

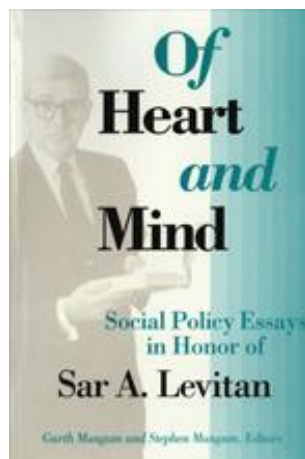
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Upjohn Institute Press

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## Vocational Education Accountability in a “Block- Grant-to-States” World: Historical Perspective

David Walter Stevens  
*University of Baltimore*



Chapter 6 (pp. 131-154) in:

**Of Heart and Mind: Social Policy Essays in Honor of Sar A. Levitan**

Garth L. Mangum, and Stephen Mangum, eds.

Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 1996

DOI: 10.17848/9780585280295.ch6

## CHAPTER 6

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# Vocational Education Accountability in a “Block-Grant-to-States” World

## Historical Perspective

David W. Stevens

Performance measurement in U.S. vocational education will be affected by pending congressional action to consolidate federal investments in vocational education and employment and training. This chapter explores the accountability antecedents of the Job Training Consolidation Act of 1995 (S. 143) and Consolidated and Reformed Education, Employment, and Rehabilitation Systems (CAREERS) Act (H.R. 1617). Conferees will soon attempt to reconcile these into a mutually satisfactory compromise that the President can be expected to sign.

National assembly of reliable training-related placement information is futile in today’s context of educational choice, occupational complexity, and fragile employee-employer bonding. A new generation of labor market outcome measurement initiatives is needed. These investments should favor data collection and accessibility refinements that will support the difficult choices among stakeholders that the consolidation legislation and appropriations levels will compel.

### Federal Legislation

The historical record should be reviewed before attempting to predict the effect of the consolidation legislation on performance measurement (Giodarno and Praeger 1977; Cuban 1982). The dawn of the

twentieth century found the American Federation of Labor, the National Association of Manufacturers, and the National Society for the Promotion of Industrial Education promoting federal funding for vocational education to sustain economic progress through a more relevant curriculum. A Commission on National Aid to Vocational Education was appointed by Congress in 1914. The Commission’s recommendations led to the landmark Smith-Hughes Act of 1917, which authorized federal investment in a limited number of occupational clusters. States were required to match the federal commitment. The Federal Bureau of Vocational Education and Federal Board for Vocational Education established to carry out Smith-Hughes are the precursors of today’s Office of Vocational and Adult Education in the U.S. Department of Education and federal, state, and local advisory boards with diverse membership.

World War I, the Depression, World War II, and Sputnik are defining events that molded vocational education in the United States during the forty-six years that elapsed between Smith-Hughes and passage of the Vocational Education Act of 1963. The wars and Sputnik heightened awareness of the Nation’s uneven capacity to satisfy industrial skill requirements in a timely and sustained manner. The Depression fostered cooperative education alliances as a substitute for the purchase of expensive equipment and revealed vocational education’s vulnerability when asked to serve displaced adult workers and to carry on in a world of limited employment opportunity.

The Vocational Education Act of 1963 drew back from categorical funding of particular occupational skill clusters and stated an expectation that federal funds should flow to vocational programs serving disadvantaged students. Planning and evaluation activities were introduced to manage the new block grant approach. Neither served as an effective control mechanism.

Subsequent amendments of the 1963 Act in 1968 and 1976, the Carl D. Perkins Vocational Education Act of 1984, and the Vocational Education and Applied Technology Act of 1990 each specified categorical opportunities that were intended to offer the carrot needed to realign state vocational education programs. The 1990 Perkins Amendments encouraged the integration of academic and vocational curricula and promoted combinations of high school and postsecondary courses as tech-prep programs. The CAREERS Act and Job Training Consolida-

tion Act, passed in September and October 1995 by the U.S. House of Representatives and U.S. Senate, respectively, would devolve these management decisions to the states.

## **The Evolution of Performance Expectations**

Outcome expectations for vocational education in the United States have been documented (Evans and Violas 1983; U.S. Congress, Office of Technology Assessment 1994). Stakeholders often have inconsistent views of what vocational education ought to be and do. Evans and Violas assert that:

Prior to 1963, it was clearly understood that trade and industrial education produced employees, agricultural education produced entrepreneurs, and home economics education produced homemakers. Now it seems to be assumed by nonvocational educators that all should produce employees. (p. 35)

Prior to 1968, the only substantial national data on vocational education were on enrollments in subject matter areas...No one knew how many people were completing programs or how much time they spent in class...It would appear that both defenders and critics were reasonably happy to make assumptions about outcomes based on logic or exhortations, rather than to test outcomes with data. (p. 36)

Today's consolidation dialogue reveals the same basic outcome expectations that preceded successful passage of the Smith-Hughes Act in 1917.

1. certification of student competencies (on behalf of employers),
2. qualification to earn a "living wage" (on behalf of students),
3. gender advocacy,
4. acculturation of workers, and
5. sustained funding for each stakeholder's own desired portfolio of vocational education activities.

Smith-Hughes was highly prescriptive with regard to process and the use of federal funds, but contained no explicit outcome expectations. The Vocational Education Act of 1963, which was far less prescriptive about the use of federal funds, advised states that their vocational offerings would be assessed with respect to current and projected manpower needs and job opportunities. Congressional intent was also expressed for these funds to be concentrated on vocational education programs serving the disadvantaged. This shift from “what to offer and how to do so” to “who to serve toward what end” has persisted through the Carl D. Perkins Vocational Education and Applied Technology Act of 1990.

The 1963 Vocational Education Act offered the vocational education community an opportunity to use federal funds to respond to the social and economic challenges of the times with few strings attached. An avalanche of complementary federal employment and training legislation and funds cascaded to the states at the same time (Levitan and Mangum 1967; Levitan and Taggart 1971; Pines et al 1995). These included youth-oriented amendments in 1963 to the Manpower Development and Training Act of 1962, both in-school and out-of-school components of the Neighborhood Youth Corps, Job Corps authorizations in the Economic Opportunity Act of 1964, and introduction of an Apprenticeship Outreach Program in 1968. Both long-standing and new community-based organizations appeared to carry out these aggressive federal initiatives. Many traditional vocational educators watched from the sidelines.

A consensus soon emerged that vocational educators had not responded to the 1963 Act’s carrot. So, in 1967 an Advisory Council on Vocational Education was appointed. Many of the Council’s recommendations became law in the 1968 Vocational Education Amendments. Now, for the first time in the United States, enrollment figures became a factor in the allocation of federal funds to the states. Cooperative education was endorsed, and states were told that federal funds should only be used to prepare students for employment or be of significant assistance in making an informed and meaningful occupational choice. Subsequent 1976 amendments added sex equity as a federal vocational education priority and introduced the now familiar training-related placement criterion as a performance review factor.

Looking back, it is now easy to cast the tumultuous '60s in terms of a growing tension between the traditional instrumental role of vocational education as one source of energy to power the engine of economic growth and the emerging view that vocational education should be seen as a key to unlock the gate to individual opportunity (Lewis 1990; Benavot 1983). Perceptive observers cast the dialogue in these terms while the legislative battles were still being fought.

The "solution" often advocated in recent years has been to equip the school leaver with a specific skill for the job market. The rationale has been twofold: (1) early school leavers are not academically inclined and are more likely to remain in school if provided specific occupational training; and (2) the school leaver must have something to sell in the job market and that requires skill training, limited as it may be. The alternative arguments appear more persuasive: (1) the high school youth's exposure to alternative occupational choices has usually been too limited for a valid and lasting vocational decision; (2) distaste for "academic" subjects is more an argument against existing teaching methods than an argument for elimination of "academic" content; (3) specific occupational training, as a substitute for broader education, drastically limits the options available both at the time of entry into the labor market and later in life; and (4) good vocational education is expensive and the failure of vocational high schools to provide it is notorious. (Levitan and Mangum 1967, pp. 33-34)

The Comprehensive Employment and Training Act of 1973 (CETA) created a strong federal-local tie that was out of sync with vocational education's federal-state governance. This represented yet another challenge to the exclusivity of public vocational education. Little evidence of voluntary cooperation between the two networks in the next few years led to 1976 amendments of the Vocational Education Act and 1978 amendments to the CETA mandating cooperation and earmarking funds for this purpose (Stevens 1979).

The Comprehensive Employment and Training Act also authorized a Summer Program for Economically Disadvantaged Youth, which was followed by the Youth Employment and Demonstration Projects Act in 1977. These, in turn, were consolidated as Title IV in the 1978 amendments. The Youth Employment and Training Program component of

Title IV became a work experience program, although a much broader range of services was allowed.

The Carl D. Perkins Vocational Education Act of 1984 advanced federal expectations about state and local accountability. States were directed to develop measures of program effectiveness, including identification of the competencies that would be used to assure that vocational students satisfy the hiring requirements of employers.

By 1990, Congress had concluded that prior calls for change had not spurred significant improvements in the quality of vocational education. Influenced by experiences with outcome based accountability in other federal education and training programs, Congress amended the Perkins Act to require states, within 1 year, to develop and implement statewide systems of “core standards and measures” that defined the student outcomes expected in local programs. (U.S. Congress, Office of Technology Assessment 1994, p. 5)

Two important conclusions about this federal mandate, each by acknowledged experts in vocational education accountability, quickly deflate any expectation that federal authorities were finally prepared to hold states’ feet to the fire. Hoachlander and Levesque, who have provided technical assistance to, and documented the responses of, the states in developing statewide systems of core standards and measures, warn that

It is essential to understand that the primary purpose of these performance monitoring systems is local and state program improvement: helping local and state educators respond more effectively to the needs of students and the marketplace. To this end, the systems must reflect the diversity that characterizes vocational education by adapting to local and state needs and circumstances. (Hoachlander and Levesque 1993, p. 81)

In other words, do not expect the statewide systems to be amenable to straightforward aggregation at the national level. This warning was echoed by John Wirt, the former director of the U.S. Department of Education’s second National Assessment of Vocational Education that was completed in 1989.

The 1990 legislation marks a significant turning point in federal accountability by explicitly tying the process of state and local

review to standards based on outcomes...The requirement for standards is also significant as much for what it does not require as for what it does. First, Congress did not authorize the Secretary of Education to issue national standards and measures.... Second,... the standards are not intended to certify or credential individuals.... Third, Congress chose not to link the vocational education performance standards to federal funding or any other incentives or sanctions. (U.S. Congress, Office of Technology Assessment 1994, p. 5)

Three decades of federal attempts to create bundles of performance incentives to promote the formation of teams of advocates for student opportunity and economic prosperity have fostered limited and unstable state and local alliances. This pattern is expected to continue in a “block-grant-to-states” context because vocational education reforms pass through three distinct stages: (1) program design; (2) execution; and (3) consequence.

The expectations of diverse and changing parties have affected the design of vocational education programs since the turn of the century, particularly as federal legislation and funds have influenced these expectations. These designs have often been transformed into action by educators who had a limited, or no, role in the design phase. A weak link between the execution and consequence stages lessens the incentive for those who execute to remain faithful to the original design. This decoupling also restricts the timely flow of reliable information through a feedback loop to guide redesign adjustments.

Substantial state and local management energy has been absorbed in complying with federal reporting requirements, and with devising ways to do what you want to do without federal sanction. This has drawn resources away from routine state and local management diagnostics. Despite this federal investment in data collection, compelling documentation of a causal link between vocational education’s enhancement of occupational competencies and a student’s subsequent access to challenging and rewarding jobs remains an elusive goal.



## Measurement of Labor Market Outcomes

Fifty years ago, at the end of World War II, vocational education in the United States was defined by categorical occupational concentrations, a public high school home, separate white male and female student populations, parity of federal and state/local funding, and a fragile but stable consensus that satisfaction of employer skill requirements was the basic objective. Few competitors provided skill training opportunities outside the workplace. Organized labor maintained pervasive control over apprenticeship ports-of-entry into the internal labor markets of major manufacturers who offered stable employment, relatively high wages, and retirement benefits.

While vocational education’s actual performance had been controversial since the turn of the century, long before Smith-Hughes, no serious attempt was made to back up these doubts with reliable evidence. Recurring debates about continued federal funding for agriculture and home economics programs did not rely upon performance data. The growth of career counseling coincident with passage of the G.I. Bill focused more on the projection of occupational opportunities than on vocational education’s success in responding to these projected needs.

Nearly two decades elapsed after the end of World War II before vocational education’s accomplishment of mission became a data-based issue. Among the most important reasons for this ascendancy of interest in performance measurement are: (1) the National Defense Education Act of 1958 had opened the door to federal funding of post-secondary vocational education for the first time, which in turn triggered new requests for information about the relative payoffs on federal investments in high school and postsecondary programs; (2) cost-benefit analysis was in vogue; and (3) the revolutionary turn of attention away from categorical occupational clusters and toward categorical student populations was accompanied by a heated debate about the anticipated consequences of this change, which created a new demand for performance information.

Strong cross-currents swirl through the vocational education evaluation literature. Vocational educators question the motives and methods of outsiders (Evans and Violas 1983). Outsiders have challenged each

other for many years (Grasso and Shea 1979; Gustman and Steinmeier 1980; Meyer 1982; Kane and Rouse 1995a; Grubb 1995). Insiders equivocate (U.S. Department of Education 1994b).

Few published results have been actionable in the sense that an identifiable agent might be expected to take a predictable, and different, action affecting vocational education based on the reported finding (Stevens 1994b). Consider Grasso and Shea's 1979 results that were the basic labor-market outcomes foundation for the first modern-era national evaluation of vocational education in the U.S.

With respect to wages and earnings, findings (based largely on the NLS) differed by sex. Among males, enrollment in an occupational program during high school was on average unrelated to rate of pay and to annual earnings. (It should be noted, however, that analysis by speciality area, such as welding and automobile repair, was not possible.) (Grasso and Shea 1979, p. 183)

Who could be expected to take what action based on this finding? We now treat reported findings of this type as quaint reminders of how humble were our analytical origins, and how meager were the actionable implications of such findings. Fortunately, recent exemplary exceptions are available (Stern et al. 1994).

Three national assessments of vocational education since 1980 have now attempted to find and report evidence of vocational education's net impact on the subsequent labor market success of former vocational education students (National Institute of Education 1981; U.S. Department of Education 1989; and U.S. Department of Education 1994a). None of the three national inquiries succeeded in uncovering what the authors considered to be reliable evidence of net impact. Each time the failure to come forth with compelling evidence of vocational education's net impact on labor market access and achievement has been blamed on data—wrong unit(s) of analysis and time coverage, failure to document pertinent student and institutional attributes, and unknown or insufficient quality of information. Should we conclude after fifteen years and three attempts that documentation of labor market impact is a futile exercise? Yes at the national level; but no at the state and local level. The remainder of the chapter explains this answer.

*The "all the eggs in one basket" phenomenon.* Sar Levitan offered the following measured counsel regarding this issue, which masks the

passionate disdain that he harbored for the victory of form over substance: “Both sides of the qualitative- quantitative debate would seem to be well advised to employ multiple approaches to evaluation” (Levitan 1992, p. 43). This sage advice flowed from exasperation with the tilt toward federal funding of evaluations featuring costly experimental designs at the expense of complementary research designs.

*The relevance of theory.* A decade ago I described how four theories of labor market institutions and behavior—human capital, signaling, job competition, and segmented labor market—would each assign a different role to vocational education. The outcomes estimation process must logically start by embracing a theory (Stevens 1983). No one has come forward with a more succinct statement of this point than Heim and Perl (1974).

It is important to remember that analyses of this sort are going to omit some dimensions of input and measure others only in broad aggregate. These difficulties should not be a basis for rejecting the conclusions of these analyses. In evaluating an analysis, two critical questions should be asked: are the dimensions of input omitted from the analysis systematically and significantly related to those included and are the variables sufficiently disaggregated for policy purposes? (p.4)

This general alarm was soon brought front and center for evaluators of investments in vocational education.

While within-firm studies of worker performance can potentially provide valuable evidence on the question of whether individuals with more education (or more of some other characteristics) are more productive, they suffer from a serious statistical flaw. . . . If firms prefer more-educated applicants, less-educated applicants who are hired are likely to have “compensating virtues” known to the hirer but often not to the researcher. (Brown 1982, p. 178 and 180)

Progress has been slow and limited.

The empirical evidence, from the production function literature, on the connections between the measurable characteristics of the learning process in schools and student achievement can best be characterized as being decisively unidentifiable. (Summers and Johnson 1993, p. 1)

The interplay of high school curriculum, participation in postsecondary education, and concurrent and subsequent employment, add to the severity of the challenge (Stern and Ritzen 1991; Bishop 1995).

High school background variables are related differently to earnings and wages across. . . . (1) former students who did not attend any postsecondary institution, (2) chose postsecondary technical education, or (3) chose higher education]; and postsecondary characteristics effects differ for the two groups that attended some form of postsecondary education. . . . Results are not consistent with the hypothesis that postsecondary technical education students would fare better in the labor market than higher education students if the higher education students would have pursued postsecondary technical education nor with the hypothesis that individuals who did not pursue any form of postsecondary education would fare better in a labor market where no one had pursued postsecondary education. (Hollenbeck 1992, p.29)

An elegant theory has been developed that attempts to explain how the quantity of training is determined and who pays for and benefits from it. However, the absence of data on the key theoretical constructs of the theory—general training, specific training, informal training, and productivity growth—means that the only predictions of the theory that have been tested relate to the effects of formal training and tenure on wage growth and turnover. Definitive tests of the OJT theory have not been forthcoming because the large number of unobservables means that any given phenomena has many alternative explanations. (Bishop 1991, p. 1)

*The unit of analysis.* The most recent available study (Kane and Rouse 1995b) adds to the already long list of evaluations that have relied upon the National Longitudinal Survey of the High School Class of 1972 (e.g., Grubb 1993; Kane and Rouse 1995a), the National Longitudinal Survey of Youth (e.g., Kane and Rouse 1993), or the High School & Beyond data (e.g., Farkas, Hotchkiss and Stromsdorfer 1989; Haggstrom, Blaschke and Shavelson 1991).

None of this research was designed to produce actionable results as that term was defined earlier, so the authors are not faulted here. But the federal, state and local authorities who manage the Nation's vocational education system want reliable evidence of outcomes defined at a level they can do something about.

Progress in responding to the need for actionable insights has emerged largely independent of the academic community; see (Pfeiffer 1990; Seppanen 1990). Stakeholders want straightforward answers to basic questions.

*Average versus “other” outcomes.* The research community has aimed its sophisticated statistical weapons at the detection of statistically significant differences in measured outcomes, such as post-program earnings, between populations whose members have or have not been exposed to a particular vocational education experience. The presentation of a standard error statistic is intended to alert readers to the likelihood that an observed difference is “real.” Apologies are often tendered for the absence of any test of the estimate’s sensitivity to a different: (1) specification of the model; (2) population of students; (3) comparison group; or (4) labor market. While each of these considerations is important for some purposes, they all miss the point that vocational education’s constituents usually want to know whether a particular vocational program is exemplary or deficient, however either of these terms is defined. I am aware of only one study of school effectiveness that concentrated explicitly on outliers (Klitgaard and Hall 1973).

*The supply- versus demand-side imbalance.* A student’s exposure to vocational education pales in comparison to other factors that determine labor market opportunity and reward (Stevens, forthcoming). Substantial progress has been made in refining the number and quality of supply-side variables that are available to researchers. The design and execution of surveys, investment in longitudinal coverage, and access to transcript data have dramatically extended the range and power of supply-side information. Progress on demand-side data elements has been much slower, despite the fact that equal or greater importance is given to such information by experts (Bureau of Labor Statistics 1994).

*The “available data” magnet.* The story of federal investments in longitudinal data sets covering education and labor force participation has not been written, but it should be. Howard Rosen’s pivotal role in choreographing the tiny federal carrot that attracted current academic luminaries and provided their students with the National Longitudinal Survey database irrevocably changed the course of labor market research. That’s the good news.

The bad news is that expediency has been a basic ingredient in the recipe for subsequent federal investments in data collection and maintenance (Levitan and Gallo 1989). Extraordinary breakthroughs have been followed by compromises. The difficulty of creating and then sustaining a new research database cannot be overstated. The best available research talent often gravitates to already available data sets that in most cases were created for some long forgotten historical purpose. These scholars have exhibited extraordinary creativity in advancing our knowledge base, but there is a conspicuous absence of consensus on any major conclusion about vocational education's impact on a former student's subsequent labor market success. No currently available database was designed to answer this question.

*The post-program outcomes fallacy.* Most of today's vocational education students, high school and postsecondary alike, have previous and/or concurrent work experience. The contribution(s) of this accumulation of human capital to post-program employment status and earnings should not be erroneously attributed to the vocational education exposure (Stevens forthcoming).

Many former students, particularly community college students, maintain a previous employment affiliation when they leave school with or without a credential. It is incorrect to refer to this employment affiliation as a placement. This error is particularly misleading if the so-called placement is defined as "training related," since the causal flow may be from employment affiliation to vocational curriculum, not from curriculum to affiliation.

A single point-in-time snapshot of post-program employment status offers no information about previous and/or intervening events. The complexity of the education/work portfolios of former students today far exceeds the capacity of simplistic pre-post snapshots to capture the net impact of an isolated exposure to vocational education.

*Training relatedness: measurement challenges.* A case has been made for the practical futility and distortion of mission that the training relatedness metric introduces in vocational education performance measurement (Stevens 1994b). Supporters of the measure simply assert that the payoff on investments in expensive facilities, equipment, and instructional expertise must be recorded in the form of immediate use of the new competencies students have acquired. The National Assessment of Vocational Education's 1994 *Final Report to Congress*

asserts that “the strongest, most consistent finding throughout the literature is that improved earnings do accrue in situations where vocational training is directly related to job tasks” (U.S. Department of Education 1994b, p. 137). But, on the next page, the *Report* warns that “the sensitivity of the research findings to the methodology employed is a question that has not been explored in the literature, but may affect results” (p. 138).

Consider the following scenarios: (1) A high school student completes a cooperative education program, which combines classroom instruction and complementary work experience and on-the-job training; (2) A community college student completes a self-selected module of three courses that were chosen to enhance the student’s candidacy for promotion in a business affiliation held before, during, and following enrollment; (3) A college graduate acquires a vocational certificate at a community college and then accepts a new job; (4) A tech-prep graduate enrolls in a four-year college and holds a part-time job unrelated to the tech-prep curriculum. What cause-and-effect relationship can, and should, be attributed to vocational education’s contribution to the observed employment status? This is the real world. No obvious decisions about the allocation of vocational education dollars flow from the National Assessment’s conclusion that “improved earnings do accrue in situations where vocational training is directly related to job tasks.”

The definitional precision of occupations is crumbling. Employers seek and achieve discretionary authority to reassign employees to new responsibilities. A snapshot of current assignment is a weak measure of training relatedness. This demand-side perspective has a mirror image on the supply side. The definitional precision of vocational exposure is rapidly deteriorating. The integration of academic and vocational curricula blurs the historical distinction between the two (U.S. General Accounting Office 1995a). Encouragement of creative bundling of courses by students, diverse cooperative education programs, and multiple forms of tech-prep sequences increase the difficulty of describing vocational exposure in a way that can be aligned with workplace application (U.S. General Accounting Office 1995b).

This outcomes measurement challenge has been a major impetus behind current efforts to design competency certification systems that will provide employers with a more accurate understanding of each

student's actual achievements (U.S. Department of Labor 1995). The old program-level labels are obsolete, and the vocational designation itself may not be far behind.

The eight bullet-items above describe the performance measurement challenge that will face the nation's vocational education community after congressional action on the pending consolidation legislation. Effective state and local management decisions will require improved documentation of the link between vocational education services offered, student competency gains achieved, and subsequent labor market access and reward. Uneven, but aggressive, advances are already underway across the United States. These are state-level initiatives. There is no common denominator. This is why practical measurement of national impact is futile at this time. The action will, and should, be at the state and local level. Promising examples of state and local measurement of labor market outcomes on behalf of the vocational education community are provided in the next section.

### **From "Beyond the Horizon" to Routine Accessibility**

Six years ago, Levitan and Gallo wrote that meeting the policy challenges of the 1990s amid rapidly changing economic and social conditions and increasing international competition will require renewed dedication to the quality of workforce statistics. (Levitan and Gallo 1989, p. 34)

One source of workforce data that was beyond the horizon in 1989 has recently ascended into the full glare of advocate endorsement and adversarial attack. This new dawn promises to revolutionize accountability systems in vocational education and other complementary employment and training programs. The recently passed CAREERS Act and Job Training Consolidation Act encourage states to use this data source for accountability purposes. This data source is the quarterly report of employee earnings that is submitted to a State Employment Security Agency by, or on behalf of, each employer who is required to comply with the state's unemployment compensation law.

The Job Training Reform Amendments of 1992 required the Bureau of Labor Statistics, in cooperation with the states, to submit a report to



Congress describing how a national wage record database containing information on the quarterly earnings, establishment, industry affiliation, and geographic location of employment for all individuals for whom such information is collected by the states will be established and maintained. That report was completed, cleared through Secretary Reich's office, and sent to the Office of Management and Budget in March 1995, where it remains pending congressional actions that may affect the recommendations that are sent forward.

Meanwhile, the Employment and Training Administration in the U.S. Department of Labor has two initiatives underway that have kept the ball rolling. One of seven state consortia funded through an America's Labor Market Information System (ALMIS) initiative is titled "Research on the Enhancement and Use of the Unemployment Insurance (UI) Wage Record Database as a Labor Market Information Tool." Maryland's Department of Labor, Licensing and Regulation is the lead state agency for this consortium, which includes six other funded states, two universities, and seven other affiliated states. More recently, the Unemployment Insurance Service's Information Technology Support Center (ITSC) has begun the pilot phase of a project to create and maintain a national wage record distributed database capability. This is one of two national databases recommended in the Bureau of Labor Statistics report that has been at the Office of Management and Budget for six months. The second database recommended by the Bureau of Labor Statistics is a wage record database that it would maintain exclusively for research purposes. The vocational education community will be a major beneficiary of the ALMIS and ITSC initiatives (Stevens 1994a, 1994b, and forthcoming), and would realize indirect benefits from the Bureau of Labor Statistics research database.

Sar Levitan recognized the latent value of wage records use.

Social security and unemployment insurance data can potentially provide significant information on the long- and short-term labor market experiences of individuals. Computer advances have generated new opportunities, but statutory restrictions have frustrated the use of [these] data. (Levitan and Gallo 1989, p. 33)

Bill Spring recently concurred.

Massachusetts and a number of other states are attempting to organize the information on the quality of education and training

and on placement.... Most of that information can be acquired by matching the social security numbers of graduates with those of new hires reported quarterly through the unemployment insurance payroll system, with individual privacy protected. This information is reported regularly but lies fallow, never analyzed and disseminated. (Pines et al. 1995, pp. 65-66)

The Joint Commission on Accountability Reporting (JCAR) has endorsed the use of wage records for accountability purposes, but cautions that not all states and education systems are prepared to act on this recommendation immediately (Joint Commission on Accountability Reporting 1995, pp. 5-6). This is another reason why a national roll-up of state data is not feasible at this time.

This author and Princeton University professor Cecilia Rouse are collaborating in the assembly and analysis of a new longitudinal database of confidential records that will contain the "universe" of student records for: (1) the Baltimore City Public Schools; (2) at least seven of Maryland's seventeen public community colleges, which enroll more than 90 percent of the system's students; (3) all University of Maryland System students; and (4) the 1985-1994 decade of Maryland wage records and related employer data elements. Steps (1), (3) and (4) have been completed. Step (2) is underway. Data-sharing agreements with each of the community colleges have been signed. One school has submitted its data. The word "universe" must be qualified because only records containing a student's actual social security number can be used. Coverage and accuracy are important concerns.

Research using the consolidated database described in the previous paragraph will advance our understanding of the interplay of high school, community college, university, labor market, and personal characteristics. School administrators and institutional research personnel are active participants in this ongoing investigation. At this time there is no survey complement to the database, but one is planned. Exclusive reliance on administrative records allows obvious cost savings.

This progress has been possible because Maryland's Assistant Secretary for Employment and Training in 1989, Chuck Middlebrooks, had the foresight and fortitude to enter into a pioneering data sharing agreement with the author. Together, between 1989 and 1995, a team of Maryland Department of Economic and Employment Development

managers, staff members of the Governor’s Workforce Development Board, and the author and colleagues in the Jacob France Center at the University of Baltimore, have demonstrated how administrative records drawn from multiple public agencies can be archived and then accessed by authorized researchers for specified purposes.

Respect for and assurance of the confidentiality of archived records is of paramount importance. It is easy to provide such guarantees in a research environment. Only a small team of professional colleagues are granted access. Each person signs an oath indicating their awareness of and willingness to abide by legal stipulations regarding the handling of the administrative records. It is more difficult to sustain this level of confidence when education authorities seek actionable information, such as how the completers of a particular vocational class in a designated school have fared in the local economy. The identities of individual former students and of any employer can not be revealed. This limits the uses that can be made of consolidated databases of administrative records.

The availability of a national distributed database capability will pose new challenges. The intent is to overcome the historical ceiling on the value of wage records that is inherent in not knowing the status of anyone who does not appear in the home state’s own wage records. State Employment Security Agency administrators and the Unemployment Insurance Service’s executive team are properly worried about the integrity of their records. New technologies, such as fingerprint identification, are now available to control access to databases in a cost effective manner; if your fingerprint is not in the access authorization file, then access will not be granted, and every authorized access can be documented so subsequent misuse of data can be traced back to its origin.

### **Speculation about the Future**

Many layers of protective insulation have been peeled away from high school vocational education since the 1950s. Today’s vocational systems lie exposed to numerous political and economic forces. Emerging cognitive theories of learning deemphasize the relevance of traditional contextual settings for skill acquisition (U.S. Congress,

Office of Technology Assessment 1994). This is a direct threat to vocational curricula. The renewed popularity of cooperative education relationships serves as both an opportunity and a threat, depending upon what balance is struck between classroom and worksite learning and whether employers can be retained in high school alliances or gravitate to community college competitors. There will be an inevitable shake-out of early tech-prep relationships. Some will prosper, but others will self-destruct.

The connection between the forces described in the previous paragraph and wage record databases is that vocational education's supporters and opponents both want a straightforward answer to the question: "How are we/they doing?"

There will be room at the table for the successful components of vocational education. This success has to be demonstrated using a unit of analysis that is actionable. The data have to be of sufficient quality to withstand the inevitable attacks. The analytical approaches that are adopted have to clearly identify the exemplary and deficient performers, so resources can be reassigned from the latter to the former; a clear definition of average performance will be of little value.

The state-level labor market outcome measurement initiatives that are underway across the country are establishing a solid foundation for responding to the accountability features of the pending consolidation legislation. The federal government would be wise to nurture, learn from, and promote these initiatives. Such advocacy should be given a higher priority than the design and introduction of any new uniform national reporting requirements that will inevitably result in the collection of performance information that cannot withstand the scrutiny of objective experts using quality and actionability criteria to assess the data. This pessimistic conclusion could be negated by a serious congressional investment in assuring the necessary quality and actionability of accessible national performance measures.

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