

Introduction

At eScholar, you have been hearing us talk about PK-20 for the past several years. It's not because we knew that the US Department of Education was going to put a significant investment into the area. We have been talking about it because our customers have asked us to help them to address this challenge. In working with them we have seen the tremendous value that can be realized by State Education Agencies (SEAs) and others by understanding and harnessing the many pathways to educational success presented in this truly longitudinal view of education.

In our work deploying P-20 systems, we have seen with great clarity that P-20 is the only truly longitudinal data system. A fully realized P-20 system tracks not only an individual's academic or educational achievement but also provides a picture of their post-education or career experience. With the billions of records that we have cleansed, integrated, loaded and analyzed, we have gained insights into both the complexity and the profound value of comprehensive data. We have also learned a great deal about what it takes to design and implement a P-20 longitudinal data system.

Besides the work we have done with customers over the past few years, it is also the early experience of the founders of eScholar in building data warehouses at the post-secondary level that gives us a perspective on what it really takes to put a P-20 system in place. During those engagements, we could see that post-secondary data was valuable, but to make it impactful we were missing a big piece of the picture, P-12 data – and there were few P-12 data warehouses in place. So we initially focused on P-12 to make our impact. We felt that if we could help foster improvement there, it would feed stronger students into, not just, higher education, but many other areas of achievement as well.

Now, we are having the impact we were hoping for in P-12 education. We have been chosen to work with more SEAs than any competitor by a margin of over 7-to-1. Now we are focusing our skills and expertise on the complete picture – P-20.

Based on our work with customers we have developed this brief guide to share some of our experiences. The subject of putting in place a P-20 longitudinal data system is both broad and deep and we cannot possibly cover it completely in a “pocket guide”. Please feel free to contact us directly to discuss any questions you have. If we don't have the answers, we can put you in contact with members of our customer community that are grappling with the same issues and would be willing to share their experiences and perspectives with you.

Shawn Bay

Founder, eScholar LLC

P-20 more than a simple add-on...

We have found that a successful P-20 LDS is much more than a simple add-on to an existing P-12 data warehouse. There are several key elements that **MUST** be taken into consideration when implementing a P-20 LDS. Outlined below are key considerations we have uncovered in our experience with our customers.

Student Identification – the KEY element

To deliver a useful and complete P-20 LDS, you need to begin with data integration at the most fundamental level – the individual. You need to track all of an individual's data to a single reliable individual identity. Ideally this means a single educational identifier that persists with a person throughout their educational life. Even with this goal in mind, there are many different identifiers in place today across P-12, the Community College System, the University System, Workforce Tracking and more. An effective P-20 system must be able to reconcile and manage these different systems of identifiers and maintain their relationships to the actual individuals involved. Even if the plan is to converge on fewer, or a single identifier, this capability must be in place to manage the transition.

Grouping of Students

Beyond the capability of managing individual student identities, a P-20 LDS must manage the ability to track groups of students. To provide real value, this capability must span the entire educational spectrum. Students should be able to be identified as members of groups at any point in the continuum and have group data aggregated across time both forward and backward. Doing this effectively involves adhering to a proven data structure and standards across the entire system.

Adhering to Data Standards

Since Postsecondary and Higher Education typically involve a very high percentage of students whose P-12 education occurred outside the state where the institution is based, the issues of maintaining data standards and interoperability across states is essential. Having a consistent set of definitions and a consistent structure for interchange are absolutely fundamental.

Subject and Skills Data

The concepts of subjects and skills cut across the entire educational system yet have typically never been addressed comprehensively before. A P-20 LDS must have the ability to consistently manage the subjects, skills, intensity and other information regarding courses and do so consistently across the entire system.

Like student identification management above, the system must have the ability to manage the process of reconciling and converging different course attribute systems into a single view over time.

Managing Complexity

The concept of dual enrollment exists in P-12, but becomes much more complex when looking at P-20. Students are increasingly enrolled in both high school and in higher education programs. In addition, many students ultimately become teachers as well as staff in our schools. Of course, our teachers also continue as students themselves. Today, many individuals are re-entering the higher education world as they look to retrain for jobs more appropriate for the latest “new” economy. These complexities will continue and a P-20 LDS must be capable of representing these complex relationships completely and accurately.

More than a technology project:

Leadership and Teamwork – Keys to Success

Most technology related projects in education encounter enormous leadership challenges. The very nature of a P-20 LDS makes these challenges even greater. Often, higher education, post-secondary, the colleges and the universities are different organizations that have operated independently for decades. Add to that, the fact that in most states, these organizations are administered by completely different agencies than P-12. As we have found, implementing a P-20 LDS requires more than just cooperation, it requires teamwork. To achieve teamwork in this environment there must be clear and visible leadership.

Change Management

In addition to establishing effective leadership, a successful LDS needs to be explicit about what stove pipe data systems it will be replacing and when and how things will change as a result. The reason we are putting in place comprehensive LDS's is to integrate otherwise stove piped systems. The systems might be large, spanning P-12 for example, or small spreadsheet based systems that someone has maintained for years, but until their data are integrated, they are stove pipes. To integrate data, changes will need to occur in systems, data management, and in the work of individuals. To accomplish this effectively, changes need to be identified up-front and the results measured explicitly. This requires an effective and well communicated change management process.

More technical challenges than you might expect:

We have found with our work in post-secondary, higher education and work force that there are often more substantial differences in their technical environments than what we typically encounter in P-12. Understanding these differences and how they can either help, or hurt your project is essential to the success of a P-20 LDS.

Systems Interoperability

The systems interoperability environment within post-secondary and higher education is in most respects entirely different from that of the vast majority of P-12 systems. In our experience, Web Services/Enterprise Service Bus standards are broadly adopted in postsecondary, essentially universal in the business environment, and increasingly deployed across the agencies that address work force, yet Web Services standards have hardly made a ripple in P-12. The systems interoperability implications for P-20 LDS's are profound and must be dealt with early in the project design.

Until now, P-12 has focused on the standards of the Schools Interoperability Framework (SIF), which pre-date Web Services. Our experience in developing P-20 LDS's gave us the insight to drive an initiative within SIF to migrate the standard to the broader Web Services standards. This initiative will enable the broader interoperability necessary for a P-20 LDS.

Transactional Systems

Outside of P-12, we also find dramatic differences in the "run the business" applications environment. Within P-12 these applications are centered on Student Information Systems. Today, these SIS's are produced by more than 100 vendors and loosely integrate with dozens of other systems covering essential areas such as special education, food services and much more. In post-secondary we find more comprehensive applications and dramatically fewer vendors. Within work force, we also find large enterprise applications, but they are more often one-of-a-kind than we see in either P-12 or in post-secondary. These dynamics have a profound impact on both interoperability and deployment strategies.

More insights based on Experience...

The challenges mentioned above are significant, but the rewards for overcoming them are well worth the effort. With a *truly* longitudinal P-20 LDS, we can see the pathways that lead to long term success and those that do not. Very importantly, we can see those pathways across the critical transitions from P-12 and into post-secondary as well as into the work force.

With a *truly* longitudinal P-20 LDS, we can observe that apparent success in one realm does not always indicate success in another. There are average high school students that achieve well-above average in post-secondary settings and high achievers that drop off. The same discontinuities occur with the transition into the work force. One of the key drivers of individual success is personal initiative and the discipline of setting and achieving goals. We all understand this relationship, but its effect on success becomes more apparent as each individual moves forward in their lives. We see the impact of these things both in detail and on a large scale when there is a P-20 LDS in place.

More to Come from P-20 LDS in the Future

The insights we have gained in looking at student experiences across P-20 are forming the basis for some very exciting work we are doing with several of our SEA clients to bring the power of individual goals into the education process as early as possible.

By studying the important dynamics that we are seeing through our P-20 work, we are beginning to gain insights into the drivers of achievement. By leveraging these drivers along with the educational experience of successful or not-so successful individuals we can help create “pathways” for individuals to follow in pursuit of the educational, professional and vocational goals they have established.

We are early in our development and are looking forward to input from educators, administrators, parents and students. This will help us continue to develop leading edge systems that will help individuals achieve at higher levels and consequently improve our economy and society.

We are looking forward to exciting journey ahead of us and welcome your participation in the process.

Why eScholar?

eScholar is the nation's leading education data management company focused exclusively on improving education by providing educators with the most effective data management tools possible. eScholar products have become the recognized leaders in data warehousing and student/staff identification systems.

eScholar customers are realizing significant improvements in their ability to meet mandated reporting requirements but more importantly in their ability to improve pre-K through postsecondary student achievement.

The eScholar Complete Data Warehouse® products are the most broadly deployed and comprehensive solutions available for integrating, cleansing, and managing thousands of education related data elements.

The eScholar Uniq-ID® products are the leaders in generating, assigning, and managing statewide unique student and staff identifiers.

Relied on by 11 state education agencies and over 3,500 districts across the country, eScholar products transform the way educators use data.

For more information about eScholar, visit www.escholar.com or call 877-328-2969.

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