does.” He suggested replacing that standard with a “judgment by what she accomplishes” (Rice 1913, 233). He proposed to accomplish this by replacing tests of “low order” thinking skills or “knowledge as a matter of memory,” with tests of “the ability to apply their knowledge of processes and principles,” what he called a “test of the power to reason” (Rice 1913, 234, 240).

During the late nineteenth century the locally oriented Jeffersonian ideals of agrarian social virtues gave way to new urban oriented social standards. As new notions of social norms emerged, agrarian populists contested and resisted these changes. In some of the cities Rice visited the older agrarian norms still held sway. Rice represented the new urban reformer contesting the control of social norms. This was a period when local community institutions, including schools, still held sway with little interference from the wider society, even in the

large cities. Reformers, like Rice, promoted the emerging set of “standards evident in... the new corporations, professions... and government bureaucracies” (Fackler & Lin 1995, 373). From the perspective of reformers searching for order in mass society, the substitution of society-oriented, universal standards for community-oriented and particularistic standards, was both rational and necessary (Fackler & Lin 1995, 374). That did not make it any less divisive, however.

Joseph Mayer Rice, a physician by training, abandoned medicine to pursue educational reform. His studies proved profoundly influential, however Rice never held an academic appointment and the educational and academic establishment never fully accepted him. His work was occasionally cited but he remained an outsider in the educational reform movement he helped to create. The Progressive movement, “once under way... manifested itself in a remarkable diversity of pedagogical protest and innovation; from the very beginning it was pluralistic, often self-contradictory and always related to broader currents of social and political progressivism” (Cremin 1961, 22). This proved true of Rice’s writing as well. He started out as a pedagogical progressive, seeking to replace recitation style teaching with thematic instruction, in the early 1890s, but by the time his final book was published in 1913, he had become a proponent of testing and the social efficiency movement. He retired in 1915, and died in Philadelphia in June 1934.

Schools in the 1890s faced many of the same challenges that confronted them a century later (Lagemann 1997). Educators’ encountered rapid demographic and economic changes, as well as a perception that schools were failing to

reach many students as successfully as they might. Rice's findings have endured the test of time and both his methodology and his proposed remedies have returned to inform contemporary debates about the nature of the curriculum, the efficacy of schools, and the most effective pedagogical methods for imparting knowledge. The work of Joseph Mayer Rice has enduring relevance both for his groundbreaking innovations in educational research and for his proposed solutions to pedagogical problems. The educational reforms he advocated at the dawn of the 20th century have again gained currency at the dawn of the 21st century. The emphasis on research-based educational practices in the No Child Left Behind Act harkens back to Rice's early insistence on classroom observation. The emphasis on testing and educational efficiency emerging from the accountability provisions of NCLB also mirror the educational reforms Rice advocated later in his career. Even the push for academic standards harkens back to recommendations he promoted. Rice wrote, "A scientific system of pedagogical management would demand fundamentally the measurement of results in the light of fixed standards" (Rice 1913, xv).

Rice created a furor with his articles and books. He even prompted some changes in the governance in some school systems. Rice believed that there should be standards for educators, and that superintendents and principals should be responsible for seeing that teachers met those standards. A century later, a variation of Rice's vision came to pass. Schools now have rigorous academic standards and students are required to pass tests to demonstrate proficiency in those skills. Curiously, the testing that measures attainment of the standards reinvigorated the very type of

drill and recitation teaching Joseph Mayer Rice first found so objectionable.

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