Maine’s current system design and future challenges

- Maine is now implementing a strong K-12 data collection system.
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- Other states have successfully used social security numbers to do this (the simplest approach) while fully protecting individual privacy.

permits institutions to collect and centralize data at the individual student level - creating connections across institutions. It is essential that legislators and administrators establish a unique student identifier that will connect PK-20 education and workforce records, while preserving individual privacy. The best and simplest option requires use of social security numbers as Florida and other states have done.

Another essential element will be the design and implementation of something akin to the Florida Educational Data Warehouse. Maine ultimately will need a state entity capable of centralizing, maintaining, and analyzing all of this information in a fully “firewalled” environment. This paper. Thanks also to the WPPP for its ongoing support which makes this work possible.

Endnotes
3. Ibid
4. Ibid
5. Ibid
7. Ibid
8. Ibid
9. It is, however, the case that local K-12 school systems use individual-level data to follow the progress of specific students, conferring with that child’s parents and creating individualized study plans to improve that child’s outcomes. This is NOT what individual-level data is used for at the state-level, where the focus instead is on programs, institutions, and systems rather than any specific person.
12. Data Quality Campaign, “Florida Case Study”, August 2006. Available along with other useful reports at: dataqualitycampaign.org

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MAXIMIZING MAINE’S EDUCATIONAL INVESTMENTS, OPTIMIZING RESULTS

By Kurt Wise and Alexis Mann

Maine is rapidly approaching a crossroads. In the next two decades a large portion of the state’s workforce will reach retirement age even as the number of high school graduates is projected to decrease. This presents significant, long-term challenges for Maine businesses and the overall structure of Maine’s economy. In order to thrive, Maine will need to not only that its K-12 students receive the education they require while in school, but also to ensure that adults already out in the workforce can improve their skills and increase Maine’s overall levels of educational attainment, providing Maine businesses with a well-trained workforce.

At the same time, state dollars are becoming ever more scarce. Maine’s anticipated revenue system no longer keeps pace with our 21st century economy and society. Managing the limited resources that are available in ways that produce the best outcomes for individual adult workers, the business community, and the state as a whole will become increasingly important.

To address this set of intertwined challenges—a shrinking workforce coupled with tighter budget constraints—we must give Maine’s educators, administrators, and lawmakers the tools they will need to increase public dollars wisely and to maximum effect. One indispensable tool will be something called a “uniform data collection and benchmarking” system.

Good decisions require both parts of this equation: complete and accurate information (through “uniform data collection”), and the ability to assess progress towards established goals (termed “benchmarking”). It is only through this process of informed decision making that Maine can develop systems of accountability and program improvement that respond to real-world results.

If Maine is to prosper in the years ahead, it must capture the significant benefits that flow from informed decision making, not only in its K-12 system but applied throughout the postsecondary education and workforce development systems as well. Now is the time to lay the ground work for a data collection and benchmarking system that makes this possible.
Florida: The Gold Standard

Florida is among the states with the oldest, most comprehensive, and most advanced UDCB systems. Considered the “gold standard,” it is a good model to examine.

In response to legislative efforts to improve educational effectiveness (starting in the 1990s), Florida pioneered the move toward assessment and accountability. Over the course of the last four decades, Florida has expanded the range, interconnectedness, and functionality of its data collection and benchmarking to examine the experiences from other states. Washington example, examining the efforts of other states may be a particularly useful place to search for ideas. Under any circumstances, it is clear that some means of connecting public investments to individual outcomes would be a remarkably useful tool for planners at all levels of Maine’s education and workforce systems.

In order to ensure individual privacy, as well as the accuracy and completeness of the datasets, an independent State Office of Accountability, Research and Measurement, was established to maintain the data warehouse. In addition, the “unique student identifier” link data from these many sources, state researchers and Department of Education staff, and other organizations. The warehouse’s firewall, providing analyses upon request to legislators and researchers. There also maintain K-12 data, making approved data available to school districts and teachers, as well as process is well along. Now, however, many people believe the necessary steps must be taken to connect this K-12 system to education and workforce development data, and to employment and wage records.

Significant challenges to establishing a functional PK-20 system remain. Most immediate among these is the need for agreement on and implementation of the “unique student identifier” (essentially a personal identifier) that

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The foundation of a successful design would result in coordination of systems, for organizational cultures that support appropriate data sharing. Precisely how data will be collected, stored, and analyzed; where it will be housed and who will be responsible for its maintenance and integrity, including which departments and public entities data and analyses will be shared is a central piece of the discussion. As with the Washington example, examining the experiences from other states may be a particularly useful place to search for ideas. Under any circumstances, it is clear that some means of connecting public investments to individual outcomes would be a remarkably useful tool for planners at all levels of Maine’s education and workforce systems.
What is uniform data collection and benchmarking?

It is a cumbersome term that describes a simple idea in that order to make the best possible decisions people need to have good information about the programs and the people they are and how they arrived at that point. They also need agreement about where collect this data, and how to head towards the future. Having this kind of overview or “map” allows people to assess whether the course they have been following is helping them progress toward their goals or if instead they need to change direction based on updated information.

This is a good description of what is meant by data collection and benchmarking (UDCB) provides to educators, administrators, and lawmakers in the realms of education and workforce development programs. It allows them to know exactly which outcomes that programs are producing, the results of which are that in the state there are examples of great success, where educational support might be needed to improve the results, and how they could be adjusted in order to promote better outcomes. It also provides the data needed to connect outcomes directly to costs, providing an assessment of the value derived from each investment in education or workforce development programs. Importantly, it provides both highly detailed information that can be used by administrators and teachers to improve specific programs, as well as big picture data that can help state-level planners coordinate investments across institutions to maximize their efficiency and impact for the state as a whole.

In the absence of good information to work with, the current collection of inconsistent, disjointed, and inaccurate data - decision makers are left in the dark, making “best guesses” based on hopes and hunches. With the state and municipalities in Maine investing over $5 billion in education annually (from kindergarten through college) and millions of dollars more on workforce development programs, it is reasonable to connect information from the pre-kindergarten years and the K-12 system (collectively called “PK-12”) to the post-secondary education systems, including the 4-year university system and the community colleges. The system also must be able to understand how the public’s (students and adult workers') investments in money and time – are playing out in terms of data fields that all institutions use. To maximize the value of this information, it also must be specific and longitudinal; following data from individual students through time, from their pre-K experience through high school and postsecondary education, and several years (preferably, as many as four additional years in college). This longitudinal system covering the years described often is referred to as a “PK-20” system.

Maine’s education and workforce challenges

The data suggest that Maine faces significant challenges and real opportunities:

• In Maine, 89% of individuals over the age of 25 have a high school diploma, but only 26% go on to earn a bachelor’s degree.
• Graduates who leave high school earn on average $4,000 more a year than those who do not graduate.
• Individuals who have a bachelor’s degree earn $16,500 more than those without a high school diploma, and $12,500 more than individuals who have their diploma.
• Only 53% of freshman students enrolled in Maine’s community colleges return to college the following year, compared to less than three-quarters of freshmen at 4-year colleges return as sophomores.
• Since the early 1990s, Maine increased the proportion of students completing certificates and degrees relative to the number enrolled by only 4% - in contrast to a nationwide increase of 24% - making Maine among the lowest-performing states in terms of improvement on this measure.
• Currently only 4.4% of 25-49 year olds in Maine are enrolled in some type of postsecondary education compared to top ranked states that experience close to 30% participation.

It is worth noting that even this gross-level data must be filtered from disparate, national sources. Because Maine currently lacks a UDCB system, Maine decision makers do not have access to more timely, fine-grained, state-specific data.

In order to link this data to workforce development programs and programs in adult basic education and training, the data from all these various parts of Maine’s educational systems must be connected to Maine’s workforce data, including occupation wages, unemployment records. Only by using a comprehensive approach like this is it possible to link to as a PK-20 system.

Among the common concerns raised about such systems is whether they are capable of safeguarding the privacy of the individual student/work. This is an important and entirely reasonable concern. The answer, however, is unequivocally, yes. These systems can be designed to guarantee individual privacy. Several states already operate such systems and have done so for decades now without breach of privacy. Moreover, states including Maine already collect and maintain much of this data on individuals, often by federal regulations dictating privacy guarantees already apply to government-collected student and adult worker investments of money and time – are playing out in terms of data fields that all institutions use. To maximize the value of this information, it also must be specific and longitudinal; following data from individual students through time, from their pre-K experience through high school and postsecondary education, and several years (preferably, as many as four additional years in college). This longitudinal system covering the years described often is referred to as a “PK-20” system.

The problem for Maine is not one of guaranteeing appropriate levels of individual privacy; that is a matter of proper system design and the solutions are well-understood. Instead, the real obstacle for Maine is that the data sets that currently do exist are “altered” within different parts of the educational system or reside in different government databases, and are not well connected. The different data sets, moreover, do not necessarily share common definitions or data fields, and in some cases institutions or public entities do not yet collect important pieces of data.

These data incoherencies and the overall fragmentation of the state’s student/worker datasets make it extremely difficult and expensive to use the data to fully understand the following:

- When does Maine currently stand and where are we headed?

Maine already has joined other forward-thinking states in beginning to implement important aspects of a single state data system. Funding for Maine’s system was secured through a $3.5 million federal grant to the Maine Department of Education. In response to legislative efforts to examine.

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Florida is among the states with the oldest, most comprehensive, and most successful UDCB systems. Considered the “gold standard”, it is a good model to examine.

In response to legislative efforts to improve educational effectiveness (starting in the late 1960s), Florida pioneered the move toward assessment and accountability. Over the course of the last four decades, Florida has expanded its range, interconnectedness, and functionality of its data collection and benchmarking framework. The Florida Education Data Warehouse (FEDW) is a key feature of this system, currently operating (in 2011) a single repository in house to collect, store, and analyze; where will be housed and who will be responsible for its maintenance and integrity, and among which departments and public entities data and analyses will be shared is a central piece of discussion. As with the Washington example, examining the experiences from other states may be a particularly useful place to search for ideas. Under any circumstances, it is clear that some means of connecting public investments to individual outcomes would be a particularly useful tool for planners at all levels of Maine’s education and workforce systems.

The foundation of a successful design will include protocols and organizational cultures that support appropriate data sharing. Precisely how data will be collected, stored, and analyzed; who will be housed and who will be responsible for its maintenance and integrity, and among which departments and public entities data and analyses will be shared is a central piece of discussion. As with the Washington example, examining the experiences from other states may be a particularly useful place to search for ideas. Under any circumstances, it is clear that some means of connecting public investments to individual outcomes would be a particularly useful tool for planners at all levels of Maine’s education and workforce systems.

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- This will become possible if the state adopts a unique identifier to travel seamlessly with each student from pre-kindergarten through postsecondary education and out into the workforce.
- Other states have successfully used social security numbers to do this (the simplest approach) while fully protecting individual privacy.

Most importantly, however, in order to move beyond our current, limited K-12 data system, it will be necessary to build consensus among the state’s many stakeholders including local school districts, teachers and administrators, the community college and university systems, government agencies, businesses, legislators, and the general public. We all stand to gain from better information and a common vision of what we want from our educational systems and how we can use this information in a fully “firewalled” environment.

The best and simplest approach will be the design and implementation of something akin to the Florida Educational Data Warehouse system that MECEP is currently pursuing a graduate degree in public policy. Special thanks to Brandon Roberts and Deborah Pootz of the Working Poor Families Project (WPPP) for their close reading and many helpful comments on this paper. Thanks also to the WPPP for its ongoing support which makes this work possible.

7 Ibid
8 Ibid
9 It is, however, the case that local K-12 school systems use individual-level data to follow the progress of specific students, conferring with that child’s parents and creating individualized study plans to improve that child’s outcomes. This is NOT what individual-level data is used for at the state-level, where the focus instead is on programs, institutions, and systems rather than any specific person.
10 Prince, David et al., “Building Pathways to Success for Low-Skills Adults,” April 2005
12 Data Quality Campaign, “Florida Case Study,” August 2006. Available along with other useful reports at:

To ensure student success and improve workforce outcomes Maine must be able to collect relevant data and assess progress toward established goals.