

*Education and the Cult of Efficiency**
Raymond E. Callahan
(1962)

**Chapter 5:
The Educational Efficiency Experts in Action**

In the years between 1911 and 1925 educational administrators responded in a variety of ways to the demands for more efficient operation of the schools. Before the mania ran its course various “efficiency” procedures were applied to classroom learning and to teachers, to the program of studies, to the organization of the schools, to administrative functions, and to entire school systems. Most of these actions before 1916 were connected in some way by educators to the magic words “scientific management.” This was especially true when someone who could lay claim to the title “educational efficiency expert” had participated in what was done, or when the work could be traced to the recommendation of such a person e.g., Spaulding or Bobbitt.

There were two groups of educators who were generally accepted and even labeled by administrators as “educational efficiency experts” or “engineers.” There were those men who worked full time in the efficiency bureaus which had been established in many of the large cities after 1911, and prominent professors of education who made their services available as consultants. Evidence that these so-called efficiency experts were quite numerous by 1914, and that they were not always wholeheartedly appreciated, is given by one irritated schoolman, veteran Superintendent J. M. Greenwood of Kansas City who told a general session of the N.E.A. that there were “so many efficiency engineers running hand cars through the schoolhouses in most large cities that the grade teachers can hardly turn around in their rooms without butting into two or three of them.”¹

A majority of administrators, however, held views quite the opposite of Greenwood’s. One of the leading, if not *the* leading, educational administrators in the period between 1915 and 1934 was Ellwood P. Cubberley, dean of the School of Education at Stanford.² His textbook, *Public School Administration*, published in 1916, was described by George S. Counts in 1927 as “the most widely read and influential book on school administration of our generation.”³ This influential educator acknowledged the existence and importance of the educational efficiency expert by devoting a full chapter of this book to an enthusiastic account of his work. The chapter, entitled “Efficiency Experts: Testing Results,” provides additional evidence of a direct link between educational efficiency experts and the scientific management movement. In a footnote on the first page of the chapter Cubberley used a newspaper statement which made a direct connection between education and Taylor’s experiments. The use to which this footnote was put by Cubberley also demonstrates again the pattern of criticism and response. He used it to provide documentation for his assertion that the efficiency expert movement in education was partly a result “of public demand for a more intelligent accounting by school officers for the money expended for public education.”⁴ The footnote, identified simply as an “Editorial in the *Springfield Republican* 1912,” read as follows: “New York City spent last year nearly \$35,000,000 for education, and hardly a dollar of it was spent for measuring results. Are educators supposed to be such experts that their methods cannot be improved? Lately we have had a striking demonstration of what experimental science can do by reducing the motions in laying brick and the fatigue in handling pig iron. It can hardly be pretended that

Space for Notes



scientific efficiency is of less consequence in the schools.” By featuring this statement, Cubberley helped to ensure that the thousands of students who used his text would be exposed, at least indirectly, to the pressure to adopt “scientific efficiency” procedures in education. (Incidentally, one wonders whether Schmidt would have agreed that experimental science had “reduced his fatigue” in handling pig iron.)

¹N.E.A. *Proceedings* (1914), p. 117.

²For a brief account of Cubberley’s early life and professional career see pp. 182-85.

³George S. Counts, *The Social Composition of Boards of Education* (Chicago, 1927), p. 84.

⁴Cubberley, *Public School Administration* (Boston), p. 325. The same point had been made by H. B. Wilson, superintendent of schools in Topeka, Kansas, and chairman of the influential Committee on the Economy of Time of the Department of Superintendence. Speaking before the National Council of Education in 1915, Wilson stated “the progressive evolution of society” had produced the efficiency engineer, and that at the time of his appearance, fortunately, enough progress had been made in the scientific study of education so that “the *education efficiency engineer* became a possibility and consequently very soon a reality.” To explain the sudden appearance of the efficiency expert’s counterpart in education he added “his advent was hastened somewhat by rampant public criticism of the schools, in part led and inspired by such leading educational journals as *the Delineator* and the *Ladies Home Journal*.” N.E.A. *Proceedings*, pp. 604-6. There was very little criticism of the schools in the *Delineator*. Certainly it was not “rampant.” He was, of course, correct on the *Ladies’ Home Journal* but he should have named the *Saturday Evening Post* as the other journal.

Cubberley described the emergence of the educational efficiency experts as “one of the most significant movements in all of our education history” and he added (prophetically, as it turned out) that their work would “change the whole character of school administration.”⁵ The same enthusiasm was conveyed throughout the chapter and particularly in the final section — a section which showed clearly that Cubberley had leaned heavily on the ideas of Franklin Bobbitt:

The work described in this chapter is new work, and work of a type with which schoolmasters are as yet but little familiar, but it is work of great future importance, work which will professionalize teaching and supervision, and work destined to do much to increase the value of the public service rendered by our schools. By means of standards and units of the type now being evolved and tested out it is even now possible for a superintendent of schools to make a survey of his school system which will be indicative of its points of strength and weakness, and to learn from the results better methods and procedures. In time it will be possible for any school system to maintain a continuous survey of all of the different phases of its work, through tests made by its corps of efficiency experts, and to detect weak points in its work almost as soon as they appear.

Every manufacturing establishment that turns out a standard product or series of products of any kind maintains a force of efficiency experts to study methods of procedure and to measure and test the output of its works. Such men ultimately bring the manufacturing establishment large returns, by introducing improvements in processes and procedure, and in training the workmen to produce a larger and a better output. Our schools are, in a sense, factories in which the raw products (children) are to be shaped and fashioned into products to meet the various demands of life. The specifications for manufacturing come from the demands of twentieth-century civilization, and it is the business of the school to build its pupils according to the specifications laid down. This demands good tools, specialized machinery, continuous measurement of production to see if it is according to specifications, the elimination of waste in manufacture, and a large variety in the output.⁶

In the body of the chapter Cubberley presented what amounted to a condensed statement of Bobbin’s version of scientific management. The purpose of the new scientific movement, he said, was to create standards so that the efficiency of the work of the schools could be determined, demonstrated, and communicated to the public in “a language which the

community could easily understand.” This would elevate the work of education from where it was, based upon guess-work and personal opinion, to “scientific accuracy.”⁷ As a result everyone would benefit. Pupils would be carefully examined and properly classified and they could chart their progress and see their deficiencies. Teachers would know “definitely” what was expected of them, since they would have “definite tasks laid down.” As for principals and supervisors they could tell

almost at a glance whether pupils or rooms are making proper progress; when any group has made all desirable progress and should advance; whether instruction is directed to what are the weak points for the group; where teachers who need help are located, and in what particulars they need help; in what rooms the load and the teacher are not properly adjusted; and what teachers are so inefficient or indifferent or incapable of progress that they should be dropped from the service. For the purpose of vocational guidance of pupils such records will be of great value. The superintendent, too, can use the results to talk to his school board and to his community and can justify both the work and the expense of his schools.⁸

Cubberley conceded, as had Bobbitt, that this work would require extensive records, but he justified them in the same way that Taylor and Bobbitt had done by stating, “The lesson of the business world, from which we have much to learn in the matter of efficiency, is that detailed records more than pay for their cost, and that an accurate knowledge as to manufacturing processes is impossible without such records.”⁹

The combination of the great prestige which Cubberley enjoyed as an “authority” in educational administration and the widespread use of his textbook meant that his enthusiastic endorsement of the educational efficiency expert certainly contributed to the spread of knowledge about these men and to an acceptance of them in the years after 1916. This meant, of course, that it was Bobbitt’s version of scientific management which was being spread and his conception of the efficiency expert which was being accepted.

⁵Cubberley, *Public School Administration*, p. 325.

⁶*Ibid.*, pp. 337-38.

⁷*Ibid.*, pp. 326-27.

⁸*Ibid.*, pp. 333-34.

⁹*Ibid.*, p. 335.

Cubberley went beyond the general endorsement to advise any young man who desired “to prepare for school administration in the future” to “thoroughly familiarize himself with the aims and methods of this new phase of administrative service.”¹⁰ He also urged the creation of efficiency bureaus in every city school department of any size. Such bureaus had already been established in Boston, New York, New Orleans, Detroit, Kansas City, Rochester, and Oakland, and he indicated that they would grow in numbers and that there would be opportunities for men interested in becoming educational efficiency experts. “Such positions” he said, “are almost certain to multiply rapidly, and they will offer attractive careers to certain types of men.”¹¹ Then he indicated the kind of work which would be available by describing the “lines of service” which he said were “already clearly defined” within the field:

Part of these lie along the line of business organization, part lie along the lines of special-type educational adjustments, and part lie in the field of experimental pedagogy. These lines include at least the following: To study all phases of the process of preparing pupils for life-careers, and for efficient community service; to study the needs of life and the industries, with a view to restating the specification for the manufacture of the educational output; to study means for increasing the rate of production, and for eliminating the large present waste in manufacturing; to test the product at different stages of manufacture, and to advise the workers as to the results of their labors; to test

out different methods of procedure, and gradually to eliminate those which do not give good results; to study the costs of production, not so much to cut down *costs* as to be able to show how the efficiency of the plant may be increased by a proper adjustment or even an increase in expenditures; to supply the superintendent with concrete data with which he may deal more intelligently with his board, the public, and the teaching staff; and to organize material for publication in the annual printed report of the school department.¹²

In his account of the educational efficiency experts Cubberley stated quite accurately that their work fell into two major categories: one, the construction of tests and rating scales for measuring school efficiency and the other, school surveys. Some of these experts were able to work in both capacities by conducting surveys in which the tests and rating scales used were ones they themselves had constructed. However, most experts specialized in one or the other of these two categories.

Efficiency Measures for the Schools

Questions about the effectiveness of teaching had been raised, and attempts to measure the achievement of pupils had been made before 1900. Joseph M. Rice, a physician turned educator, had worked out tests in arithmetic and spelling, had administered them personally to thousands of children in schools in several of the larger cities, and had published the results of his findings in the *Forum* between 1895 and 1903. Partly because his findings showed much of the work of the schools to be poor, partly because he was not exactly gentle in his criticisms, and partly, perhaps, because he was an outsider, Rice and his work were not well received by educators generally. An analysis of his work shows that he lacked a knowledge of even elementary statistics and that many of his conclusions could not be supported by his data. Nevertheless, he is generally credited with being a pioneer in the field of educational measurement. After 1903 a few other investigators, and especially E. L. Thorndike and his students, began to develop instruments for measuring achievement in the skill subjects of the elementary school, and by 1910 several tests had been constructed and were being standardized.

¹⁰*Ibid.*, p. 326.

¹¹*Ibid.*, p. 336.

¹²*Ibid.*, p. 336.

Almost immediately after the country became acquainted with scientific management procedures, pressure began to apply them to the classroom. In July of 1911, for example, a month after Taylor's series of articles was completed in the *American Magazine*, a school board member from Allegheny, Pennsylvania told the N.E.A. that the two words which were "electrifying the industrial world — scientific management" contained a "message" for every teacher, and near the end of his speech he indicated that if teachers did not voluntarily take steps to increase their efficiency the business world would force them to do so.¹³ As a result great energy was expended on using the available tests and on developing new tests or scales or rating sheets or anything else that would seem to provide tangible evidence of efficiency. As one superintendent writing in 1912 put it, "the results of a few well-planned tests would carry more weight with the business man and the parent than all the psychology in the world."¹⁴

In the process of actually attempting to measure efficiency within the schools, educators engaged in a wide variety of activities, but most of the attention was devoted to developing and utilizing "objective" achievement tests in the language arts and arithmetic and in developing scales for rating the efficiency of teachers.

By the end of 1913 several tests had been developed and were being used in the schools. The most prominent of these were the arithmetic test developed by S. A. Courtis, the handwriting scales by Thorndike and Ayres and the English scales by Thorndike and Hillegas. The *Elementary School Teacher* reported in December of 1913 that these tests were being given "wide currency" in the schools.¹⁵ The work of developing and extending the use of tests was furthered by the important Committee on Tests and Standards of Efficiency in Schools and School Systems appointed by the National Council of the N.E.A. in 1911. The committee, headed by George D. Strayer, reported to the N.E.A. in 1913 and again in 1915 on the progress being made and in each instance urged that more tests and scales be developed. Strayer, expressing his views in speeches and articles, believed "if scientific measurement is to be accomplished, we must have units or scales of measurement which will enable us to make measurements which are verifiable by other observers. We may not hope to achieve progress except as such measuring sticks are available or may be derived."¹⁶

¹³N.E.A. *Proceedings*, p. 723.

¹⁴Don C. Bliss, "The Standard Test Applied," *American School Board Journal*, XLIV (May, 1912), 12.

¹⁵Vol. XIV, pp. 145-46.

¹⁶George D. Strayer, "Is Scientific Accuracy Possible in the Measurement of the Efficiency of Instruction," *Education*, XXXIV (December, 1913), 253.

Much of the work of developing these tests was done by professors of education in the universities and by "educational efficiency experts" who worked full time in efficiency bureaus. By 1915 nine of these bureaus had been established in large cities and the development of the new "profession" of efficiency experts looked so promising that a National Society of Efficiency Men was formed at the Department of Superintendence meeting held in that year.¹⁷

The attempt to measure efficiency was not, however, limited to the efforts of a relatively few men in universities or in efficiency bureaus. On the contrary, educators from all over the country engaged in this activity by developing rating sheets or offering suggestions to the profession on ways and means of increasing efficiency. The result of their labor is evident in the numerous articles and books which appear in the professional literature as well as in speeches at professional meetings. In his presidential address to the Schoolmasters Association of New York and Vicinity in October of 1912, Theodore C. Mitchell spoke of the great savings made in industry through efficiency studies and then asked "Has the school made equal progress? Has the conduct of the recitation kept pace with modern needs?" His answer was that it had not and he suggested to his audience how the situation could be changed. He warned in advance that some of his suggestions might seem trivial, but he said, "bear in mind that four places of decimals are charged against many railroad engineers for coal, water, lubricating oil, and waste. Time and energy lost in a hundred ways rapidly mount up to vast accounts on the wrong side of the recitation ledger."¹⁸

Mitchell suggested that time should not be wasted scolding pupils or lost while students borrowed pencils or paper. To avoid this latter waste teachers should have a well-stocked satchel and carry it from room to room in case it was needed. He recommended an elaborate system of bookkeeping for he said, "Only a teacher would think of trying to keep adequate records of a complex business in one little book that can be slipped into the pocket." In the recitation itself, "Use should be made of all the available time." No time should be wasted in calling the roll, and "Too often valuable time is lost where groups are

sent to the blackboards and their several tasks assigned to each one by one, while all the rest wait their turn. As much as four minutes idle time is spent by some.”¹⁹ The ideal of “cultured ease in the classroom, of drawingroom quiet and refinement” had to go, he said, and

It must give way to an ideal of timesaving through preparation for dealing expeditiously and variously with a variety of needs, to the end that maximum results may be attained under pressure of time and with economy of material. By better use of ground space, by better setting of machinery, by better placing of raw material, by the cutting down of labor motions, by producing harder and more lasting cutting tools — by these and other means the factories have increased their output, have lowered the cost of production, have met the demands of their very existence. In a word they have learned to “speed up,” not only without placing fresh labor burdens on the workman but on the contrary, with beneficial results in the matter of energy expended and wages earned. And we teachers ought to do the same. We should be compelled to, were we, like members of other professions, as often under watchful, critical adult eyes — were our mistakes to carry as quickly as do theirs, the penalty of almost immediate retribution. We are curiously protected in inefficiency.²⁰

Another educator, a superintendent from Portland, Oregon, noting in a speech before the Department of Superintendence in 1913 that “the proceedings of this Association for the last few years show clearly that educational leaders are trying to find some *meter* that can be fitted to our educational *pushcart*,” reported that he had developed an observational chart by means of which teachers could mark the progress of pupils in forming habits.²¹ Still another described how teaching efficiency could be increased through the use of pictures.²²

¹⁷*Elementary School Journal*, XV (April, 1915) , p. 394.

¹⁸“Loss of Efficiency in the Recitation,” *Educational Review*, XLV (January, 1913), 8-10.

¹⁹*Ibid.*, p. 15.

²⁰*Ibid.*, pp. 27-28.

²¹N.E.A. *Proceedings*, p. 64. (Italics mine.)

²²Horace G. Brown, “Efficiency in Teaching by Pictures,” *Education*, XXXIV (November, 1913), pp. 171-76.

These earnest and sometimes curious efforts continued through 1916. In August of that year the *American School Board Journal* reported in a news item under the caption “Efficiency in the Classroom” an “interesting efficiency system involving the adoption of modern factory systems to the work of the classrooms. . . .” This system had been installed at Bay City, Michigan by the superintendent, and it consisted of hiring a group of substitute teachers who, working under the supervision of the superintendent, tested students extensively and kept records of their progress. The *Journal*, reporting that some fifty thousand examinations had been given, stated that the system made it possible for the superintendent to locate the strong and weak points in the schools and closed by pointing out to its readers that “The system is similar to that in use in factory and commercial establishments and offers a method of determining where the city’s money is being invested to best advantage, and where the results are not commensurate with the expenditures.”²³

A major part of the effort to measure efficiency in the school consisted of the attempts to rate teachers. In the early years efforts were made to connect this work very closely with the procedures that Taylor had developed, but later this was not done and the actions were generally justified by reference to the business and industrial world’s promotion of workers on the basis of merit. Joseph S. Taylor, district superintendent of schools in New York City, tried to adapt Taylor’s ideas to the school and to draw the parallels between the worker and the teacher.

He asked the basic question of whether quantitative measurement could be applied to teaching ability. He then gave an accurate account of the basic principles of Frederick Taylor's system — the employer determining the science of the job, the task and bonus system etc. — and then drew his parallels in education.

One may easily trace an analogy between these fundamentals of the science of industrial management and the organization of a public school system. For example: (1) The state as employer must cooperate with the teacher as employee, for the latter does not always understand the science of education; (2) the state provides experts who supervise the teacher, and suggest the processes that are most efficacious and economical; (3) the task system obtains in the school as well as in the shop, each grade being a measured quantity of work to be accomplished in a given term; (4) every teacher who accomplishes the task receives a bonus, not in money, but in the form of a rating which may have money value; (5) those who are unable to do the work are eliminated, either through the device of a temporary license or of a temporary employment; (6) the differential rate is applied to the teacher, quantity and quality of service being considered in the rating; (7) the result ought to be a maximum output at a low relative cost, since every repeater costs as much as a new pupil; (8) the teacher thus receives better wages, but only after demonstrated fitness for high position; (9) hence we ought to have the most desirable combination of an educational system — relative cheapness of operation and high salaries.²⁴

In his adaptation of scientific management, Joseph Taylor was too much of an educator to suggest applying Frederick Taylor's ideas in a mechanical way in the schools. For example, he stated that "after a teacher has become an artist and has learned to secure results in her own way, no principal or superintendent should come along with his petty prescriptions issued in mandatory fashion."²⁵ Yet he could not bring himself to accept the notion that successful teaching could not be measured, since this acceptance constituted a denial of the "possibility of an educational science."²⁶ So he worked out charts on which teachers were to be rated, and his attention to detail (e.g. teachers were rated on the time spent in passing and collecting papers) would have done justice to any efficiency engineer. And despite his words about the teacher as an artist, he stated that if her work was "inefficient" the supervisor had the right to say "take my way or find a better one."²⁷

In March of 1913 the *American School Board Journal* reported that the educators in large cities were "almost without exception" working out "elaborate plans for rating the work of instructors." The editor complained that most smaller cities and villages had neglected this opportunity for increasing efficiency but some plans had been put into effect by "earnest and fearless superintendents." One such man, reported the *Journal*, was the Superintendent at Park City, Tennessee, who rated his teachers on a 100 per cent scale on the following points: "Influence upon students — in study, in life goals, in nobler ideals etc.; teaching ability — methods, professional progress, tact and skill, enthusiasm, adaptability etc.; discipline; scholarship — accuracy in things taught, preparation of lessons — promptness etc.; energy — snap, go, force in class work etc.; growth — improvement, professional zeal, etc.; results measured by preparation of pupils; relations with other teachers, principal, and ways of cooperating with all that goes on in school; care of books, property etc."²⁸

²³Vol. LII, p. 54.

²⁴"Measurement of Educational Efficiency," *Educational Review*, XLTV (November, 1912), 350-51.

²⁵*Ibid.*, p. 363.

²⁶*Ibid.*, p. 353.

²⁷*Ibid.*, p. 359.

²⁸Vol. XLVI, p. 48.

EFFICIENCY RECORD					
Teacher	<i>Miss M.</i>	City	<i>VIII-S</i>	Grade taught	8
Experience	20	years.	Salary	<i>\$72.50</i>	per month.
Highest academic training	<i>Two years in High School.</i>				
Extent of professional training	<i>One year in Normal School.</i>				

DETAILED RATING.....		VERY
		POOR POOR MEDIUM GOOD EXCELLENT
I. Personal Equipment—	1. General appearance	
	2. Health	
	3. Voice	
	4. Intellectual capacity	
	5. Initiative and self-reliance	
	6. Adaptability and resourcefulness	
	7. Accuracy	
	8. Industry	
	9. Enthusiasm and Optimism	
	10. Integrity and sincerity	
	11. Self-control	
	12. Promptness	
	13. Tact	
II. Social and Professional Equipment—	14. Sense of justice	
	15. Academic preparation	
	16. Professional preparation	
	17. Grasp of subject-matter	
	18. Understanding of children	
	19. Interest in the life of the school	
	20. Interest in the life of the community	
	21. Ability to meet and interest patrons	
	22. Interest in lives of pupils	
	23. Co-operation and loyalty	
	24. Professional interest and growth	
	25. Daily preparation	
III. School Management—	26. Use of English	
	27. Care of light, heat, and ventilation	
	28. Neatness of room	
	29. Care of routine	
	30. Discipline (governing skill)	
	31. Definiteness and clearness of aim	
	32. Skill in habit formation	
	33. Skill in stimulating thought	
	34. Skill in teaching how to study	
	35. Skill in questioning	
IV. Technique of Teaching—	36. Choice in questioning	
	37. Organization of subject-matter	
	38. Skill and care in assignment	
	39. Skill in motivating work	
	40. Attention to individual needs	
V. Results—	41. Attention and response of the class	
	42. Growth of pupils in subject matter	
	43. General development of pupils	
	44. Simulation of community	
	45. Moral influence	

In June of 1915 the education profession acknowledged the importance it attached to the problem of measuring teachers' efficiency. In that month a yearbook devoted to the subject was published by the National Society for the Study of Education. The Yearbook was written by Arthur C. Boyce, an assistant in the Department of Education at the University of Chicago and therefore an associate of Franklin Bobbitt. Boyce sent out a questionnaire to

educators in 350 cities of over 10,000 population and found that most of them were rating teachers in some way but that many of the schools used only “general impression” methods, while others used scales which were vague and indefinite and had methods of recording judgments (of supervisors) which were “frequently wasteful of time or inaccurate or uncontrolled or all three.”²⁹ To correct this situation Boyce developed a rating scale (presented below) which was designed to overcome these weaknesses and to eliminate “arbitrary personal opinions” from the ratings.

Although the results of a trial run in which this scale was used on 424 teachers in 39 cities showed that it had weaknesses which were due, Boyce said, to differing standards of excellence in the minds of the rating officers and to differences in the ability of school officials to discriminate carefully between the various qualities listed on the scale, it was warmly received by administrators and adopted in many school systems. This was so partly because the scale was simple and easy to use and partly because it was backed by the prestige and authority of the National Society for the Study of Education. Also important was the support of the leading administrative periodical — *the American School Board Journal* — a periodical which reached school board members as well as schoolmen. The scale had been printed in this journal in March of 1915, three months before the publication of the yearbook, and the *Journal* continued to endorse Boyce’s work editorially and to praise his ideas frequently in articles.³⁰ Thus in January, 1917, one superintendent in discussing the rating of teachers, described his work as the “clearest analysis of the whole subject.”³¹ Even when Boyce’s scale was not adopted as such it was apparently used as a model; for many of the rating forms which appeared subsequently in the educational literature were remarkably similar to his.

²⁹*Methods for Measuring Teachers Efficiency* (Chicago, 1915), p. 77.

³⁰Vol. L, p. 10.

³¹Mary D. Bradford, “How the Superintendent Judges the Value of a Teacher,” *American School Board Journal*, LIV (January, 1917), 69.

Since most of the teacher-rating sheets had to be filled out by school principals it followed that means should be devised for measuring *their* efficiency. One of the many rating forms devised for this purpose was drawn up by the superintendent of schools in Everett, Washington, and printed in the *American School Board Journal* in July, 1917.³² Teachers were to rate their principal on the following items:

I. Personal Equipment

1. General Appearance
2. Health
3. Initiative
4. Enterprise
5. Capacity for leadership
6. Accuracy
7. Industry
8. Enthusiasm
9. Integrity and sincerity
10. Self-control
11. Promptness
12. Tact
13. Sense of Justice

II. Social and Professional Equipment

14. Academic Preparation
15. Professional Preparation
16. Understanding of children

17. Interest in life of school
18. Interest in life of community
19. Ability to interest patrons in school
20. Interest in lives of pupils
21. Co-operation and loyalty
22. Professional interest and growth
23. Use of English

III. *Management*

24. Care of light, heat and ventilation
25. Neatness of buildings and grounds
26. Care of routine
27. Handling of discipline
28. Management of play and athletics
29. Definiteness and clearness of aim

IV. *Technique of Supervision*

30. Follow-up work in supervision
31. Helpfulness to teachers in supervision
32. Helpfulness to teachers in discipline
33. Value of teacher's meetings
34. Value of visits to rooms
35. Moral influence
36. Spirit and tone of school

³²Vol. LV, p. 79. About the same time an educator from New York proposed to clock and standardize the work of the principal to make sure he was not being overpaid. He concluded his proposal by suggesting that "those who oppose the scheme most loudly should be selected for closest investigation." Felix Arnold, "The Unit of Supervision, Cost and Efficiency," *School and Society*, II, 1-11.

As might have been expected in the efficiency mania of the time, efforts were made to measure the efficiency of all other individuals in the schools including superintendents, students, and even janitors. One suggestion to check the efficiency of superintendents came from Superintendent William Vance of Delaware, Ohio, in a round-table discussion at the Department of Superintendence meeting in 1914. His recommendation was that the administrator determine his efficiency through "self-analysis," and he listed the qualities which he said all would agree "must characterize the equipment and output of any efficient man . . ." and certainly the "successful superintendent." One of these "fundamental qualities" was that the superintendent be a "man of affairs" and, said Vance, "By this I mean not only that he should know the details of the school plant and equipment, from pens and ink to plumbing fixtures and vacuum cleaners, but that he should be an expert in warming, ventilating, school seating, decorating, and landscape gardening. . . . In cities of less than 25,000 he is frequently the purchasing agent of the board of education, and hence he must be a compendium of school and office supplies. Catalogues, samples, and pricelists comprehensively filed are at his finger tips. He familiarizes himself with the quality of the manufactured output of the various houses. He inspects the school grounds, basement, furnace and engine rooms, toilets—the entire realm of which the janitor is king, and even ventures a suggestion or a correction, if need be, to that potentate."³³ In prefacing this statement Vance had said: "In these days of scales and standards or norms, when there is a burning desire to reduce everything in the pedagogical universe to the fraction of something else, and then to hold it up to public view as a percentage, or a graph, or a segmented line, or a sector of a circle, or groups thereof, one device seems to have escaped the inventive diabolism of the experts, namely, a contrivance whereby the superintendent of schools may take his own measure, quickly, accurately, privately. But how is he to do this himself? How can he anticipate the inquisitorial methods of some Holy Office

of a Survey?"³⁴

³³N.E.A. *Proceedings* (1914), pp. 280-81.

³⁴*Ibid.*, pp. 279-80.

Other educators added to these contributions by Superintendent Vance. One administrator from the Brooklyn schools, noting in March of 1915 that the age was one of "weighing and counting," believed that it was time that such terms of "accurate description and efficiency be applied to the superintendent." To achieve this goal he had drawn up a chart through which the administrator could measure his own efficiency.³⁵

Less attention was given to developing scales for rating the efficiency of students than was given to teachers, but they were not neglected completely, and from time to time forms which were being used were reproduced in the professional journals so that educators all over the nation could benefit from the creative efforts of a talented few. One such form, by the superintendent of schools in Blackfoot, Idaho, was printed in the May, 1915, issue of the *American School Board Journal* as follows:

STUDENT EFFICIENCY TEST³⁶

Place after each item the per cent which is a fair estimate of your personal attainment in the particular line and add the total. This will be your per cent of efficiency as a student.

1. Do you take joy in your school work? 5% . . .
2. Can you finish your lessons in two hours' home study? 2% . . .
3. Do you have a regular schedule of study? 4% . . .
4. When you are mentally tired, do you take physical exercise in the open air? 3% . . .
5. Do you have a place for home study apart from the family? 4% . . .
6. Do you get all of your lessons each day? 4% . . .
7. Do you sleep with at least one window open? 2% . . .
8. Do you study by a good light from behind or over your left shoulder? 3% . . .
9. Do you get enough sleep to awaken of your own accord at a regular hour? 3% . . .
10. Do you read newspapers? 3% . . .
11. Do you read magazines? 2% . . .
12. Do you read good books? 3% . . .
13. Do you enter into discussions of local interest in civic and state affairs? 3% . . .
14. Do you keep up a correspondence with some sympathetic friend or relative? 2% . . .
15. Have you a bank account? 6% . . .
16. Do you "loaf on the streets"? 2% . . .
17. Do you earn some money each month, other than that from your own family? 2% . . .
18. Have you one special friend of your own sex? 3% . . .
19. Do you attend and enjoy church? 3% . . .
20. Do you attend and enjoy musicals and lectures? 3% . . .
21. Do you take part in some wholesome exercise (Outdoor)? 5% . . .
22. Do you make it a rule to do a kindness toward someone each day? 5% . . .
23. Do you help with the common duties of the home? 5% . . .
24. Do you enjoy going to places with your parents? 3% . . .
25. Do you contribute, by your work, to the maintenance of the home? 6% . . .
26. Do you find your home a place of pleasure and enjoyment for yourself when none but the family are present? 3% . . .
27. Do you give your best efforts to study when at study and play when at play?

3%. . . .

28. Are you proud of your report card as representing the best that you are capable of doing? 5%. . . .
29. Do you study the manners of other people, imitating the good and avoiding the bad that you see about you? 3%. . . .
30. Have you a good 'HOBBY'? 3%. . . .

Total Efficiency _____

Name _____

Four years later a teacher from Salem, New Hampshire sent the editor of the *Journal of Education* a copy of a "High School Student's Efficiency Score" which, she said, was a modified version of a scale she had seen in another educational journal. Some of the items on which students were scored were: "According to your age and height is your weight up to standard?" "Do you read at least one standard book a month?" "Is your language always clean?" "Do you keep an expense account?" "A bank account?"³⁷

Finally administrators carried the effort to measure and demonstrate the efficiency of the schools to its logical conclusion by creating and using rating scales for janitors. In May of 1917 *the American School Board Journal* printed a copy of a rating card which was being used in Rockford, Illinois. The duties of the janitor were listed and points assigned so that his efficiency could be rated on a one-hundred point scale.³⁸

By the end of 1918 the campaign to introduce efficiency measures into the schools had been successfully consummated and evidence that this was so was provided by an educator from Pittsburgh. "Any teacher" he said, "who has attended an educational meeting in recent years has heard discussions of Educational Measurements. Scales and tests and standards are numerous. Surveys and investigations and comparisons are being made in almost every school."³⁹ By 1920 rating scales for teachers were being used extensively but there was also widespread dissatisfaction with their use. As one educator put it, teachers had accepted the ratings "meekly but resentfully" for many years.⁴⁰ Yet, except in cities such as New York and Chicago, where teachers had strength through organization in teachers' unions, they had little choice but to accept the rating system. And despite the dissatisfaction, leading administrators defended its use. For example, William McAndrew, superintendent of schools in Brooklyn and later (1924) in Chicago, justified teacher ratings by stating that "Every principal is responsible for a good-sized pay roll. If he doesn't follow up the work of those he is put to supervise he is not doing his duty as a financial manager. If he doesn't keep an account of his appraisal of work he's likely, I think, to be a poor business man. If he does, I don't see any objection to his summarizing it as A, B, C, D."⁴¹

³⁵Frederic L. Luqueer, "Self Accounting in Supervision," *Educational Review*, XLIX, 460-68.

³⁶Vol. L, p. 50.

³⁷ Vol. XC (October, 1919), p. 376.

³⁸Vol. LIV, p. 60.

³⁹Arthur G. Skeeles, "The Educational Yard Stick," *Journal of Education*, LXXXIX (January 23, 1919), 93. ,

⁴⁰Alexander Fichlander, "Teachers Ratings," *Journal of Education*, XCI (February, 1920), 243.

⁴¹*Ibid.*

Although some educators undoubtedly believed that the education of children would be improved through the introduction of the various efficiency measures, the primary motivation for their adoption by administrators was self-defense. This comes out in some of the material presented above and it was

stated specifically by leading educators from time to time. Thus Edward Elliott, professor of education at the University of Wisconsin and one of the leading efficiency experts in education, in his report in 1913 to the National Council of the N.E.A. as a member of the Committee on Tests and Standards of Efficiency in Schools and School Systems stated, "The ultimate problem of this Committee . . . is that of creating a new kind of confidence on the part of the public in the work of the public schools. This confidence constitutes the capital with which the efficient school system must develop its dividends and activities."⁴² And he went on to say that the efficiency measures which were undertaken had to be reported simply and understandably and in a language businessmen would understand. Evidence that this same motivation applied to the efforts to measure the efficiency of teachers was provided by a superintendent of schools from Beaver Falls, Pennsylvania, who stated before the Department of Superintendence of the N.E.A. in 1915, "The desire to apply sound business principles has prompted the administrative authorities of most large cities and many small ones to adopt some form of the merit system of promoting teachers and fixing their salaries."⁴³ Even educators who were bitterly critical of the movement, such as James L. McConaughy, professor of education and English at Dartmouth and later President of Wesleyan University, provided evidence that the motive was to ward off criticism by seeming to demonstrate efficiency. McConaughy began an article written in March of 1918 and entitled "The Worship of the Yardstick" by stating, "This is an age of efficiency. In the eyes of the public no indictment of a school can be more severe than to say it is inefficient."⁴⁴

The School Survey

⁴²N.E.A. *Proceedings*, p. 398.

⁴³N.E.A. *Proceedings* (1915), p. 473-74. Proof that this was so was provided in January, 1915, by the editor of the *American School Board Journal*. He reported "the growing necessity of efficiency tests in school departments is reflected in every annual report issued from the larger cities of the country." Vol. L, p. 27.

⁴⁴*Educational Review*, LV, 191-92.

The other major activity engaged in by educators in which they identified themselves and were identified by others as efficiency experts or engineers, was in the work of surveying school systems. The procedure generally followed was to call in an outside "expert" or experts who studied the schools and made a report to the board of education. These men were usually professors of education from the leading universities and most often specialists in administration, but frequently a prominent superintendent (e.g. Spaulding) was engaged, and occasionally men from the educational foundations such as Carnegie directed or participated in surveys. The length of time spent upon these investigations varied from one week to a year or more, but most of them (at least of a single school system) were completed in less than a month. Some surveys were conducted by one or two men while on others a team of five or six educators was employed. In the years between 1911 and 1925 hundreds of surveys of schools were made — so many, in fact, that it seems there was hardly a state or local school system in America which was not surveyed. One educator, describing the situation in 1919, wrote that it was "quite the fashion for the schools to be 'surveyed' and many hundreds of systems have been through the operation." And he added sarcastically that the result of this work was contained in volumes of "findings" which he said laymen "cannot interpret and which no one with the least grain of sense would attempt to read..."⁴⁵

The growth in numbers of the surveys paralleled the growth of the strength of the efficiency movement and the accompanying criticism of the schools in the years after 1911. As early as February, 1912, superintendents were briefed at their annual meeting by one of their leaders on the situation

regarding surveys and were given some advice on how to proceed. The speaker, Calvin N. Kendall, Commissioner of Education in New Jersey, told his audience that the investigation of school systems by commissioners or committees was being pushed to answer two basic questions: "What return is the community getting from its investment in the schools? How can the investment be made to yield greater returns?" Kendall reported that only a few investigations had been made so far, but he said that signs were not wanting that such inquiries would increase greatly. He spoke of the great concern for efficiency which was sweeping the country and the increasing criticism of the schools and he warned that "In this practical age there is sure to be a search for tangible results of educational processes." Kendall, aware that administrators were growing anxious and fearful concerning these investigations, tried to reassure them. It was possible, he said, that the results of the surveys could be helpful to schoolmen and he cited the Baltimore survey as an example of a case in which the facts indicated that more money needed to be spent on the schools. Then he provided some advice for administrators on how to proceed — advice which was repeated frequently in the years that followed. The superintendent, he said, could take the initiative in arranging for a survey. By doing this he could beat his critics to the punch, for, as he put it, "Obviously it is much the wiser course for him to take the initiative than to have it taken by hostile influences in the community."⁴⁶

⁴⁵"An Unintentional Survey," *Journal of Education*, XC (July 3, 1919), 8.

⁴⁶N.E.A. *Proceedings*, pp. 376-80.

Year after year these themes presented by Kendall were repeated by educators. In 1913 the superintendent of schools in Boise, Idaho, Charles S. Meek, reported enthusiastically to the National Council of the N.E.A. on the results of a one-week survey made of the Boise schools by Edward Elliott, Charles Judd, and George Strayer. He quoted the president of the Boise school board as saying (after he had read the survey report) that he was glad to see that education had "at last reached such a stage of development that it is indeed a profession. The report . . . will certainly compare favorably with expert reports made by engineers etc." This statement must have been like sweet music to administrators who had been subjected to severe criticism the previous year. And it certainly contributed to the popularity of the school survey, for here was a means whereby they could apparently achieve professional status and defend themselves at the same time. On this latter point Meek had more reassuring words to say: "The comparisons these men made with other cities, as on expenditures, have placed us in an entirely defensible position before the taxpayers and will convince even the most critical that we are not spending too much money, and that the results that we are getting are certainly commensurate with the expenditures made."⁴⁷

By 1914 the school survey had become so important that the Committee on Tests and Standards of Efficiency in Schools and School Systems reported at length to the N.E.A. on the purpose, nature, and conduct of school surveys. George Strayer, chairman of the committee, said that obviously any consideration of the study of efficiency in the schools had to include "some treatment of that form of inquiry now so commonly advocated by the critics of public education. . . ." The critics of education had succeeded in forcing many investigations and evidently these were causing administrators to be apprehensive, for Strayer labored to effect a change in the name and in the spirit of these inquiries. He urged educators to use the term "survey" for these inquiries instead of the word "investigations." The latter term he said had an "invidious connotation" which implied seeking proof of *inefficiency*, of putting

the schools on trial. On the other hand the “survey” was positive in nature and was concerned with constructive criticism.⁴⁸ Clearly Strayer had no difficulty getting schoolmen to accept this view; the problem was to get a critical public to do so.

At the same meeting Superintendent Meek of Boise gave another speech on the school survey and provided additional evidence of the need for and the usefulness of the new means of defense. He reminded his colleagues that the public schools were being “assailed today more vigorously, even viciously, than ever before,” and he quoted a statement from a recent report of the National Manufacturers Association which charged that the schools were so “hopelessly, wickedly inefficient and damaging as to call for instant and tremendous consideration and readjustment.” Then, speaking of the public, Meek told his audience of educators, “They want to know that no part of the vast sums they each year pay for the support of public education is wasted, but that all of it is wisely and economically expended; that all of it is yielding for their children the greatest possible return in terms of educational units.” His recommendation was based on his own experience in Boise—arrange for a survey of the schools by outside experts, and he described its function as follows: “*As a protection to competent school administrators, as an effective device to convince the public that the enormous sums the schools are each year exacting are being wisely and economically expended and are yielding commensurate returns in educational units, and as a means of educating the patrons to an appreciation of the newer phases and modern trend of education, the work of a school-inquiry committee is invaluable.*”⁴⁹ It was necessary to bring in *outside* efficiency experts, he said, because they would have no interest in the local situation whereas local schoolmen might not render a decision against themselves. Testimony such as this from men who had survived a crisis contributed to the spread of the survey movement and to the demand for the services of the educational efficiency engineer.

In the years between 1912 and 1916 school administrators were told repeatedly by leading educators that the survey was an excellent device to use in defense against hostile critics. They were also told that it was a valuable instrument for obtaining more money for the schools. Bobbitt described how this could be done in an article published in the fall of 1914, and the message was repeated frequently.⁵⁰ By 1915 superintendents heard testimony at their annual meeting from one of their prominent members, James Van Sickle of Springfield, Massachusetts, that the survey was doing the job. He reported that “the most conspicuous immediate result of surveys, and one which seems to have been attained in nine of the ten about which I have made inquiry, is the very decided help given in securing adequate appropriations to the support of the schools.”⁵¹ Under the circumstances administrators could have been forgiven for inviting in the visiting firemen.

The school surveys were initiated either by groups in the community or by schoolmen, and sometimes by a combination of the two. The giant Cleveland survey conducted in 1915 was brought about partly as a result of the activity of the Cleveland Engineering Society. This group had charged, in the fall of 1912, that according to their standards the Cleveland schools were operating at less than 50 per cent efficiency.⁵² The *American School Board Journal* provided evidence of the impetus for the San Francisco survey (as well as giving other interesting aspects of the situation regarding surveys) in the following news item in its May, 1915, edition. “Upon the suggestion of the school board and the superintendent, the Chamber of Commerce has appointed a committee to undertake a thorough and complete survey of the city schools to increase the efficiency of the system and to reduce the cost of operation. In the conduct of the survey, the school authorities will assist in every way possible and experts of national reputation will be in direct charge.”⁵³ In the state of

California as a whole, surveys were stimulated by the Taxpayers' Association of California which in May, 1917, established a special Bureau of Educational Investigation. The director of the bureau described its work in a statement which was reprinted in the *Elementary School Journal*: "The Taxpayers' Association of California exists for the purpose of eliminating waste and promoting greater efficiency in the administration of public affairs. As a part of its operating program it will attempt to show the business men and taxpayers of California how they can get better educational results for the money spent. Educational leaders for many years have been demanding changes for the better, but either have achieved no results or else have had to be satisfied with so many compromises that it is generally admitted that the highest efficiency is not being obtained even with the large amount of money now being spent. The direct object of the new bureau will be to show the men who pay the bills that the principles of good school administration are fundamentally related to the cash drawer and the pocketbook. . . . If the Bureau of Educational Investigation selects any city or county as a base of operations, it will be because a beginning must be made somewhere. It is hoped that the Association and its Bureau will have the hearty co-operation of public officials throughout the state."⁵⁴ The *Journal* reported also that the association had secured the services of Ellwood P. Cubberley as a "consulting expert."

⁴⁷N.E.A. *Proceedings* (1913), p. 398.

⁴⁸N.E.A. *Proceedings* (1914), p. 302.

⁴⁹*Ibid.*, pp. 310-13. (Italics mine.)

⁵⁰John Franklin Bobbitt, "The School Survey," *Elementary School Journal*, XV, 41-54.

⁵¹N.E.A. *Proceedings*, p. 382.

⁵²*Elementary School Teacher*, XIII (October, 1912), 59.

⁵³Vol. L, p. 51.

⁵⁴Vol. XVII (May, 1917), pp. 623-24.

In the extensive and controversial survey of the New York City schools the inquiry was initiated in 1911 by the financial authorities, the Board of Estimate.⁵⁵ In St. Louis, a survey was organized by the Board of Education, apparently without outside pressure, in order to persuade the citizens that more money was needed for the schools.⁵⁶

The nature of the surveys was determined partly by the individuals who initiated them and partly by the "experts" who actually made the studies. Clearly the dominant motivating force in most instances was economic, not educational. What was wanted was a decrease or at least no increase in taxes. Since this was so, the financial aspects of the operation of the schools were very prominent in most survey reports, as anyone who can stand the boredom of reading them will discover. On the other hand, the outlooks and competence of the surveyors influenced the nature of the survey. When Charles Judd was director, as in the St. Louis survey cited above, the emphasis was upon instructional problems, although the financial and organizational aspect could not be neglected. When Bobbitt, Spaulding, Ayres, Cubberley, Strayer, or N. Engelhardt were involved, they emphasized the financial, legal, or organizational side even when they were dealing with instructional or curricular problems. And the survey reports by these men were filled with business and industrial terminology, and parallels were drawn frequently between these areas and education. For example, Bobbitt in his report on his Denver survey (1916) included a point-by-point analysis of the relation between school management and the management of a business corporation.⁵⁷

⁵⁵*Elementary School Teacher*, XII (September, 1911), 42.

⁵⁶*Survey of the St. Louis Public Schools* (Board of Education, St. Louis, Missouri, 1917), p.

1. ⁵⁷*Elementary School Journal*, XVII (December, 1916), 223.

There were other reasons for the emphasis on the financial and mechanical aspects of education in these surveys. Generally funds were limited and time was short and so a thorough study was impossible. Also, the *Plans for Organizing School Surveys*, published as the Thirteenth Yearbook of the National Society for the Study of Education in 1914, stressed the financial and mechanical. Even the section on the child was limited largely to enrolment and promotion statistics. The same thing was true of the section on teachers. Consider, for example, the section under the heading "The Work of the Teacher," which included the following items to be checked in the survey:

1. Number of pupils per teacher.
2. Number of classes per teacher.
3. Number of preparations per teacher.
4. Total amount of time per week teacher is required to spend on school work.
 - a) During school hours.
 - b) Outside of school hours.
5. Degree to which teachers are consulted concerning —
 - a) General school policies.
 - b) Making of course of study.
 - c) Selection of supplementary material.
 - d) Change of textbooks.⁵⁸

Probably, too, the connection of the school survey and the educational engineer with the efficiency engineer in industry, and especially with the Taylor system, contributed to its financial and mathematical emphasis. It will be remembered that scientific management was perceived by the American press largely in terms of the financial saving its application made possible. That the school survey with its experts was patterned after the industrial scientific management system was indicated by Cubberley as well as by other educators.⁵⁹ One educator, Jesse B. Sears, gave explicit testimony on this point. Sears, who was a pupil and colleague of Cubberley at Stanford, had participated in many surveys and through his acquaintance with Cubberley was thoroughly familiar with the development of the movement. In his book, *The School Survey*, published in 1925 (to which Cubberley wrote an introduction), Sears gave the following explanation of the origin and spread of the survey, showing its connection with industrial scientific management:

*With a critical public opinion demanding economy and efficiency, and with a new conception of education growing rapidly into a science of education, we had both the motive and the means by which the survey movement could take form. Under these circumstances it was not strange that the public should take readily to the survey idea. People were already familiar with the work of the efficiency engineer and the accounting expert in business and industry. Naturally, then, when boards of education called upon educational experts to help point the way out of difficulties, the idea was promptly understood and sanctioned by the public, and the school survey movement had begun.*⁶⁰

⁵⁸ P. 31.

⁵⁹E.g. in October, 1914, Howard T. Lewis of the University of Idaho, writing on the school survey in rural areas, gave an account of the increased efficiency gained by Frederick W. Taylor in industry and then stated: "So ought it be in education." *Educational Review*, XLVIII, 270.

⁶⁰Jesse Sears, *The School Survey* (Boston, 1925), pp. 3-4. (Italics mine.)

The purpose and nature of the school survey have been considered. Its effects on American education are more difficult to determine. Undoubtedly it contributed to the adoption by the schools of standardized tests and teacher-rating procedures. More important, however, was the effect it had on the nature

of educational administration. After all, the men who made the surveys were recognized “authorities” and if they emphasized the financial and mechanical aspects, why should an ordinary superintendent, or board member, or citizen question that these were the important elements of education. Were not these men experts? And was not this work scientific? Equally important was the fact that the published reports of the school surveys were used as texts or at least as basic documents in the newly formed (and rapidly expanding) courses in educational administration in the universities, where they contributed toward a business and mechanical conception of school administration among newcomers in the field.

There were other unfortunate effects of the surveys. In many instances and especially when a hostile group had initiated the survey the experts tended to be extremely critical and when these criticisms were exploited by the newspapers some poor schoolman was in for trouble.⁶¹ In some instances superintendents fought back and the result was a hot controversy which certainly disrupted the educational work of the schools. Such a situation resulted in New York City, where the Board of Estimates hired experts, Professors Hanus of Harvard and McMurry of Teachers College, among others, to investigate the schools. The findings, published in several volumes, were critical and many New York schoolmen, including Superintendent William Maxwell, thought unjustly so. Maxwell accused McMurry of making sweeping conclusions based on inadequate evidence, and other educational leaders in New York described the survey as “setting third rate men at the task of inspecting and estimating what first rate men were doing.”⁶² As the controversy raged in the press and in the educational journals some telling criticisms were made of the experts, including the most basic of them all: *What special competence did these men have? What was the basis of their claim to expertness? What right did they have to pass judgment on the schools?*

⁶¹This situation developed in Cleveland in 1915. *Elementary School Journal*, XVI, (January, 1916), 220.

⁶²“Good and Bad in New York Schools,” *Educational Review*, XLVII (January, 1914), 67-68. Some evidence of the consequences of a survey made of the University of Wisconsin in 1913 will show what could ensue from a survey by so-called “efficiency experts.” This survey was directed by William H. Allen, whose qualifications were certainly questionable but who nevertheless made surveys and even went into the business of selling pamphlets on how to survey a college, etc. Testimony on the effect of Allen’s work on the university was presented by Jerome Bumpus, later President of Tufts College: “Three or four years ago, when the ‘lost motions’ of the brick layer were being capitalized and ‘Success Magazines’ were going into the hands of receivers, certain efficiency experts were assigned to ‘speed up’ the University of Wisconsin, that held at that time the foremost position among publicly-supported educational institutions. The men assigned as efficiency experts began with the business side of college administration; they were not college men, but accountants, men ignorant of college purposes. . . . The injury that the University of Wisconsin has suffered since the inquisitorial methods of so-called efficiency experts invaded the educational side of the institution is irreparable. For over a year an educational staff costing the state a million and a half has had its attention and its energies diverted from its legitimate work and centered upon the formulation of protests against unwarranted interference, unfair misrepresentation, and against the ruthless destruction of long-established educational ideals.” “Efficiency in the University,” *Education*, XXXV, No. 10 (June, 1915), 663-64.

Although similar situations undoubtedly developed on other occasions as a result of a survey, the evidence indicates that generally they were helpful to school administrators in their efforts to defend themselves. Regardless of the long-range effects, they helped schoolmen meet the demands of an economy-minded, business society. As a superintendent from Boston put it “Even an investigation, as bad as some of them are, may have this advantage — that the conclusions, if any are made, will be so confusing that the business man cannot understand them; and it will therefore be a valuable asset in our defense of the public schools.”⁶³ The tragedy, however, was not only that surveys helped

orient the nature of the “profession” of school administration in its formative years toward the business and mechanical aspects of education, but also that many intelligent educators were forced to spend their time on trivial matters. To be sure, much of the work done was valuable and the millions of facts gathered were useful and could have been even more useful if they had been put to educational and not to financial purposes. In the end, the American people got what they deserved for forcing their educators to spend their time on accounting rather than on the education of children.

The Unavailing Dissent

Enough evidence has been presented thus far to indicate the strength of the efficiency movement and of the business philosophy in America in the second decade of this century. American society was saturated with the business-industrial ideology and, as I have shown, American public education did little but respond to the dominant forces. But some evidence has been given of the existence of dissenting opinions by educators. More of this dissent will be included in subsequent chapters but it seems appropriate to present at least a brief account here of the nature, the sources, and the effectiveness of this opposition to the various phases of the efficiency movement.

I have chosen to describe this dissent as unavailing because, although voices were raised in protest against each of the various efficiency procedures which were introduced into education as well as against the inappropriate application of the business philosophy generally, in the total picture the dissenters were such a small minority that their voices were barely audible, and they were unable to stem the tide. Occasional victories were won, such as that against the platoon school in New York, but even in this instance success was due to the fact that the educational issues became involved in political controversy.⁶⁴ What opposition there was among teachers was limited to a few large cities where strong teachers’ unions or professional associations existed. This was to be expected because teachers generally worked without tenure and were at the mercy of the school boards and of the administrators. Teachers as a group were quite timid, partly because of their insecure position, and partly because, as Dewey pointed out, “in the main the most docile among the young are the ones who become teachers when they are adults. Consequently they still listen docilely to the voice of authority.”⁶⁵

⁶³Stratton D. Brooks, *School Review*, XX (May, 1912), 318.

⁶⁴Cf. pp. 136-41.

⁶⁵John Dewey, “Education as Engineering,” *New Republic*, XXXII, No. 407 (September 20, 1922), 91.

The loudest voice of protest among teachers was raised by the *American Teacher* which became the official journal of the American Federation of Teachers, a teacher’s union affiliated with the A. F. of L. As early as 1912 this journal carried an article by a teacher from New York who charged that the schools had become commercialized.

By this I do not mean that the management of the schools is motivated by an itch for profit, as is implied, for example, when we speak of the professions of law and medicine having become commercialized. I mean merely that our educators have yielded to the temper of their surroundings, which are distinctly commercial. The organization and the methods of the schools have taken on the form of those commercial enterprises that distinguish our economic life. We have yielded to the arrogance of ‘big business men’ and have accepted their criteria of efficiency at their own valuation, without question. We have consented to measure the results of educational efforts in terms of price and product — the terms that prevail in the factory and the department store. But education, since it deals in the first place with organisms, and in the second place with individualities, is not analogous to a standardizable

manufacturing process. Education must measure its efficiency not in terms of so many promotions per dollars of expenditure, nor even in terms of so many student-hours per dollar of salary; it must measure its efficiency in terms of increased humanism, increased power to do, increased capacity to appreciate.⁶⁶

The editors of the *American Teacher* continued their opposition through the years and printed the following statement in bold letters on the title page of the March, 1916 issue:

If efficiency means the demoralization of the school system;

dollars saved and human materials squandered;

discontent, drudgery and disillusion —

We'll have none of it!

If efficiency denotes low finance, bickering and neglect;

exploitation, suspicion and inhumanity;

larger classes, smaller pay and diminished joy —

We'll have none of it!

We'll espouse and exalt humane efficiency — efficiency that spells felicity, loyalty, participation and right conduct. Give us honorable efficiency and we shall rally to the civic cause.

There were only a few administrators who objected to the efficiency measures being introduced into the schools and they were the older men such as William E. Maxwell of New York and J. M. Greenwood of Kansas City. These men accepted the notion that schools should be efficient but questioned the definition of efficiency that was being used and the means of measuring it. Maxwell, for example, doubted whether "time-wasting, energy-destroying statistical research" could determine the efficiency of a school system or could give new information to the experienced teacher. He believed the standard of efficiency could be set as a considered, philosophical definition of an efficient school in terms of what it should do for its students in life. But he asserted the real test of what the school had done could come only in the adult life of the student, for, he reminded those who had referred to the child graduate as the "ultimate product" of the school, only the adult in actual life could be termed the "ultimate product." As for the value of tests on immediate ability in school subjects, he was apparently somewhat scornful, for he said:

When I read that, in one of the older eastern cities, after shedding lakes of ink and using up untold reams of paper and consuming the time of unnumbered teachers in administering and scoring the Curtis standard tests in addition, subtraction, multiplication, and division, the learned director reached the conclusion that "29 per cent of the pupils in the eighth grade could exchange places with a like number of pupils in the fourth grade, without changing, in the slightest, the arithmetical ability in the fundamental operation of either class as a class," I am inclined to exclaim:

My dear sir, what did you expect? That all the children in a grade would show equal ability in adding, subtracting, multiplying and dividing? Any teacher of experience could have told you that they would not. You should have known it yourself. One flash of Horace Mann's insight would be worth a thousand miles of your statistics.⁶⁷

He went on to say:

these new doctrines usually run a regular course and that course involves three stages. In the first stage, everything hitherto done in the schools is wrong; in the second stage, if the new theory receives any popular support, everything will be well; the new subject or the new method is a panacea that will cure all educational ills; in the third stage, the practical teachers have divested the new theory of its superfluous trappings, have swept away the preposterous claims of its advocates, and have discovered and used whatever small kernel of truth it contains or conceals. . . . Our friends of the standard-testscale-statistical theory . . . are still in the second stage of reform accomplishment — the stage in which they proclaim their theory as a panacea for all educational ills.

Maxwell believed, however, that the standard-test-scale-statistical plan of testing efficiency should not be absolutely rejected because it could not realize a “tenth part” of the claims of “Professor Bobbin,” its “most elaborate exponent,” for he hoped that such tests might become an improved form of the old state examination and, as such, could help restore “that thoroughness of teaching and that accuracy of scholarship which, to no small extent, vanished with the old examinations.”⁶⁸ But, he said, if the tests turned teachers into bookkeepers, the tests too, would vanish.

An amusing sidelight of this same talk was the barb Maxwell aimed in the direction of Bobbitt and his university colleagues.

Our good friends, the statistical professors of education, would do well to try their theories on the work of their college and university colleagues before applying them to the common schools. The college or university student is more nearly an ultimate product than is a sixth-year child. How would it do to determine the efficiency of college teaching by grading the Juniors according to their ability to solve six problems in the differential calculus in twelve minutes, to estimate the English compositions of Seniors on a scale graduated from the style of William H. Allen, of New York, up to the style of Charles W. Eliot, of Harvard? Imagination pales before the attempt to picture the howls of horror raised by the ordinarily peaceful and placid professors.⁶⁹

This satirical picture actually came into being, for when the efficiency experts did invade higher education, there was vigorous dissent by professors.

⁶⁶Benjamin C. Gruenberg, “Some Economic Obstacles to Educational Progress,” *American Teacher*, I (September, 1912), 90.

⁶⁷*Elementary School Journal*, XVII (December, 1916), 223.

⁶⁸*Ibid.*, p. 401.

⁶⁹*Ibid.*, p. 398.

Occasionally, questions about the efficiency measures being used were asked by statisticians themselves, men who could not have been suspected of hostility toward genuinely scientific attempts to measure the results of education. The doubts these men raised were concerned with the qualifications and accuracy of those who used the statistical tools, and with the use to which they were put. Edward M. Hartwell, Secretary of the Statistics Department of the Boston schools made some comments which were representative of the reservations of the conscientious expert in statistics:

Doubtless the scientific admeasurement of measurable quantities may be made to yield valuable criteria of the efficiency of certain methods and procedures pertaining to school life and administration. But the measurements must be made by patient and skillful measurers, who can be depended on to winnow and classify their results and not jump to conclusions. . . . But I must confess that the glowing accounts of the rapid spread, in the last few years, of comprehensive statistical investigations of schools and scholars does not elate me overmuch. Supposedly professional statisticians not infrequently do such queer things that the prospect of a possibly too-rapid multiplication of amateur school statisticians is not inspiring.

When I hear that state-wide investigations of schools or school children have been completed in a year, I cannot forbear wondering how many of the investigators were experts, where they came from, how much money they spent, and what they really accomplished. . . . My plea is that we should discriminate in our investigation and consideration of educational matters between methods and criteria that are applicable to living mechanisms and their activities and those which pertain to the realm of the inventor, the engineer, and the manufacturer.⁷⁰

This was similar to the attitude Richard C. McLaurin, president of Massachusetts Institute of Technology, had shown in 1910 when he said, “Now . . . its [science’s] merits are loudly proclaimed on every hand, and its importance is emphasized, with tiresome repetition, by college presidents and others, often, indeed, by men who have little real knowledge of its methods and

little real sympathy with its progress.”⁷¹

The most insightful criticisms, however, of the efficiency devices were made by two outstanding educators, William C. Bagley and John Dewey. Both men opposed the inappropriate application of business and industrial values and procedures to the schools and both criticized the oversimplified and superficial activity being engaged in, often in the name of science. Bagley believed that the scientific movement held great promise for education but warned educators not to expect miracles. “If the history of our art teaches us anything,” he said “it is that nostrums, panaceas, and universal cure-alls in education are snares and delusions. In a field of activity so intricate and so highly complicated as ours, it is both easy and disastrous to lose the perspective. To keep this clear perspective must be our constant struggle. We must give up the notion of solving all of our problems in a day, and settle down to patient, painstaking, sober, and systematic investigation.”⁷² And Dewey wrote and spoke repeatedly on the same theme. He pointed out that “would-be pioneers in the educational field need an extensive and severe intellectual equipment.” And while approving the testing movement he criticized the use that was being made of the tests. They should be used, he said, for diagnostic purposes, to provide a better understanding of children, and not as a convenient means of classifying and standardizing students. He charged that much of the “scientific” work being done was not really scientific in the sense of inquiry into processes, but merely the same old education “masquerading in the terminology of science.” The change, he said, had made little difference “except for advertising purposes.”⁷³

So the dissenting voices were raised — strong, intelligent, prophetic voices — but, as it turned out, voices lost in the wilderness.

⁷⁰*School Review*, XX (May, 1912), 314-17.

⁷¹“Science and Education,” *Ibid.*, XVIII, 319.

⁷²N.E.A. *Proceedings* 51912), p. 639.

⁷³John Dewey, loc. cit., p. 90.