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ABSTRACT

This paper explores the development of a set of indicators devoted exclusively to the school to work transition. The indicators described are directed at monitoring a geographical area as a whole, whether it is the nation, state, or a local community. Developing a set of indicators is linked to making judgments about the impact we expect new systems to have on the achievement of economic adulthood in the United States. It is also linked to making judgments about the institutional changes need to ensure economic maturation. Three sets of indicators are considered: (1) the final outcomes aimed for by improving the school to work transition; (2) intermediate outcomes that are the early results of changes; and (3) system outcomes that represent the specific changes desired in institutional behaviors. Final outcomes include changes in employment patterns, reversing the relative earnings decline, increasing the perception of well being among citizens, and other impacts on economic success. Intermediate outcomes are those related to literacy, finding employment, seeking higher education, and changing perceptions about new school to work initiatives. System outcomes include changes in program opportunities and increased training and employment-related opportunities. An indicator system will be a set of measures designed to track the putting into place of the elements of a system and whole systems. The indicators will indicate change, but do not, in themselves, form a program development and implementation plan. An appendix presents notes on performance measures. (SLD)

A POLICY ISSUE PERSPECTIVE

POLICY INFORMATION CENTER
Educational
Testing Service

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by Paul E. Barton

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ETS
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These are the personal views of the author. The paper was commissioned by the Office of Policy and Planning, U.S. Department of Education. Comments by David Goodwin, of this Office, were very helpful in completing the paper. Carla Cooper provided desk-top publishing services. Nivedita S. Niyogi did the editing.

INTRODUCTION

This paper explores the development of a set of indicators devoted exclusively to the school to work transition. The indicators described in this paper are directed at monitoring a geographical area as a whole: the nation, or a state, or perhaps a community. We begin by focusing on the nation, but we are also concerned with identifying a set of feasible state and community indicators. While cost becomes a large factor in tracking individual communities, some key indicators are built upon school- and employer-level reporting that could permit aggregation at the community level.

This paper does not directly address performance measures for funded projects. That is, it does not tackle measures of what constitutes successful project implementation. Such performance measures deal with how well funded projects serve individual youth; the indicators in this paper deal with installing a whole system. However, the two are obviously related, and thinking through an indicator system will help in thinking through project performance measures. Comments about performance measures required by the new school–to–work legislation (House version) are included as an Appendix.

Developing a set of indicators is linked to making judgments about what impact we expect new systems to have on the achievement of economic adulthood in the United States. Also, it is linked to making judgments about the institutional changes needed to ensure economic maturation. Work on an indicator system will flush out underlying assumptions about an effective approach to the school-to-work transition, and could lead to clearer thinking. It is not possible to set forth an indicator system without revealing underlying views about the changes needed in the support/preparation system, and, therefore, this is not simply an exercise in statistical theory and methods.

Indicators are inevitably driven by a specific prescription for change, except possibly for the final outcome measures, which could be agreed upon by people with different prescriptions. While prescriptions in the indicator system are my own versions of the necessary ingredients, I believe they generally fit the school-to-work legislation proposed by the Clinton administration and now being considered by the Congress. There may be room for argument over details, however. Some of these details are in elements that may go beyond this legislation. One such example would be efforts to increase industry investment in training new young employees, who currently receive the least amount of training.

There are, in this formulation, three sets of indicators:

FINAL OUTCOMES

These are the final results we wish to achieve by improving the school to work transition. What is it, ultimately, that we want to improve? These measures are in terms of successful occupational and economic transition, because it is from "school to work" that is our focus. This in no way dimin-

ishes other important outcomes of education, nor of other arrangements in society to provide for successful entry into adulthood. This is a set of indicators specific to this transition, not the general well being of American youth.

INTERMEDIATE OUTCOMES

With the end result clearly in mind, what intermediate successes do we think will achieve these final outcomes? There is a lot of emphasis these days, and appropriately so, on "outcomes driven reform." However, a statement of outcomes tells you nothing about how to achieve them. What has to *happen* for these outcomes to be realized? In bowling, there are markers (spots) a few feet down the lane. You decide which one you want the ball to roll over in order for it to hit the right place going into the pins. These markers are what I am calling intermediate outcomes. Select the wrong ones, and you won't get there. These outcomes are not themselves the institutional changes you intend to bring about, but the results of those changes.

SYSTEM OUTCOMES

And what specific steps must we take during the transition to produce the intermediate outcomes we seek? These are indicators of whether the elements of a new system are in fact being put into place, and what portion of the total transition has been converted to a new system. Obviously, to do so, the elements of the new system must be specified. To have a relevant indicator system, consensus has to be reached on these elements. Of course, they could encompass some variation in approaches where consensus is not reached. As time passes it may be possible to see which approaches are associated with achieving the intermediate outcomes. However, an indicator system will not likely be a means of determining cause and effect; it is not a research design for a controlled experiment. In the bowling analogy, these program elements are the aim one takes at the markers.

To put it simply, the system outcomes are the specific changes we want in institutional behaviors. These are designed to bring about the intermediate outcomes. The intermediate outcomes are expected to move us toward the final outcomes. Of course, the final outcomes will not result only from these intermediate outcomes, since other factors also affect their achievement. For example, a recession, or changes in demography, or the structure of production.

We focus here on these changes in institutions because that is what we will set out to change through school–to–work legislation (state or federal), or through administrative action. Other factors will, however, play a large role in the behavior of the "final outcome" measures, and these are not tracked in the system described here. This larger

set of factors that determine the transition are elaborated on in Volume 1 (of three volumes) of a publication called *Between Two Worlds: Youth Transition From School to Work*, by Paul Barton and Bryna Fraser, now 15–years–old. This volume postulated that there were three sets of factors: 1. Individual Circumstance; 2. Institutions: Quality and Behavior; and 3. Changes in Society. Further, that these three sets of factors interact with each other. The system changes described in this paper have their origin in this earlier typology, although with considerable enlargement and, of course, updating. Intermediate and Final Outcomes were not addressed at that time.

A. FINAL OUTCOMES

1. Earlier Employment Establishment

High school graduates have great difficulty establishing themselves in a way that enables them to become economically independent and create households and families. Their ability to do so has seriously deteriorated in the last two decades, absolutely and relative to their more highly educated peers.

A. Indicator: *Proportion of 18–20 year old graduates and 21–25 year old graduates, not enrolled in school, who are employed in the primary job market.*

Discussion: On the one hand, a youth labor market has developed, paying around the minimum wage, having very high turnover, and having no (or minimal) fringe benefits. On the other hand, employers for adult-type jobs with career ladders and standard fringe benefits typically (but not always) do not hire those under the age of 22 to 25. Earlier employment establishment can happen only if earlier entry is gained to the primary market — one of the objectives of a new School to Work System.

Construction: It would be constructed out of a combination of data on occupational and industry employment, earnings by occupation, or fringe benefits by occupation, and age distribution by occupation. In some cases, arbitrary rules would be required in deciding which occupations/industries would be counted as primary market. Such a composite of existing statistical series and rules for inclusion would result in an estimate to serve as an indicator, not a government "statistic."

Source: The BLS occupational survey, the payroll employment series, the monthly CPS surveys, and (possibly for the most detail) the Decennial Census. I assume it can be constructed from existing data.

B. Indicator: *Percent earning enough to support a family that is a) above poverty and b) above "near poor" by age 25.*

Discussion: The drop in real earnings among young high school graduates, say age 21–25, threatens increased poverty and dependence, for them and the children they have (a reason for rising child poverty and near poverty). While our ambition is

for young people to do better than escaping poverty and near poverty levels, one goal will be to turn around a trend toward impoverishment and dependency.

Construction: Use of existing income statistics and official definitions of poor and near poor. Also could use dependency rates from AFDC and Food Stamp programs. However, the measure should be of those *able* to *have* a family and stay out of poverty, as well as of families already in poverty. At this age, we want to know how many have the *ability* to *create* families, and not live in poverty, as well as those who have already descended into poverty sunk into it. We are concerned with the ability to make this important life transition.

Sources: Existing data: BLS, CPS, Census and HHS program data.

2. Reversing the Relative Earnings Decline

Indicator: *The ratio of annual earnings and income of high school graduates and STW program completers* to the earnings of 2–year and 4–year college graduates.*

Discussion: The increased economic difficulty of youth not pursuing college degrees is reflected in the deteriorating ratio of earnings and income of those with just high school educations (and those with some college, but without degrees, as well); they have been losing ground relatively over the last 20 years. Quality School–to–Work programs should be expected to make successful completers more attractive to employers that pay higher wages. And they should spend less time unemployed. Other things being equal, success should show up in a halt in the relative earnings decline, and a reversal should begin.

Of course, other things may not be equal and changing work and labor market structure could continue to produce these increasingly adverse ratios. It is a measure of how the whole

*There is reference throughout to STW completer graduates. Definitions of what constitutes such a completer will have to evolve. It could be a high school graduate who went through an STW program, or a two–year college graduate. But regular high school programs could be evolving toward STW concepts and practices, without such formal designation, which has to do partially with funding sources.

of the society and economy is doing in terms of the welfare of this large segment of the youth population. In lower growth and stagnant economies, level of education certification tends to allocate scarce opportunities.

Construction: From data in the Current Population Survey (Although the CPS measures years of school completed, not graduation. Since certifications of completion are important, it is something we should know, particularly for those who have a degree after two years as opposed to just attending two years.)

Sources: Above

3. Rewarding Academic/Literacy/Skill Achievement in the Labor Market

Indicator: *The relative earnings and weeks worked of high school and STW program graduates, age 17 to 21 or more, who have achieved at different levels and taken courses/training of different difficulty. Single age intervals should be used since age is a key factor in labor market penetration, and 21–years–old graduates will do better than those younger, at the same level of educational achievement.*

Discussion: Until the labor market rewards differential achievement in school, taking more rigorous courses, and getting good skill training, efforts to create better School–to–Work programs will not succeed. Many studies, particularly those of John Bishop, have shown that for youth age 17 to 21 with high school diplomas or more, employers do not make such differentiations. If employers are not looking beyond the diploma, then changes in content and level of achievement will hardly be discovered. If there are no rewards, there are no economic incentives.

Construction: A measure of course taking and achievement must be combined with data on labor market experience, preferably on a longitudinal basis.

Source: In 1980, ASVAB was used together with a household survey, and is expected to be repeated for renorming. The best source is likely to be the NCES longitudinal surveys, such as NELS 88. They can provide data from past surveys to establish trends, they deal with a single age cohort, and the longitudinal element can establish when differential accomplishment

begins to get recognized. The periodic National Adult Literacy Studies could also be used.

4. Increasing Economic Independence

Indicator: *The percent of youth* completing their formal educations, still living at home with their families because they cannot afford to establish independent households (both from the perspective of the youth and the perspective of the family).*

Discussion: The measures in 1, above, relate to earnings necessary to establish economic independence. Another is the actual ability to establish households separate from the family, as it is perceived by the young adult and the family. Increasingly, there is the perception that youth are less able to move out and make it on their own. A measure of involuntary dependence on the family, even if subjective judgment, would help illuminate this matter.

Construction: A question(s) in a household survey

Source: Either the CPS or the Department of Education household survey

5. The Perception of Well Being

Indicator: *Graduates who feel they are or are not succeeding in the labor market, do or do not feel in control of their lives, are or are not experiencing alienation.*

Discussion: The perception of well being results from both expectation and objective accomplishment. In a society and economy where more youth are likely not to do as well as their parents, there is likely to be more youth with perceptions of failure, which can lead to alienation. Objective measures (above) should be supplemented with subjective measures. Many would not consider this "hard" data. However, perception is reality to an individual, and we must succeed on this front as well.

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*There will be differing judgments as to the "age of economic independence" that we should strive for. This can be accommodated by measuring at ages 18, 21, and 25.

Construction: From existing surveys if possible (I am not up to date on ongoing surveys, such as Monitoring the Future, that might be used for this).

Source: Above

B. INTERMEDIATE OUTCOMES*

1. Increased Academic Achievement and Literacy

Indicator: *Proficiency in academic subjects and literacy.*

Discussion: Success in the transition to work will be aided, we believe, if students leaving high school and STW programs have greater academic and literacy achievement.

Construction: Derived from the National Assessment of Educational Progres, the National Longitudinal Surveys, and the National Adult Literacy Study.

Source: Above

2. Increased Proportion of Secondary School Students in Bona Fide Work Based Learning Programs, Using the Worksite

Indicator: *The percentage of all 10-12th grade students (as well as those in the postsecondary phase of STW programs who are in substantial worksite training / education programs), by how many hours are at the worksite. It would be desirable to deifferentiate four types of worksite:***

a. Private enterprise
b. Public agencies
c. School–based enterprises
d. Service learning opportunities

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*Wherever student populations are discussed, I assume collection of data by race/ethnicity, gender, and perhaps disability status. Programs for "out–of–school" youth are just different kinds of schools, and they would be included.

**The preferred worksite is private employment. However, reality dictates that we contemplate other sources in order to get to scale.

Discussion: The belief behind STW programs is that using the worksite for training and experience, related to classroom work, will increase employment success, as well as stimulate educational achievement.

Construction: The Department of Education, to my knowledge, does not have a reporting system in place to build on for STW programs. Reporting of Cooperative Education was abandoned several years ago. A state–based reporting system will be necessary. The types and intensities of the use of the worksite should be differentiated, through a generic classification, if possible, since terms like Co–op, Internship, and Youth Apprenticeship can have widely varying content and quality.* It is not just a matter of hours engaged at the worksite, but whether there is structured on–the–job training and mentoring. This may be hard to capture statistically and on– site observation may be preferable.

Source: State–level reports (with disaggregation below the state–level for state tracking purposes) to the Federal level.

3. Increased Enrollment in Secondary School/Community College Articulated STW and Tech–Prep Programs**

Indicator: *Enrollments in secondary school in articulated programs that anticipate continuation at community colleges.*

Enrollments in community colleges of students who transferred from the secondary education phases of articulated programs.

Discussion: Such arrangements are considered essential to a complete STW program and improved transition for occupations requiring postsecondary degrees. Tracking enrollments will determine if efforts to develop and implement articulated programs is being translated into student engagement. We should also track policies of postsecondary institutions in whether they recognize STW credits for college admission.

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*A rough beginning at such a differentiation is contained in "A Memorandum on the Youth Transition," by Paul Barton, in *Improving the Transition From School to Work in the United States*, American Youth Policy Forum, *et al*, 1993.

**While not addressed here, we need some measure of completion rates. This is discussed some in the Appendix, Notes on "Performance Measures."

Construction: Standardized reporting from appropriate state agency or agencies, with reporting system worked out by the federal government with the states. Also, state by state reporting. It will be necessary to agree on rigorous definitions that identify truly articulated programs.

Source: New state and federal reporting, but building on presents reports under the Perkins Act.

4. Increased Awarding of Skill Certification (and/or Employment Readiness Profiles Such as Worklink™ and Career Passports)

Indicator: *The proportion of graduates of high school and STW programs that are awarded skill certifications:*

- *recognized community wide*
- *recognized statewide*
- *recognized nationwide, by occupation or industry*

Discussion: A way of conveying employment readiness to employers, which is recognized by employers, is an essential feature of STW programs. There may be variation in the nature of the information, whether a cut–point approach to a specific occupational skill or a profile of work–related skills, behaviors, and accomplishments. How many students are receiving such credentials/ profiles at the exit point of their educations is a measure of the effective reach of STW programs.

Construction: New reporting system designed by DOL and DOE. However, it could also be approached through NELS '88 type longitudinal surveys and transcript studies as such certifications get more institutionalized.

Source: Same as above.

5. Increases in the Proportion of High School Graduates Who Get Their Jobs with Assistance From the Institutions Involved in STW Programs (or at least elements of STW program)

Indicator: *The proportion of graduates entering employment who report getting first (and second) jobs through sources other than friends and relatives, such as teachers, school counselors, school and state employment services, employer organizations*

and associations, the receipt of an occupational skill certificate, contacts created through worksite learning programs, etc.

Discussion: Due to the isolation of schools from the workplace, lack of assistance from agencies serving adults, such as the Employment Service, the lack of school placement assistance, and the tendency of primary market employers not to hire graduates until the early to mid 20s, most youth report getting their jobs through "friends and relatives." Effectiveness can be gauged from seeing if more report graduates getting jobs in other ways.

Construction: Expansion of the DOL October employment survey and the National Education Longitudinal survey such as NELS 88 (and the latter at the state level at state option).

Source: See above

6. Increases in Employer Training of 18–24 year-old Employees

Indicator: *The proportion of employers of 18–24 year-old high school graduates or students in STW programs who are providing entry–level or skill–improvement after hiring.*

Discussion: Occupational preparation is inadequate both on the school side and the employer side. In many countries with which we compete, employers play a large role in training young workers. In the U.S., industry investment in training is generally low relative to our competitors. Furthermore, *young workers receive the least amount of the total invested in training.* Closing the school–to–work gap requires greater participation by employers at the entry age, in their regular training programs.

Construction: Data on entry–level and skill–improvement training is collected periodically (although not on a regular schedule) by the Bureau of Labor Statistics. The recent results and trends are summarized in a 1993 report, *Training to Be Competitive*, by the ETS Policy Information Center.

Source: The occasional household survey, through the Current Population Survey, of workers and the training they receive from their employers. The survey is conducted by the Bureau of Labor Statistics.

7. Changes in Parental Perception of the Viability of New School to Work Initiatives that are not Identified as a *Traditional* Academic Track/College Going Route

Indicator: *As new STW systems become widely available, the perceptions of parents about these systems and their desirability for their children.**

Discussion: Parents generally fear what appears to them to be any form of tracking away from the college route. While STW programs are designed to increase academic achievement, keep the college option open, and have a postsecondary component as part of an STW program or as an option, labels may make it hard to convince parents, and therefore, students. STW must succeed in terms of the parent perception of new systems as well as in the content of new systems.

Construction: Could be questions added to household surveys, or parent surveys conducted by school systems.

Source: Above

C. SYSTEM OUTCOMES: Changes in Institutional Behaviors, Practices, and Services

1. Growth in Worksite Training/Education Openings for Secondary (and Tech Prep) Students

Indicator: *Count of the number of schools whose students have opportunities, and the number of worksite slots involved, by a categorization (to be worked out) of a.) the extent of training time provided; b.) the level of skill certification involved upon completion; and c.) the relative involvement of employers and schools in direct occupational preparation.*

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*This may be considered by some to be a soft measure, or a "sociological" measure. But these attitudes will make or break an STW effort, and should be gauged.

Discussion: While this parallels Intermediate Outcome #2, we are here interested in measuring extent of program availability and type, rather than extent of penetration into the student body.

Construction: Ideally, from reports filed at the school level.

Source: School level reports or possibly, additions to the School and Staffing Survey, or transcript studies.

2. Beyond Worksite Training/Education, Growth Generally in Secondary School and Tech–Prep Collaboration with Employers

Indicator: *A. Percent of secondary schools (and community colleges, regarding Tech Prep) having extensive involvement with employers and employer organizations*

B. Percent of employers having extensive involvement with secondary schools in efforts directly related to the transition to work (or further training and Tech Prep)

Classify by nature of involvement, such as:

- *Communications with school personnel about students employed part–time, on their own*
- *Assistance to schools in occupational counseling through providing mentors and advisors*
- *Assistance to schools in expanding students' general knowledge of the workworld and the nature of various occupations*
- *Advising on content of school–based occupational education*

Discussion: No new "system" for the school–to–work transition can come into being without close cooperation and collaboration between the school and the employing community. Although the necessity for this was recognized in the first objective of National Goal 5 stating:

"By the year 2000 — Every major American business will be involved in strengthening the connection between education and work,"

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- *Advising on content of school–based occupational education*

Discussion: No new "system" for the school–to–work transition can come into being without close cooperation and collaboration between the school and the employing community. Although the necessity for this was recognized in the first objective of National Goal 6 stating:

"By the year 2000 — Every major American business will be involved in strengthening the connection between education and work,"

no tracking system to monitor progress was put into place. What we are looking at here is *help with the transition*, not

with the broad array of employer efforts to improve schools generally.

Construction: This will require new reporting from schools and employers. It could be on a universe basis in a community; every employer, potentially, could be involved, as can every school (which is the goal of the Governors and the President, set in 1989). At the state and national level it could be sample–based surveys.

Source: If local surveys were guided by standardized instruments provided at the national level and adopted by the state, the data could be aggregated. However, given that this universal local reporting is a long way off, a sample survey would be required for national level reporting. The Goal 5 Task Force, working for the National Education Goals Panel, recommended surveys by the U.S. Department of Labor. Such surveys might be more successful if carried out with participation of major employer organizations, such as the Conference Board, the National Association of Manufacturers, the Chamber of Commerce, the National Alliance of Business, and the Business Roundtable.

3. Extent of Integration of Academic and Occupational Education in Secondary Schools

Indicators: *A. The number of*

- *courses taught jointly (or designed jointly) by academic and occupational education instructors*

- *applied academic courses being taught such as CORD'S Principles of Technology*

B. The availability of instructional materials and teacher training opportunities for integrating academic and occupational information.

Discussion: Such integration is a key component of School–to–Work Systems. The record keeping here is simply of the degree to which such integration is being achieved. There must be course offerings by subject matter area, and there must be suitable instructional materials developed and available for instruction, as well as arrangements for teacher training.

Construction: Possibly, course availability could be obtained through modification of transcript studies. The availability of instructional materials could be obtained through surveys made by the Council of Chief State School Officers in its indicator work. The SREB High Schools That Work Consortium could assist in specifying the indicators.

4. Growth in Counseling/Guidance Time Available to Secondary School Students for Making Choices in School-to-Work Programs

Indicator: *The amount of counseling time provided to students overall (expressed as a ratio to students), the availability of computer-assisted guidance, and a distribution of counselor time along the lines of*

- *class scheduling duties*
- *behavioral problems and psychological counseling*
- *selecting courses, majors, and tracks*
- *selecting colleges and arranging for college admissions tests*
- *providing occupational information for choosing careers and what is necessary to prepare for them*
- *providing information about available jobs*

Discussion: There has been no regular, or even periodic, reporting along the above lines, although the new School and Staffing Survey (SAS) does count the number of counselors. There was an *ad hoc* study in 1969 and also one in 1981*; and they disclosed that very little of available time was devoted to students going directly into the job market.

Construction: Counselor ratios can be derived from the SAS surveys carried out by the National Center for Education Statistics. The time distribution could perhaps be obtained there also; counseling characteristics have not been treated on a par with teacher characteristics.

Source: See above

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*Carried out by ETS under contract with the National Institute of Education.

5. The Provision of Placement Services to Graduating Seniors

Indicator: *The availability of job placement services to graduating students.*

Discussion: Organized job placement assistance is typically not available to graduating students, except on an *ad hoc* basis, commonly found in vocational schools. The Public Employment Service no longer provides this service (it used to, in about half of high schools), and systematic school–based services have seldom existed in the U.S. Failure to help graduating, work bound students is a peculiar characteristic of the U.S. system.

Construction: This lies somewhere between the responsibilities of the U.S. Department of Labor and Education, as it does with their counterparts at the state and local level. Years ago, the Department of Labor quit asking State Employment Services for this information, probably because resource reductions had by and large eliminated the Cooperative School Program.

Source: See above

6. Establishment of *Sequential* Occupational Courses

Indicator: *In addition to counts of individual course offerings, the extent to which there are sequenced offerings, constituting a "major" in a particular occupational area.*

Discussion: The pattern in vocational education has been for students to elect a variety of courses in an unplanned way, so they end up without any entry–level skill in a particular occupation. In a School–to–Work system, a *sequence* of courses is established so there is progression to a marketable entry–level skill. The record keeping about offerings needs to show whether or not this is happening.

Construction: Transcript studies designed specifically to reveal whether such sequencing is available.

Source: Course reporting classifications developed by the Office of Adult and Vocational Education, linked to transcript studies carried out by NCES.

7. Establishment of Skill Standards and Certification Systems

Indicator: *A count of occupations in which skill standards have been established, nationwide or in individual states, together with a count of certification systems available.*

Discussion: Having a credential recognized by employers is a critical element of a School–to–Work System. An indicator system would track the extent to which standards and certification are coming into existence.

Construction: Possibly gathered through the new National Skill Standards Board from national and state industry associations and state departments of education and labor.

Source: See above

8. Growth in Secondary School/Community College Articulation Agreements

Indicator: *Number of articulation agreements that meet Tech–Prep standards, categorized by the number of occupations in which there is a sequencing of courses over four years (2+2).*

Discussion: Such agreements play a very important role in there being a postsecondary education option in School–to–Work Systems. An indicator system should include some means of tracking their availability. Rigorous definitions are needed.

Construction: I am unfamiliar with the extent and nature of present reporting for Tech–Prep programs and Perkins Act requirements. I assume that work has been done on this in the Office of Adult and Vocational Education.

Source: See above

9. Establishment of Agreements for Follow–up of Students for One Year (two?) After Graduation and Certification

Indicator: *The number of schools that provide follow–up, and nature of the follow–up.*

Discussion: By and large, our students become invisible to the school system after graduation. The school doesn't know what happened to them (some have surveys shortly after graduation to determine if they were employed). This means that they no longer help in making a labor market adjustment. It also means they get no feedback that would enable them to adjust for the kinds of problems or deficiencies graduates have in gaining employment.

Construction: The school would be the unit of reporting, or an STW system within a school if it is not school–wide. The objective though is for follow–up of *all* graduates. Perhaps they should remain on the school rolls as a responsibility for 12–24 months after graduation.

Source: See above

10. The Growth of Complete School–to–Work Transition Systems

Indicator: *The number of schools, or School–to–Work Systems located in schools, that include all (or most all?) the elements needed for a complete system.*

Discussion: While elements of systems are tracked in 1 through 9 above, and while each element is considered to be an improvement over the present, a complete system includes all the elements. We need to know how many complete systems we have, at the school and part–of–school level.

Construction: School level reporting aggregated to district, state, and national

Source: See above

D. THE GEOGRAPHY OF INDICATORS

There are several considerations in deciding on the geographical level of indicators. One is simply expense. No comprehensive indicator system will get off the ground if it has an astronomical price tag, and that's what happens if certain kinds of indicators are planned for at the school, district, and state level in addition to the national level. However, school, district, and state level indicators become practical when they are designed to be built upon school reporting.

A second consideration is whether it will be necessary to rely on household sampling, or whether administrative data can be used. Such sampling is typically expensive, and samples must be fairly large, even for small geographic areas; the number in the sample is as important as the size of the poulation.

A third is the level at which decisions are made that can affect the matter being measured in the indicator. A school-based policy will likely best be tracked down to the school level. Those matters determined by economic policy at the national level.

However, these are likely no clear principles that hold up for all the components of an indicator system. One reason is that the type of indicators vary, as in this presentation of final outcomes, intermediate outcomes, and system outcomes. Also, the importance of the target of measurement will affect the decision; a given target may be considered so important that it *has* to be measured at the community level, even if it requires expensive sampling. So it comes down to examining one indicator at a time, and reaching consensus after grappling with factors like those above.

I went through such as exercise, in a very rough way, and have presented the result in the following chart. It is the basis to start a discussion, but it is not the kind of thing to be done by one person. For one thing, the indicators themselves are merely discussion starters; indicators will require considerable involvement from the policy and statistical communities, and we will have to face the reality test of cost and the availability of resources. No effort is made to document all the reasons in the author's mind for making the choices reflected, but they do encompass the criteria described above, in a rough sort of way.

The Level of Reporting

	School	Community	State	National
Final Outcomes				
1A. B.			Every 10 years. Through Census (or if large state in CPS)	x x
2.			Every 10 years. Through Census (or if large state in CPS)	x
3.			State option in longitudinal surveys	x
4.				x
5.				x
Intermediate Outcomes				
1.			State option in NAEP, NALS & NELS	x
2.			State option in NAEP, NALS & NELS	x
3.				x
4.	x	x	x	x
5.	x	x	x	x
6.	x	x	x	x
7.			State option in NELS	x
System Outcomes				
1.	x	x	x	x
2.	x	x	x	x
3.	x	x	x	x
4.	x	x	x	x
5.	x	x	x	x
6.			?	x
7.		?	x	x
8.	x	x	x	x
9.	x	x	x	x
10.	x	x	x	x

E. WHAT THE INDICATOR SYSTEM IS, AND IS NOT

As broad as the reach of the indicator system described is, it is still purpose specific, focused, and in some respects narrow. In using this document to aid a discussion of an indicator system, it may help to be clear about what it is and *is not* intended to be.

It *is* a set of measures designed to track the putting into place (in whole geographical areas) the elements of a system and whole systems (systems indicators), the intermediate outcomes of such a system, and the final outcomes (although these outcomes will be determined, as well, by larger happenings in the economy and society, as well as in the school–to–work system). It *indicates change* in the significant measures, and we should be able to judge whether or not the nation, or smaller geographical area, is making progress.

It is:

- Not a program development and implementation plan (although it makes assumptions about what the plan is, and should be adjusted to emerging reality)

- Not an evaluation of a program (although, over time, some *judgments,* not "findings") can be made about whether payoffs occurred, although we will not know from indicators alone what elements produced the results we see.

- Not a research design. It will not measure effectiveness of a system as compared to existing arrangements. The outcome sequence is not formally a causal model, and there are no controls. However, it embeds a set of presumptions about the elements of a system, what the shorter term results should be (intermediate outcomes), and what final results we want.

- Not a set of performance measures and monitors for individual projects/funded programs. These deal with implementation targets, with conformance to program, regulatory, and legislative requirements, with resource utilization, and with expected outcomes set in advance for the project/program. Also, such measures are at an individual project level, and not for all youth in entire geographical areas (unless the program becomes universal).

There is, however, likely to be some interplay between such project level monitoring and a broad indicator system.

- Not a record keeping system of the well being of all youth in general, but one focused on the transition of graduates to economic adulthood.

F. A PROCESS, NOT JUST A PLAN

If this paper helps inform an initial discussion of the establishment of an indicator system, it would meet the expectations of the author. An indicator system will not be created by a plan put to paper by one individual. Rather, it will be created—assuming there is a strong desire to do so—out of a process involving a considerable number of people, coming together from different perspectives. There are the people who have created the demonstration programs and the new school–to–work legislation. There are the people in state–level government who will be implementing a school–to–work system. There are the people in state and federal administrative and statistical agencies who are familiar with the existing reporting system and what its possibilities are for encompassing new measures. And there are the scholars who know particular areas covered by an indicator system in depth.

While I have, in this paper, made an effort to cover the full span of a measurement system, I have done so largely with my own accumulated knowledge, which is quite incomplete and uneven. Some of the stabs I have taken at how to construct a measure will be wide of the mark. This paper did not evolve out of the process of involvement and consultation described above.

* * *

This effort springs from a strong conviction that we need an indicator system that permits monitoring the school-to-work transition as a whole. We need one that spans the education world and the workworld, mirrors the traversing by youth from one to the other, and illuminates the path(s) of entry into economic adulthood. What we have now largely parallels the separateness of education and work institutions. As Daniel Patrick Moynihan has said, "In America, we do what we measure." We will need to break out of measuring only what, in the past, we have been accustomed to doing. To do so will require a collaborative effort between the Departments of Labor and Education and their counterparts in state government, and local institutions as well.

APPENDIX
Notes on Performance Measures

The School–to–Work Legislation that was proposed by the Clinton administration and passed the House of Representatives in 1993 (and was awaiting action in the Senate when this was written) requires the establishment of "a system of performance measures for assessing state and local programs..." This is basically conceived as a set of accountability measures to assure quality, or to judge funded programs on the basis of achieving certain purposes of the legislation. As stated at the outset, this paper is addressing a comprehensive tracking system of the nation's progress (or state's... or a community's ... or a school's) in improving the school–to–work transition, and was not directly addressing these legislative requirements.

One might view a set of performance measures for funded projects as a means of quality control in the establishment (by actions under this legislation) of a system. The proposed System Outcomes measures track the putting of elements of a system into place, not the quality of elements resulting from actions taken under the legislation. Beyond this difference, the indicator system proposed encompasses changes in institutional arrangements whatever their source, such as:

- Actions under existing federal legislation, such as the Perkins Act, or laws administered by the Department of Labor for employment services and training

- Actions taken by states on their own (or consortiums of states, such as the SREB a project) or communities on their own

- Actions taken by individual postsecondary institutions and whole state sytems

- Actions taken by individual schools and by employers in relation to those schools, or by employers acting alone in, for example, increasing their training of young entry level workers

- Actions taken by industry associations in establishing skill standards, or otherwise spelling out entry requirements

It is, of course, very important that the programs and projects under the new legislation be scrutinized through a set of measures, to judge project quality and help in decisions about continued funding of individual projects and programs. This seems to be the purpose of the performance measures described in the legislation. I do think there is benefit in starting from a broad perspective (whether or not the one described in this paper) of what we want to track to tell us whether we are creating a total system, and actually improving the transition, before specifying individual project measures starting with specific legislative language. The broad view can perhaps focus down to the specific project. I read this legislative language after I wrote the paper; below are comments about these performance measures, one at a time.

(1) Progress in the implementation of state plans that include the basic program components and otherwise meet the requirements of Title I.

Comment. This is a standard approach to administering a grant program and insuring that legislative and administrative requirements are adhered to.

In this paper, the "basic program components" could be expected to be found in the System Outcomes indicators (although these may be spelled out in more detail than in the legislation). Individual projects and programs will have time tables for implementation and start up; This is likely in the mode of a management–by–objectives type system.

(2) Participation in school–to–work opportunities programs by employers, schools, and students.

Comments. It is not so clear what this means on a project basis, in specific. By the legislation, the funded programs have to show participation by employers and schools. If there are not students participating, there is certainly no program. This sounds like a matter of compliance with the terms and conditions for receiving funding, and continuing to meet the specifications for having at least the bare elements of a school–to–work program.

If it is meant that such participation should grow throughout the nation, or a state, or a community— stimulated by this legislation, that is, increasing participation *rates*— then this is addressed in Intermediate Outcomes fairly extensively.

(3) Progress in developing and implementing strategies for addressing the needs of in–school and out–of–school, at–risk youth.

Comments. This seem to be a lot like the first: are the recipients of funds doing what they agreed to do... the conditions for receiving grants in the first place. It is a bit confusing though, for, in the case of in–school youth at risk, it is the STW program itself that is the strategy. *It would be unfortunate if sound efforts to better meet the needs of these youth (who may not seem "at risk" if they are enrolled in STW programs) would be undercut by highly visible performance / accountability measures that belie the objective of having this effort as perceived as being for all youth.* Another attempt at labeling the clients will fail both these clients and the student body as a whole.

As for "out–of–school" programs, if they meet all the standards set for STW programs, I would treat them the same as in–school programs, in an indicator system. If they result in GEDs, there should be articulation agreements with Tech Prep programs (as an *option)*, just as high schools do. These programs also need to integrate strong academics, and lead to skill certification. Otherwise, they should not be receiving STW funding.

(4) Student outcomes, including —

(A) Academic learning gains

Comments: Addressed in Intermediate Outcomes (1).

(B) Staying in school and attaining a school diploma, skill certificate, and college degree

Comments: Credentials recognized by employers is addressed. Reducing the dropout rate probably should have been addressed under Intermediate Outcomes; dropout rate measures, however, are being improved at the state and national level by the National Education Goals Panel, the Council of Chief State School Officers, and the National Center for Education Statistics. These statistics will exist and can be used in an indicator report.

The matter of dropout rates for individual funded programs is somewhat different. If they are comparative, then compared to what? If a whole school has STW, then it can be compared to the past. If compared to a standard then how to set the standard? The best approach, would, I believe, be to demonstrate continuous improvement, and narrowing of differential rates among sub– populations within a school (or a program).

The inclusion of "college degree" requires some care in developing this measure and what its role is to be. College is an option for individuals in STW programs and should remain so, even as we would like more students in the programs articulated with 2 year colleges. We are, I believe, trying to develop *options*, options that are limited now because college is really the only viable option at present. As an option, this is addressed in both Intermediate and System Outcomes.

(C) Placement and retention in further education and training, particularly in the student's career major;

Comments: It is an important objective to provide the quality academics and training that keep education options open, and to encourage all young people to develop to their full potential. But whether they *do* or not, in high percentages, is not, in my judgment, a make or break matter for a funded project or program.

One of the great problems of the American education system, I believe, was (and is) characterized by Rupert Evans about 25 years ago. Each stage of the system, he said, is designed to prepare students for the *next* level of education. Not for *exiting* from the system. I think the STW effort is one means to correct this. *We want its graduates to be prepared to exit into the workforce, whether or not they choose to continue. That's why we want them to have skill certificates recognized by employers.* This includes, of course, STW programs in which the final year, or two years, is in a postsecondary institution.

It is also not apparent why this measure is placed before the employment measure (below).

(D) Job placement, retention, and earnings, particularly in the student's career major

Comments: I have dealt with these outcomes under Final Outcomes. But for project accountability, there is the further question of standards. How good is good enough? Success rates compared to what? How quick should success be achieved? There has been a lot of experience with this in JTPA, including recognition of varying labor market conditions, that will likely be drawn upon. It is an important measure central to the purposes of the STW program.

However, while these are bottom line outcomes, we need to recognize the continued development that takes place in the transition to economic adulthood, or what Marcia Freedman called, years ago, the process of work establishment, the title of a book she wrote. It does not frequently happen on a fixed schedule, even for four year college graduates. They do not necessarily end up "in their majors," or start out that way either. The question is whether their employment trajectory from say 18 to 24 is greatly improved, in terms of participation in the primary market, or in rise in relative earnings. It is harder to measure a trajectory, of course, but it would be an oversimplication just to measure whether they are "employed full time in their major three months after they graduate."

(E) The extent to which the program has met the needs of employers

Comments: This can be learned by following up every graduate for a substantial period of time, as proposed. Also, surveys of employer participation will be helpful. Of course, employers have a responsibility for training entry level employees — a responsibility fulfilled much better in countries with which we compete. They are serving themselves by being a party to occupational preparation. A performance measure should not send the message that public agencies are solely responsible.

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