

EDUCATION RESEARCH FLOUNDERS IN THE ABSENCE OF COMPETITION FROM FOR-PROFIT SCHOOLS

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Relatively little attention is paid to research in controversies over educational policy. For instance, *A Nation at Risk* (NCEE 1983), the most highly publicized document on educational reform in our nation's history, did not include any references to educational research. In addition, there is a broad albeit not unanimous consensus that educational research has had little if any impact on teaching or other aspects of education. Although commentaries differ on why this is the case, few allege that educational research has been productive or is likely to be productive in the absence of drastic change.

Professional educators often join in the severe but long-standing criticisms of educational research. Robert Slavin (1997: 22), one of the most prominent educational researchers in the nation, notes: "For decades, policymakers have complained that the federal research and development enterprise has had too little impact on the practice of education. With few notable exceptions, this perception is, I believe, largely correct."

Negative comments about educational research in the late 1960s and early 1970s led to the establishment of the National Institute of Education in June 1972. Its sponsor, the late Sen. Patrick Moynihan (D-NY), expected NIE to be similar to the National Institutes of Health, which conducts long-range studies on health issues. Nevertheless, one congressional opponent of NIE, Rep. William J. Scherle (R-IA), made a comment about it that seems as relevant today as when the comment was made:

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This provision simply opens the Federal Treasury to the same educational researchers without any assurance that the quality of education would be improved.

The Office of Education in the last 10 years has spent approximately \$1 billion on education research. Most of this was contracted out to various educational research organizations. Under this bill all that would happen would be that a new organization, the National Institute of Education, would be created to do the same thing which is being done now. . . .

By defeating this amendment, the House will have an opportunity to reject the concept that the way to solve problems is to recast an old agency with a new name and increase its size and scope with the same people who run the old program, with additional waste of time and effort [Scherle 1971: 39214].

The latest reorganization of the research activities of the U.S. Department of Education took place in 2001, when the Bush administration established the Institute of Educational Sciences (IES), headed by an executive director appointed for a six-year term to facilitate bipartisanship in the department's research program. This may be a constructive change, but it will not affect the department's entire research program.

Educational Research and Drug Research: A Comparison

In view of the near unanimous consensus on the deficiencies of educational research, let us consider how it differs from research in the pharmaceutical industry, which is often cited to suggest the potential importance of educational research if it received comparable funding. Pharmaceutical companies conduct or finance a great deal of research.¹ Their research expenditures, accounting for billions annually, are made in anticipation of discovering drugs that will help millions avoid or overcome pain and disability or delay death. Because the researchers are searching for drugs that will be patented and widely utilized, their research focuses on drugs that can help large numbers of persons, or dominate a market niche.

The following analysis does not ignore the criticisms of the pharmaceutical industry. Some of the criticisms have merit, but no one

¹An article on Pfizer's purchase of Pharmacia Corporation stated the result would be a corporation with 2002 revenues of \$60 billion and R&D expenses of \$7.1 billion ("Pfizer to Buy" 2002a and 2002b). The item states that the combined R&D budget for 2002 "exceeds \$7 billion."

questions the fact that the pharmaceutical companies develop valuable drugs based upon their research. Some argue that the companies charge too much or unjustifiably fail to make the drugs available in poor countries that need them desperately or do not publish the results of research with negative outcomes, but these issues would not arise if pharmaceutical research did not lead to valuable drugs.² Although government support plays a critical financial role in the development of some life-saving drugs, the following analysis reflects the most common pattern of research and development in the pharmaceutical industry.

Inasmuch as the companies must pay for the research out of their revenues, their research programs are scrutinized from several standpoints. The researchers must stay abreast of developments in medicine, the pharmaceutical industry, and relevant biomedical sciences. Because drugs lose their patents after three years, there is enormous pressure to discover new drugs that will compete successfully in the marketplace; however, before this can happen, the new drugs must be tested extensively and approved by the Food and Drug Administration. The approval process includes reviews of the research to ensure that it was conducted pursuant to rigorous standards. The process may require billions and several years, and because rejections are not unusual, the researchers must be careful to meet the standards required for approval. Despite these costs, however, the outcome is a highly profitable drug industry because of its success in identifying drugs that extend life, ease pain and suffering, and eliminate or reduce disabilities.

In contrast, most educational research is conducted by academics and is not proprietary. Because it is not proprietary, it is not likely to result in a successful commercial product. The education research community sees the large research budget of the pharmaceutical companies and the impressive results. The common reaction is, Give us this much money and we will generate comparable results in education. Unfortunately, everything between the money and the results in the pharmaceutical industry is ignored. The absence of any discussion of these matters in the educational research journals and conferences is remarkable; few, if any, of the approximately 1,300 presentations at the annual conventions of the American Educational Research Association (AERA) are devoted to the reasons why

²For example, see Grieder (2003). The book begins with the statement “Drug companies make something to protect us from pain and illness that safeguard our ability to keep our routines at work and at home.”

educational research is so unproductive compared with commercially sponsored research.³

Hugh Burkhardt and Alan Schoenfeld (2003: 46) illustrate the mindset in education:

Consider the matter of tangible support. Just how important in dollar terms, is the research enterprise in education?

Organizations in applied fields where change is recognized as important (medicine, engineering, electronics) typically spend 5 to 15 percent of turnover on R&D, with about 20 percent of R&D expenditures on basic research and 80 percent on design and systematic improvement. Here is how education compares. The U.S. House Committee on Science (1998) wrote currently the U.S. spends approximately \$300 billion a year on education and less than \$30 million, 0.01 of the education budget, on education research. . . . This minuscule investment suggests a feeble long-term commitment to improving our educational system.

We trust that the case has been made.

Unfortunately, the case has not been made. Let's see what is missing from their argument.

Who Chooses the Research Topic?

The identity of the decisionmaker on the research topic is a critical difference between research in the two industries. In academe, the decisionmaker is ordinarily a professor who is largely free to decide the research topic. A dean or a university business official may have to sign off on a research proposal intended to generate external funding, but the choice of a research topic is seldom the reason for a refusal to sign off. The business office will want to be sure that the proposal accords with institutional policies on overhead rates, released time, and employee benefits. The academic officials who sign off also need to know those things as well as the extent of replacement and support. Approval of the research topic, however, is ordinarily *pro forma*.

In the for-profit sector, the choice of research topic is much more a company than an individual researcher decision. The expertise and recommendations of the researchers are accorded careful

³I have not attended every AERA annual convention and it is possible that comparisons to commercially sponsored research have been included in presentations with titles that do not indicate the content. Nevertheless, the only comparisons that have received much attention in AERA journals and convention programs are the amount of government support for research.

consideration, but so are the company and research budgets, the anticipated cost, the revenues if the research is successful, and what the competition is doing. In contrast, the costs of poor educational research are largely absorbed by taxpayers, not the researchers or their employers. In the for-profit sector, the cost and consequences of poor research materially affect other employees, officers, and owners of stock in the company. For this reason, research issues in the for-profit sector undergo a much more thorough vetting than is customary in educational research.

Universities are mainly concerned about the ability of educational researchers to attract external funding. Whether the funding is likely to have any impact upon practice is seldom a concern. Business failures due to poor research, or no research, are a frequent occurrence, but nobody has heard of a university going into bankruptcy because its educational research never affected educational practice.

The Department of Education is the largest single funder of educational research and development, hence it will be helpful to consider how it manages the R&D process. Educational R&D is funded by different units within the department—hence, there is no single decisionmaking process on what to fund, how much to provide, who should conduct the R&D, and other questions of this nature.

When the Department of Education reviews external research proposals, it usually employs three or more external reviewers for each proposal. The reviewers are often paid a small amount (\$100–\$150 per proposal in 2003) to evaluate requests for several million dollars. The reviewers are asked to answer several weighted questions, such as the quality of the research design, the competence of the research staff, and the potential impact of the research. The reviewers may have had no particular expertise in the field relevant to the research; however, they frequently discuss their evaluations with each other before submitting them to department staff for final action. Multiple reviews of each proposal are submitted confidentially, and the decision to fund or not to fund is often made at higher levels that are not identified. The procedure is called “peer review,” to give the impression that it is like the procedure followed by the NIH in making awards for medical research.

Hundreds of millions are distributed according to this slapdash procedure. The procedure has emerged out of two considerations. First, both Republican and Democratic administrations are fearful of getting several angry losers for each grant winner. The department officials responsible for making the awards can point to the reviews to justify rejection, or stack the reviewing panel with certain or probable

supporters of the proposal when department officials wish to fund it. They can, and sometimes do, ignore the peer reviews altogether if they do not get the kind of reviews they want.

Most pharmaceutical research does not lead to successful commercial drugs, but the failures are paid for by the revenues from the successful drugs.⁴ The failures in pharmaceutical research at least rule out certain possibilities because the research is described carefully; it has to be so that there will be no doubt as to what precisely has been tested. Thus, if a drug does not demonstrate its utility in a trial, researchers can ascertain whether the failure is due to the dosage, the frequency of application, the stage of the illness, the physical condition of the takers, or some other factor. This kind of progress is not possible in most educational research because the relevant factors and conditions are not spelled out with sufficient precision.

In the interest of avoiding a double standard, it must be conceded that private, proprietary interests sometimes affect the conclusions reached in pharmaceutical research. Bekelman, Li, and Gross (2003) found strong and consistent evidence that industry-sponsored research tends to draw pro-industry conclusions. The Yale University researchers went on to say that “anecdotal reports suggest that industry may alter, obstruct, or even stop publication of negative studies. Such restrictions seem counterproductive to arguments in favor of academic-industry collaboration—encouraging knowledge and technology transfer.”⁵ Nevertheless, bias of any kind in pharmaceutical research is much more likely to be exposed and it runs the risk of career- and company-ending liabilities.

Basically, the for-profit and nonprofit dimensions reflect the differing incentives in the two industries. In the pharmaceutical industry, the major incentive is to conduct research that will enable the company to make a profit; to do that, however, the research must be helpful to end users. In education, although researchers want teachers and/or policymakers at some level to benefit from their research,

⁴News reports on the 2002 merger of Pfizer and Pharmacia asserted that each company had at least 10 drugs that had revenues of \$1 billion or more annually.

⁵About two-thirds of the institutions sponsoring pharmaceutical research held stock in start-up companies that fund research in proprietary drugs. Interestingly, the industry share of the costs of biomedical research has increased from about 32 percent in 1980 to 62 percent in 2000, while the government share has decreased. Bekelman, Li, and Gross (2003) strongly supported industry and government collaboration, but also recommended more effective disclosure of the industry ties to biomedical researchers. The point is that my comparisons do not assume an idyllic academic/industry relationship; self-interest creates problems in both sectors.

enhancing the researcher's status and prospects for tenure, promotion, and salary increases plays a major role. Educational research is evaluated largely by other professors, but not primarily on the basis of its usefulness to teachers, most of whom will never read or hear about the research.⁶

Spending on Educational Research

The educational research community argues that the low level of financial support, especially federal support, underlies the poor state of educational research. This argument is based on the fallacious assumption that funding for educational research consists mainly of federal expenditures. In 2000, there were about 27,030 full-time and 25,800 part-time professors of education in the United States.⁷ A 1998 study indicates that the education professoriate devoted 11.1 percent of its time to educational research (Zimble 2001). As in most other disciplines, the faculty teaching load reflects the research expectations of the institution. In universities with strong graduate schools, faculties usually teach one or two courses per week, usually meeting once a week for two to three hours. At the other extreme, faculties in community colleges teach twelve hours or more per week and significant research is not expected. When faculty released time (including its overhead costs) is taken into account, the expenditures for educational research are much greater than is acknowledged by the proponents of increased expenditures for it.

Conceptually, we should include the value of graduate student time devoted to doctoral dissertations as resources devoted to educational research. Historically, doctoral dissertations were supposed to be evidence that the student was capable of conducting research at a high level. Doctoral students were required to pass tests in foreign languages (usually French and German for students seeking a Ph.D. in education) to demonstrate their ability to read research in non-English countries. However, as more and more doctoral students in education sought higher level positions in school administration instead of academic careers, most graduate schools of education eventually adopted the Ed.D. (Doctor of Education) as an alternative

⁶The constant requests for funds to disseminate educational research contrast sharply with the criticisms of the pharmaceutical industry for spending far too much on dissemination.

⁷The basis for the estimate can be found in Lieberman and Haar (2003). The estimates in this book on the costs of educational research in higher education may have been too high due to excessive estimates of the research expenditures for the part-time faculty.

doctorate for practitioners who did not necessarily benefit from proficiency in foreign languages.

The issue here is not the quality of the research in doctoral dissertations; it is the amount of resources devoted to educational research. Academics often characterize doctoral dissertations in their universities as “research,” but do not count it as research in estimating the resources devoted to educational research. The inconsistency leads to substantial underestimates of the resources devoted to educational research.

Of course, some institutions offer a doctorate without a dissertation requirement, and among many others, characterizing the dissertations as “research” is quite a stretch. Furthermore, many dissertations are devoted to topics that do not affect K-12 public schools; however, many dissertations in fields other than education (for example, law, psychology, taxation, sociology, and economics) are devoted to public education issues.

In 1999–2000, 245 institutions of higher education awarded 6,830 doctorates in education, the largest number awarded in any discipline (U.S. Department of Education 2001).⁸ Some dissertations apply partly to K-12 education and partly to other areas of education; unfortunately, there is no feasible way to quantify the total portion that should be allocated to K-12 education. With several doubts and reservations, it appears that at least three-fourths of the doctoral dissertations in education are devoted to public education.

Most doctoral candidates in education are mid-career teachers or school administrators, such as principals and assistant principals. Some are doctoral students full-time, but the most common pattern is part-time during the school year and full-time during the summer. It usually takes more than a year, and sometimes several years after a master’s degree, to complete the requirements for a doctorate. In short, virtually every factor affecting estimates of the student costs is subject to significant uncertainty, hence estimates of the cost of student time may be substantially inaccurate. Regardless, the quality of doctoral dissertations is irrelevant to the actual cost. Just as we count the expenditures for poor teachers in estimating the costs of education, we must also count the expenditures for poor research in estimating the costs of educational research.

⁸The study defined “doctor’s degrees” as “the highest academic degree [requiring] mastery within a field of knowledge and demonstrated ability to perform scholarly research. Other doctorates are awarded for fulfilling specialized requirements in professional fields, such as education (Ed.D.).”

At any rate, let us assume that the value of doctoral student time is equal to the average teacher salary plus benefits for one full year and that average teacher salary plus benefits is \$50,000. On this assumption, the cost of doctoral student time for one year would be \$341.5 million, an amount large enough to suggest the need to review the dissertation role in educational research.

Research Contributions from Philanthropic Foundations

The philanthropic foundations contribute significant amounts for educational research. Nonprofit testing and educational policy organizations, such as the Educational Testing Service, also budget for research and development, but there appears to be no systematic data on the amounts.

Textbook publishers, education policy organizations, and several for-profit learning and testing companies active in K-12 education, such as Edison Schools and Sylvan Learning Centers, also devote a significant portion of their resources to research and development. These costs include research and development expenditures for program development, better instructional equipment, textbooks, audio visual aids, distance learning, bleachers, buses, desks, athletic gear, lockers, uniforms, gymnasium apparatus, school construction, and other products and services provided by the for-profit sector. Because some of these expenditures are devoted to products and services that are sold in noneducational as well as educational markets, their R&D costs cannot be allocated completely to K-12 education. We can surmise that total expenditures for educational research are several times as much as the estimates by the educational research community, but whatever the actual amounts, they would not explain the low state of educational research. In any event, reliance solely upon federal funds to estimate the amount spent for K-12 educational research results in huge underestimates of expenditures, a striking commentary on the quality of research by the self-designated experts on the subject.

Teacher Incentives to Utilize Research

Teachers lack the incentives to use or stay abreast of educational research. This fact adversely affects every aspect of such research. To see why, it is instructive to compare the situations of doctors and teachers relating to research. Doctors want to help their patients, but their interests in research are also strongly motivated by self-interest.

A doctor who was not aware that a new drug had dangerous side effects could be subject to severe penalties, including loss or suspension of the freedom to practice and huge civil suits. In contrast, there are no penalties for failure to utilize research that would improve instruction. The principals who evaluate teachers are just as likely to be unaware of the relevant research as the teachers. In many cases, utilization of research, not failure to utilize it, would have negative consequences for teachers. They might be required to change their course syllabi, tests, and teaching methods. They might be required to take additional training, which may or may not be available. The idea that teachers will utilize research because of their desire to help students is part of the folklore of education; however, if research makes the teachers' work easier, they are more likely to utilize it.

Teacher compensation is based partly upon the amount of academic credit earned after initial employment. In theory, the courses taken after employment could enable teachers to stay abreast of research in their subjects and how to teach them. In the real world, the teacher seeks to amass as much credit as inexpensively and as soon as possible. The school board interest supposedly lies in ensuring that the courses strengthen the teachers' ability to perform effectively. This conflict of interest is played out in collective bargaining, a forum in which the unions argue that teachers should decide what courses to take because teachers know best what will help them teach more effectively. School boards that accept this argument quickly discover that their teachers are frequently paid for courses to enter a different occupation, that are the least expensive or most convenient, that treat foreign travel as professional development, or that are required to be accepted into graduate school. The teacher incentives to take in-service courses vary widely, but they have only weak incentives to study research in order to improve their classroom instruction.

As critical as it is, the absence of teacher incentives to stay abreast of educational research is only a partial explanation for its low state. A major problem that pervades educational policy research is the mindset that if researchers can show better policies, policymakers, academics, and teachers will support such policies. The reality is that policymakers, academics, and teachers use research to legitimate what they are doing. Research that challenges policies and practices is used mainly by those who want to change them. As James Coleman (1990: 615, 649) comments,

Policy research is also used when policymakers are divided on the relevant issues, or when policymakers want to persuade public and

legislative opinion that policy changes are needed. . . . On the other hand, policy research is ignored by policymakers who feel no pressure to legitimize their policies. Research also tends to be ignored, unfunded, or even defunded if it points in politically unpopular directions.⁹

Contemporary controversies over educational policy provide an inexhaustible supply of examples that support Coleman's analysis. For example, in controversies over charter schools, school choice, social promotion, high-stakes testing, and teacher certification, to cite just a few, parties on all sides of the issues cite research that allegedly supports their positions. Sometimes even the same research is cited by protagonists advocating conflicting policies. Research that led partisans to change a policy position is relatively rare.

The Political Dynamics of Educational Research

Most conservative research and policy organizations do not accept or solicit government funds for their activities. For example, the Heritage Foundation, American Enterprise Institute, and the Cato Institute (the three leading conservative/libertarian policy organizations in Washington) do not apply for or accept government funding. Before the Bush administration in 2001, this contributed to liberal domination of federally funded educational research. The fact that most educational research is conducted by professors of education in public institutions of higher education is another reason to expect a liberal orientation in educational research. However, since the start of the Bush administration, several conservative organizations have demonstrated no compunction whatsoever in accepting federal support.¹⁰

One argument for not accepting government funding is that researchers who accept such funding often end up dependent upon it. Another thought is that it is hypocritical to criticize government spending while seeking it for research. Obviously, this point of view narrows the competition for government funds for educational research. Research funded by government goes overwhelmingly to

⁹Coleman's analysis explains why even good policy research is ignored by policymakers; interests trump good research in a variety of circumstances.

¹⁰The Black Alliance for Educational Options, American Board for Certification of Teacher Excellence, National Council on Teacher Quality, and Center for Education Reform are conservative organizations that have received federal grants. In 2003, Chester E. Finn Jr. expressed concern that the Education Leaders Council, an organization primarily of state superintendents of education who had broken away from the Council of Chief State School Officers, was losing its freedom to be critical of government policy because of its dependence on federal funds.

parties who support government programs. The research is frequently used to justify an expansion of such programs; for example, the research on first-grade pupils shows that a substantial percentage of black and Hispanic pupils are characterized by an achievement gap when they begin school. This has led to support for early childhood (age three to five) programs for all children.

James Payne (1990 and 1991) has pointed out that expert witnesses who testified for the continuation of federal programs outnumbered opponents by a 16-to-1 margin. In fact, proponents of government-funded research frequently pay their expenses from government research funds to testify for the programs they are trying to keep alive or to expand. Meanwhile, even on some of the largest federal education budget items, there is no opposition testimony on the issues. Payne concluded that the congressional voting record reflects this huge imbalance in testimony on funding issues. In his view, as long as the supporters of more government funding testify before Congress and the critics do not, members of Congress will continue to believe in the value of unproductive research programs.¹¹ However, neither Payne nor anyone else has proposed a viable way to fund a research organization or system that would counter the pro-spending bias in federal educational research.

The Politicization of Empirical Issues

Educational research is replete with empirical issues that have become politicized. Coleman's study (1990) that concluded that "schools bring little influence to bear on a child's achievement that is independent of his background and general social context" is a striking example of this tendency. Coleman's study was conducted under contract with the Department of Education at a time when racial segregation was the leading topic in educational circles. The Coleman study was funded on the assumption that it would show that racial segregation was a root cause of the low achievement levels of black students. When the study concluded that racial segregation had at most only a minor impact on the achievement levels of black students, the Department of Education tried to prevent the study from being publicized.¹² Conservatives enthusiastically welcomed the study because it appeared to confirm their arguments about the importance of

¹¹Educational research was not included in Payne's studies, but there is no doubt that his conclusions are applicable to education.

¹²Coleman later moved to the University of Chicago as a professor of sociology and education. He was president of the American Sociological Association in 1992.

strong families in educational achievement. In promoting school choice, however, the conservatives constantly refer to “failing public schools,” as if the public schools are primarily responsible for low academic achievement.

Research on the most effective way to teach reading is another example. Conservatives advocate phonics, a method that emphasizes sounding out the sounds from the letters in words. A significant number of teachers and researchers emphasize what is widely referred to as the whole language approach, in which the emphasis is on the meaning of words. The advocates of the whole language method do not deny the usefulness of phonics, but they insist that it is not the superior method for all children at all times. These definitions of the two camps are oversimplifications, but my purpose here is not to resolve the dispute but to cite it as an illustration of the primitive level of education research.

Several points about this situation deserve thoughtful consideration. First, hundreds of millions of children have been taught how to read just in the United States. If we include pupils worldwide that have been taught to read English, the numbers are huge indeed. Consider also the thousands of professors who teach prospective teachers how to teach reading. How does it happen that the most effective way to teach children to read has become a political issue, with conservatives contending that phonics is the most effective way and liberals arguing for a whole language approach? Politics comes into play when it is essential to adjust competing interests; it is not supposed to be the environment in which we resolve empirical issues. In fact, it is remarkable that the issue of how to teach reading is still a controversial matter. What private for-profit enterprise would still be debating this issue after it has been addressed by thousands of researchers and expenditures in the billions?

A layman might be excused for wondering why, at this late date, anyone should be in doubt about the best way to teach reading.¹³ Regardless, the Bush administration has made improvement in reading its basic educational research priority. To disseminate helpful research on the subject, it has established a Web site entitled “What Works.” Teachers and parents concerned about the best way to teach reading can supposedly get the help they need from the Web site. Unfortunately, “What Works” relies upon the same

¹³This point takes for granted that there may be a “best way” for some pupils, a different “best way” for others, and “best ways” that are equally effective. Also, even for individual students, the “best way” may vary, depending on maturation, the nature of the problem, and the needs of the class.

incentives that have failed to achieve utilization of research in the past.

Suppose that research establishes that procedure X is the best way to teach reading to pupils in category Y. What reason is there to believe that the teachers of pupils in category Y will read the research on their own or will have it brought to their attention by their principals, their school boards, or their superintendents? What new incentives will overcome the inertia that underlies the current failure to read and utilize research? The answers to these questions strongly suggest that a Web site devoted to “What Works” is very unlikely to bring about any improvement in teaching reading; it does not address the absence of teacher incentives to seek, understand, and utilize helpful research.

The Bush administration has required that adherence to phonics be a condition precedent for receiving federal funds for reading development. This is the case even though a significant number of teachers and researchers advocate and/or use the whole language method. Regardless of which group is right, this is not the kind of issue that should be resolved through legislation. There is always the possibility that further research will show that what appears to be the right way is not the best way after all. There is also the possibility that a new and better way may emerge, as frequently happens in medical or dental research. To legislate the best way to treat cancer would be a huge mistake for obvious reasons; doctors would have to break the law to provide the best possible treatment for their patients—a position that doctors should not be in. And neither should teachers. If they are using second- or third-best solutions, or even counterproductive methods, their employers or professional associations should put an end to the practice; but the best practice, whatever it is, should not be legislatively determined. Obviously, once that happens, changes in political control lead to changes in pedagogy, an inefficient system with great potential for doing harm.¹⁴

Note how unlikely it would be for this issue to remain unresolved in a competitive education industry. Assume that different schools and teachers had adopted different ways to teach reading. Assume also that some ways had demonstrated their superiority in practice. In that case, the superior schools would advertise the fact, thereby forcing their competitors to come up with a better way or lose market share. Reading effectiveness would play a role similar to safety or miles per gallon in buying a car. Because school management would

¹⁴The case for phonics is set forth in National Reading Panel (2000). For a lengthy criticism of the National Reading Panel Report, see Coles (2000).

have strong reasons to utilize the most effective way, it would make sure that teachers utilized it.

The Application of Research to Practice

At the risk of belaboring the issues, let us consider the reading research program of the IES. This is a multiyear project to ascertain the best way to teach reading. Let us put aside our bafflement that this project should be necessary after billions of pupils have been taught to read in English and assume that regardless of who or what is responsible, the subject is too important to leave any major issues unresolved. Let us further suppose that after several years and hundreds of millions in expenditures, the research comes up with solid, defensible answers to questions about the best ways to teach pupils to read. What will be the sequence of events that leads teachers to use the optimum methods that have emerged from the research?

If past experience is any guide, few teachers will read the research and fewer still will adapt their practice accordingly:

- Some teachers will be near retirement or about to leave teaching in a few years. They have weak incentives to read research or change to any new methods.
- Some teachers may read the research but not fully understand it.
- Some teachers will challenge the research, for reasons good or bad.
- Some teachers will lack the instructional materials required to teach the best way.
- Some teachers may be more effective by continuing less-than-optimal ways, and introducing the more effective way only in the earliest grades.

What about the principals? Some may not believe that the research demonstrates a better way. Principals are reluctant to be directive on these matters; this is perceived as administrative violation of professional autonomy. Also, all the reasons why teachers may be reluctant to change, or unable to change, apply to the principals. Putting aside the personality conflicts that often emerge in these situations, let us suppose that the superintendent and school board are determined to bring about improvement. What then?

Many teacher union contracts leave professional development as a teacher option, not as a management right unless it is provided during the regular school day. Most teachers receive favorable evaluations; therefore, there will be problems in requiring tenured teachers with

favorable evaluations to undergo professional development at the direction of the district. The teachers involved can recruit favorable witnesses and testimonials if the dismissal goes to arbitration or the courts. Furthermore, many children learn to read regardless of what methods the teachers use; hence, the district may not be able to point to low reading scores despite the fact that its teachers continue to use less effective methods of teaching reading. Also, there may be several professors in the area who are prepared, even eager, to challenge the district's case. We must also consider the fact that the union contract may be in effect for several years, precluding district efforts to regain its authority over professional development for years to come.

All of the above possibilities will be realities in many districts. It is difficult to say how many unless, and until, there is a careful analysis of district rights to require in-service training in a large number of union contracts. Unfortunately, whatever changes in the teaching of reading are called for by the results of the Bush administration's reading research program, the administration does not appear to have faced up to the problem of ensuring that the results are applied in classrooms.

Clueless Conservatives

Educational research is another dimension of public education in which conservatives demonstrate a pervasive naiveté about public education. To illustrate, consider the recommendations on educational research from the Heritage Foundation:

Congress should always ensure that the federal government is spending America's educational resources on research-based programs that produce measurable achievement in the classroom. In 2002, Congress will reauthorize the U.S. Department of Education and its research and information dissemination department, the Office of Education Research and Improvement (OERI) that provides research findings and instructional materials to schools across the country. Research with the department's stamp of approval can have a strong effect on instruction and student achievement. In the past, OERI has made little distinction between quality research and educational fads. Congress should make sure that OERI's research is relevant, accurate, and objective [Butler and Holmes 2002: 142–43].¹⁵

¹⁵Their advice reminds me of the halftime advice of my high school basketball coach: "Make those baskets." Suggestions on how to improve our shooting might have helped, and so might suggestions on how "Congress should make sure that OERI's research is relevant,

In the first place, Congress is part of the problem, not the solution. At the first hint that Congress is thinking about turning the spigot off, the educational researchers appeal to their representatives in Congress to prevent this from happening. No member of Congress likes to see constituents lose their jobs. “You haven’t performed adequately, so I can’t help you” would be a rare Congressional reaction. In fact, members of Congress often strive to locate or retain federal research projects in their own states, regardless of other considerations. Interestingly enough, the Bush administration implicitly rejected the Heritage recommendation by restructuring the Department of Education to minimize political (read “congressional”) disruption of its research program.

Aside from naive faith in Congress, the Heritage recommendation would rule out research on a host of matters, such as teacher pensions, school finance, civil rights in education, school construction, school board members, elections, contracting out support services, certification, and the feasibility of lowering the school-leaving age, to cite just a few issues that may not lead to “measurable achievement in the classroom.” Congress would be foolish to block research that could save school districts hundreds of millions annually because there was no evidence that the savings would result in “measurable achievement in the classroom.” How the districts would spend the savings would be irrelevant to the desirability of research on school finance. One would not look to “measurable achievement in the classroom” to assess the usefulness of research on the investment of state teacher retirement plans.

The idea that teachers will pay attention to research when its quality improves is often assumed even by analysts who recognize the inferior quality of most educational research. According to Clopton and Evers (2004: 39), “a 1998 report to the California State Board of Education examined 8,727 published studies of mathematics education and found that only 110 met minimal validity criteria.” In fact, they surmise that the Department of Education’s newly established What Works Clearing House may have engaged in a bit of grade inflation when it accepted only 17 mathematics studies out of a total of 191 submitted for inclusion in the What Works Clearing House. Nevertheless, low quality is not the reason teachers don’t utilize educational research; the reality is that teacher incentives to utilize valid research are extremely weak.

accurate, and objective.” One way would be for Congress to stop appropriating earmarked research funds for designated institutions.

Conclusion

Part of the explanation for the educational research debacle is that the anti-market culture of public education is alive and well in educational research. Consider the following statements by the National Academy of Education (NAE), a small organization with a high proportion of members from the most prestigious colleges of education:

We believe that some researchers will be captivated by the creation of a new social arrangement for the conduct of educational research: deriving theoretical principles from solving real problems in education. For researchers eager to work on our most compelling educational problems, the excitement of working closely with practitioners in schools and classrooms, plus opportunity to join colleagues nationally to build generalizable understandings, tools, and insights, will provide ample incentives to participate. On the other hand, calls to privatize education through vouchers and some charter school proposals threaten the idea that public schools are a social good available to all students regardless of their parents' ability or willingness to pay [NAE 1999: 41, 63–64].

The absence of financial incentives to attract high-quality researchers might be interpreted as an innocent oversight, but the gratuitous one-sided criticism of vouchers in a document on research priorities is another matter. Surely, it tells us something about the NAE that not one out of its 150 members dissented from its gratuitous anti-voucher views. Nothing better illustrates the liberal mindset of the education professoriate than NAE's embrace of a bankrupt system of educational research, overlaid with the phony idealism that seems to thrive in education. This acceptance is especially remarkable coming as it does from a group that repeatedly and explicitly argues that our existing system of education is heavily biased against the poor and minorities. NAE members are drawn disproportionately from the prestigious colleges of education—the ones that train the most future professors, house the most widely read educational journals, and employ the most professors who are prominent in the media and professional journals (and it might be added, pay the highest salaries). To say the least, their gratuitous put-down of market incentives is suspect, especially when the track record of educational research is compared with research supported by for-profit enterprise.

Naiveté about innovation continues to characterize the educational policymakers in the Bush administration. In reorganizing the Department of Education in 2001, it created an Office of Innovation and Improvement, headed by a deputy undersecretary of education. OEII's main function is to distribute approximately \$50 million to

fund-promising innovations. It also publishes a weekly newsletter that includes a section entitled “Innovations in the News.” A note accompanying the newsletter states that “The purpose of this e-letter is to promote promising and innovative practices in education. This is one of the goals of the Office of Innovation.”¹⁶ The idea that disseminating information about innovations will lead to their adoption elsewhere is belied by the fact that several journals in the field of education have been publishing favorable articles about innovations for well over half a century with very little, if any, pickup by school districts elsewhere. Analysis of the reasons might be helpful; repeating a practice that has never been helpful is very unlikely to be beneficial in the future.

Even the critics of educational research seldom recognize the depth of changes that must be made in order to generate high-quality, useful research. Lewis Perelman (1992), an analyst who has been very critical of educational research because of its anti-market orientation, has emphasized that education has a low investment in technology. Expenditures for technology per employee in education are a thousand times less than in other major industries, and even less than in the most competitive firms in the high-tech information business. Perelman also emphasized the fact that education is a business in which the consumer does most of the work. Indeed, if one counts the students as workers, at least at the secondary level, the investment in educational R&D is miniscule.

Perelman also emphasized that unless research results in commercially viable innovations, and there is a marketing system in place to commercialize the innovation, the innovation will not be widely successful. “Demonstration” and “model” schools are successful only when potential adopters are not aware of the innovation. Perelman was especially caustic in his criticisms of the New American Schools Development Corporation, an initiative of the first Bush administration intended to create a model school in each congressional district. Private-sector research would not waste hundreds of millions on such overtly political considerations (Perelman 1992: 252).

Despite the strong case for Perelman’s criticisms, they have been ignored, not rebutted, by the educational research community. Its leaders have asked not only for higher levels of funding but also for long-term commitments to new and higher levels. In view of the propensity of both Democratic and Republican administrations to

¹⁶See *The Education Innovator* published by U.S. Department of Education (www.ed.gov/news/newsletters/innovator/index.html?src=ln).

fund failed educational research programs, it would not be surprising if these efforts were successful.

Thus far, the discussion has been mainly devoted to explaining why educational research is not and has not been productive in the past. The establishment of the IES in the Department of Education to conduct or oversee long-range studies appears to be a constructive step, but unless accompanied by a substantial for-profit sector in K-12 education, it will not bring about the kind of improvements that are commonplace in competitive industries.

This discussion has not tried to predict the structure or magnitude of educational research in a three-sector industry (public, nonprofit, for-profit), because we do not know and can only speculate about the future structure of the education industry. Will it be dominated by a few huge chains that can take advantage of the mobility of the American people by providing name-brand recognition of satisfactory schools? What role, if any, will be played by local, state, and regional chains? How large must the for-profit sector be to take full advantage of economies of scale? Will economies of scale take into account whether school chains can cross national borders, at least among the English-speaking nations? Will demographic pressures lead to a lower duration of compulsory education and earlier entry of young people into the labor force, thereby reducing the demand for formal schooling? What will happen if and when the formal schooling option must compete against the work option at a much earlier age? How attractive will schools for profit be to investors and entrepreneurs? Educational research and development will affect as well as be affected by the answers to these and other questions about the future; obviously, not much can be said about the future of educational R&D that rises above armchair speculation.

Supporters of a competitive education industry are frequently asked to describe it in practice. We can respond with scenarios, but nobody really knows the answer. However, we can be confident that the advent of a competitive education industry will bring about basic changes in union/management relations. In the private sector, union membership has dropped from 36 percent of the labor force in the 1950s and 1960s to about 8 percent at the present time. In competitive industries, the threats to employees come mainly from the competition, not from management that faces the same threat. Virtually every day we read about the drastic changes in the airline industry, as the established long-distance carriers struggle to eliminate the inefficiencies inherited from prior union contracts in order to avoid bankruptcy. Management could never have persuaded its employees to accept “takebacks” in the monopolistic air travel industry;

today, the issue is the amount of the “takebacks,” which affect every employment level in the industry. A competitive education industry tends to bring management and labor together in the same boat and leads to hitherto unprecedented levels of cooperation.

Paradoxically, the competition between the National Education Association and the American Federation of Teachers illustrates the impact of competition in education as well as anything. Unions are the producers of representation services; teachers are the consumers of such services. It so happens that it is very difficult to dislodge or decertify an incumbent union. Knowing this, the NEA and AFT competed furiously in open school districts to represent teachers; in 10 years, over half the public school teachers in the United States were working pursuant to union contracts. The pace of teacher unionization would have been much slower in the absence of competition between the two unions.

We can expect to see the same dynamic in a competitive education industry. Parents can be expected to stay with schools that they find to be satisfactory. For this reason, as states open up to competing providers, there may be intensive competition that speeds up the pace of change in the education industry. However, on this issue, a great deal will depend on whether vouchers are universal or means-tested. If the latter, the prospects for research and development that will transform the education industry are slim indeed. No such research and development has materialized to date where means-tested vouchers are in effect. Unfortunately, that is the most likely prospect elsewhere unless the proponents of a competitive education industry establish a much stronger role in the school choice movement.

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