ED*Facts*
Shared State Solution

Highlights

- *ES3's updated UI is packed with new features to assist states with EDFacts reporting*

- *ES3 strives for alignment with all appropriate data standards and practices, including CEDS*

- *Developed with Partner SEAs*

- *Fully Maintainable by the SEAs*

- *No License Fee for the SEAs*

- *Optional SEA Partner Association for Annual Updates and Shared Enhancements*

- *Support Services Available from ESP*

UI Triggers Package Execution & Watches Results in Real Time

ESP's Chief Architect, Steve King, has been installing the latest user interface for ES3 across the partner SEAs for enthusiastic ED*Facts* coordinators. There are so many new features, that we've included a four-page insert to this newsletter to describe them all.

"I believe this UI is the tipping point that makes ES3 universally useful to SEAs," stated Glynn Ligon, ESP's President. "Combined with ES3's turnkey process for movement of an SEA's data from source files to the ED*Facts* submission files, the UI puts the ED*Facts* coordinator at the control panel and in full control."

The UI is a standard feature of ES3 now for all partner SEAs. Coordinators and program offices can manage their files, trigger package execution, and monitor results in real time.

ES3 and CEDS: Aligning ED*Facts* with CEDS

[ESP Solutions Group is committed to keeping the ES3 effort open and aligned with all appropriate data standards and practices. As noted in previous newsletters, ESP completed the CEDS "Align" exercise. This is a case study about specific EDFacts submission issues as they relate to the underlying ES3 staging tables and CEDS.]

The student membership file is the most basic of the ED*Facts* submissions and is based on the historical Common Core of Data (CCD) collection, which NCES has received from states for decades.

States get data from school districts. They review the data for internal and cross collection consistency. They may move "certified" data to various operational systems. Data may get transformed and "flattened" in order to load them into a longitudinal reporting system or data warehouse. There may be additional processing and transformations in loading the ES3 staging tables. Each of these steps implies some degree of calculation or aggregation is occurring against the data. These aggregated and calculated metrics are not defined in CEDS.

Racial ethnic group is a classic example of differing aggregation or summary levels required for ED*Facts* as opposed to how CEDS defines how the data should be managed at the collection level.

ED*Facts* asks states to summarize the data into specific tabulation categories (which may vary by submission file). Some states get the data on students from their district clients using the tabulation group categories. That is, while still getting individual student data, they ask states to report a student's racial ethnic background as the tabulation group within which they should be reported to ED*Facts*. This issue of our using a different level of aggregation or collecting a calculated value will be repeated. This is not a "new" issue—it was also an issue with the legacy NCES handbooks. This issue led to the Forum's need to publish the *Guide to Education Indicators*. —Steve King, ESP Chief Architect

ED*Facts*/ES3 Integration into SLDS Solutions

ES3 should be an essential component of an SEA's SLDS solution. ES3 doesn't need to wait for the SLDS data warehouse to be complete and loaded with all ED*Facts* data sources. The ETL into ES3 will adapt annually as sources evolve.

ES3 was built based upon best practices for meeting the demands of ED*Facts* reporting. These include:

Keeping up with the updates; finding new and changed source data across the SEA; making changes to the local ETL processes; keeping the SEA data providers up-to-date (conducting an annual meeting, publishing an annual calendar, communicating requirements changes, communicating changes in processes); updating the submission file formats; creating/maintaining the data dictionary; creating error, edit reports for data stewards and providers; maintaining business rules.

Tasks that seldom or never get done:

Creating a longitudinal data store of ED*Facts* submissions; creating enough edit reports; providing longitudinal analytics and reports; and creating a comprehensive training program for ED*Facts* data stewards and providers.

Tough job! These last three tasks have become the roadmap for ES3.

Integrating these into an SLDS solution is one of ESP's strengths. From establishing metadata standards to adopting data governance policies and procedures, ED*Facts* reporting must be considered every step of the way.

How ESP Supports ES3 Implementation

A team of seasoned experts works quietly on the top floor overlooking one of Austin's high-tech intersections. The signs on neighboring buildings say Google, Microsoft, SAS, and Mighty Fine Burgers (winners of the Malcom Baldrige Award for Excellence). The team possesses more combined years experience of ED*Facts* and its many relatives and predecessors (PBDMI, CCD, OCR, etc.) as any other they know—having worked directly now with 10 SEAs to submit successfu ED*Facts* files. Calls come in formally and informally daily asking advice on ETL, business rules, formatting, nuances about N or D, or whether an entity is an LEA or not. This isn't NCES. This is ESP's ED*Facts* Shared State Solution (ES3) development and support team—plus its Chief Architect, Steve King, who Lyncs in from Cheyenne.

Steve inspired ES3, along with Glynn Ligon and Barbara Clements, who all knew there was a lot of duplicate effort going on learning changing rules and aligning local data to submission formats every cycle. Now that the concept is proven and ES3 is in production, Evangelina Mangino, Darrell Prather, Pierre van Eck, Rebecca Fanestiel, Jim Rife, Tuan Nguyen, Greg Palmer, Josh Goodman, Neetu Toor, Raj Dhanwada, and other names will be heard on partner calls implementing and enhancing ES3.

We created www.ES3*Facts*.info to ensure all documentation and communications among partners are easily accessible to everyone. In addition, ESP maintains a SharePoint account for each partner for SEA-specific communications.

During the initial phases of implementation for an SEA, ESP assigns a project manager. That person conducts scheduled project meetings and tracks issues, risks, and tasks. We have developed detailed implementation status charts showing each submission file and tracking the responsibilities for each step toward completing them.

The story and the insert in this newsletter describing the ES3 User Interface illustrate how easily ED*Facts* Coordinators and data providers can manage their source data and results. Comparing current data to past years is a crucial step in ensuring data quality during each cycle, and the new ED*Facts* D&A visualizations are a significant value add to that process.

With ES3 being in its fourth year and having a full set of submission packages in production, implementation support is now a demonstrated strength of the solution by our ESP team.

ED*Facts* D&A shows the amazing enhancements that can be created working with all the partner SEAs. There are plenty more on the roadmap.

- Visit *www.ES3Facts.info* for complete information about ED*Facts* Shared State Solution.

EDFacts D&A Dashboards

EDFacts reporting is no longer a one-way street!

EDFacts Dashboards and Analytics (EDFacts D&A) is a growing set of 12 workbooks and 57 dashboards displaying EDFacts data in a graphically enhanced and timely way. SEAs upload their EDFacts data to EDFacts D&A in exactly the same format as the current EDFacts Submission System (ESS) requires, and then have immediate access to their data through clear and meaningful visualizations.

To learn more about EDFacts D&A, please visit: *www.es3facts.info.*
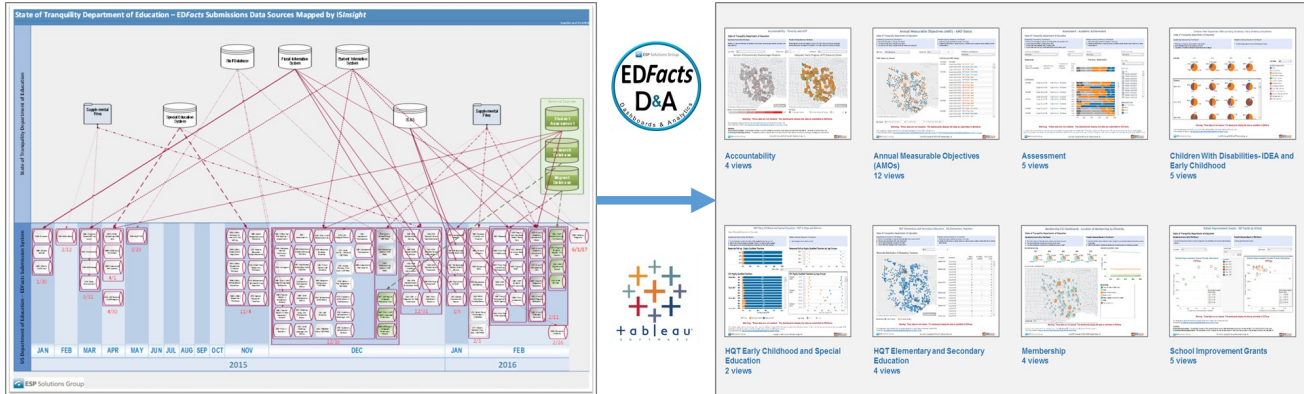
From Data to Insights with EDFacts Dashboards and Analytics

How ES3 Evolved: The History

The U.S. Department of Education automated state-to-federal reporting with the EDFacts system. The task of compiling a state's data into compliant files for uploading was left to be solved by each one. Most of the core processes are duplicated within every SEA.

> **BIG ED COULD NOT DEVELOP AND MANDATE A SINGLE SOFTWARE PRODUCT FOR EVERY SEA. ES3 EVOLVED AS AN OPTIONAL STANDARD SOLUTION.**

Many SEAs have looked across their borders over the years and wondered which of their processes and software applications they could share—and by doing so save time, effort, and money. However, their time and resources were concentrated on meeting the immediate EDFacts requirements and deadlines and not on software product development.

The SEAs working with ESP consolidated best practices with development resources across their projects to create a new dynamic. ES3 was developed upon this foundation.

- Microsoft tools are common, standardized, affordable, and easy to use.

- SEAs know enough about the EDFacts processes to pinpoint where the commonalities are and where the uniqueness of each SEA remains.

- ESP has enough clients to allow it to devote sufficient resources to building the common data model, databases, documentation, UI, and ETL processes.

- The ES3 SEA Partnership Association model with an annual fee to support updates and on-going enhancements will be viable as enough states adopt a common architecture.

- Documentation and visualizations are value adds that ES3 can provide beyond an SEA's capacity.

What are the common ES3 components?

- A user interface to manage the processes

- Two Staging Databases (allowing the SEA to ETL and process either unit or aggregate records and to transform unit records to aggregate) in SQL Server

- Three Types of Reporting (providing feedback to the EDFacts Coordinator, data providers, and analysts/decision makers) using SSRS

- EDFacts Submission Data Store (creating a longitudinal data system for verification and analytics)

- EDFacts Submission File Engine (creating EDFacts-compliant files for uploading)

Unique to every SEA is the ETL into staging databases from data sources.

EDFacts Shared State Solution

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Extraordinary Insight for Support of
ED*Facts* Shared State Solution
SEA Partners

WWW.ES3*FACTS*.INFO

ESP Offers ETL and Implementation Services

ESP Solutions Group is the developer of the ED*Facts* Shared State Solution (ES3) as an enhancement of its contracts with several SEAs. For newly adopting SEAs, the tasks of installing and configuring the solution, creating the ETL for the local sources to the staging data stores, and managing the process for the first year are available from ESP as contracted services. In future years, the maintenance of the ETL from local sources to the ES3 data stores is also a service provided by ESP.

The design of the ED*Facts* Shared State Solution is based entirely upon Microsoft tools. These were purposely adopted by the early SEAs to ensure that they and future partners could maintain the solution themselves without an obligation to any vendor. However, the availability of ESP as a service option provides both the risk mitigation and the support alternative when local staffing needs assistance.

Contact ESP at 512-879-5300 or info@espsg.com.

ED*Facts* D&A Follows Model of "Action Reports"

#ESPTwiminars

This year, ESP initiated the concept of using Twitter for seminars on hot topics by tweeting a series of 14 insights about reporting. The visualizations designed for ED*Facts* data follow the lessons learned and reported as best practices in that "twiminar" entitled Action Reports.

In a related publication, ESP released a new poster, Teacher to Teacher: Informing Decisions (http://bit.ly/1deW6y1). This illustration follows questions through the complex processes to the decisions and actions people take once data have been collected, processed, and provided to them.

How does this all relate back to *EDFacts*? Now with ED*Facts* D&A, those years of ED*Facts* data and the timely new data being reported in the current cycle can be visualized for decision makers.

Each dashboard visualization in Tableau has been designed from the beginning with decision questions in mind and related actions.

The expectation is that SEAs will use the visualizations immediately upon the availability of fresh submission files to provide program offices reports for audit, edit, and resubmission purposes. This gives program offices the ability to compare current submissions with the previous four cycles.

The complete white paper can be download at http://p20wforum.info/action-reports-white-paper/.

Earlier this spring, ESP published a twiminar on the topic of data quality. A central theme in that twiminar is that use of data engenders improvement in the quality of those data. This insight adds to the benefits from ED*Facts* D&A. Excellent visualizations will improve the ability of data providers and data users to understand the ED*Facts* source data as well as the reported aggregate statistics. In turn, they will have more of opportunities to detect and need accurate and timely data.