

# Powering Analytics Session Notes

Friday, April 13, 2018

9:30 AM - 11:30 AM	Powering Analytics With Ed-Fi  Ballroom AB  Report out and demos by community members showing analytics implementations powered by Ed-Fi. The session will also cover early planning for new metrics generation from the Ed-Fi data model and gather feedback on those directions.
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These broad session notes attempt to capture the spirit of the discussion and should not be interpreted as a transcript. Although Ed-Fi Alliance staff were involved in capturing these observations, the notes below should not be construed as official, complete, or 100% accurate.

Presentation by [Cy Jones](#). Slide deck: [Powering Analytics with Ed-Fi.pptx](#)

## Audience Goals

- Want to hear what other people's questions are.
- What are the use cases for educators? What is it they need to solve? We need to work from use cases rather than from solutions to identifies gaps, data shapes, and tools. Don't want perpetual change (investment) because we don't know what we're trying to build.
- What is the community doing with the existing dashboards and movement toward PowerBI?
- What are other people looking to get out of analytics, and how do those goals match with "our own"?
- Moving toward PowerBI, but interested in seeing what other folks are working on.

## Dashboard Destiny

- Cy: Moving dashboards to the governance process, as mentioned during yesterday's plenary. If interested in crafting a future for the dashboards, join the group.
- Q: is the working group for best practices or for refining the application to meet best fit?  
A: all of the above. Perhaps it would be simplifying "less is more."
- Q: are you thinking about driving the dashboards from the API instead of direct database query, like vendors are doing? Use it as a showcase for data flow in and out of the ODS.  
A: we'll talk about that in this presentation. Ed-Fi Alliance does want to show what is possible, without creating solutions that discourage vendor work.
- Audience: Dashboards "are outdated". Would like to see more best practices in data science and BI rather than spending time on those dashboards.

PowerBI and AWS QuickSight on the Ed-Fi Exchange as "starter kits".

<https://exchange.ed-fi.org/#eb3badaa-2a41-40ea-a06a-c8432b059e13>

## Missing Metrics Layer

- Providing an abstraction layer that makes it easier for vendors, agencies, and districts to build analytics from some shape of denormalized data or calculated metrics. All about enabling many solutions.
- Audience: base data model is generic, but use cases for aggregations and calculations are highly use case specific. Examples are good, but make it possible for any tool to run on top of it.
- Conversation around need for basic denormalized views in SQL (very accessible, versus pushing data into something like SSAS), and then providing guidance / suggestions for extended from there. Shaping the data with SQL also enables many more people to understand the data, not just for consuming it. Everyone who spoke up supported missing metric layers being in SQL.
- Anyone think the layer should go straight to calculated data? No.

This conversation is not part of the Dashboard working group. But continuous input and feedback still desired.

Who has built analytics downstream from their ODS? Just a few hands up...

- Crystal Reports - easily setup to push reports to some users instead of making them go out and pull reports. POC with Tableau and PowerBI. Don't necessarily need SSAS for PowerBI. Looking for a good solution that will solve most use cases. Focused on practical solutions for districts and teachers, not just what is cool for us (IT).

- Tabular models and dashboards in PowerBI. Built domain-specific data models. Hoping to provide a self-service dashboard with pre-defined calculations. Takes a lot of work internally, so exciting to see Ed-Fi Alliance talking about providing a middle layer. If you go away from the Microsoft stack, would watch what you're doing but probably not participating. Cy re-emphasizes that we want to be vendor-neutral so that you can easily use PowerBI or other tools.
- Custom ETL and .NET dashboard. Beginning to evaluate PowerBI and Tableau for self-service toolkit.
- A new licensee talks about using Tableau currently, haven't moved to ODS yet. Already have various visualizations and need to move forward without visible impact to end-users.

Audience-member warning: need pre-built dashboards for teachers. Most attempts to let teachers self-serve (build) end in failure because they don't have time to learn how to use the tools. Philosophy of "just give them the data and good things will come" doesn't always work. They already go to the system of record for data everyday, so why come to a new tool?

Should we even talk about teacher dashboards? Teachers don't often have time to spend drilling into the current dashboards. Is it better to push the right data at the right time? Right-sizing solutions based on roles and usage.

Goldilocks - make it easier for semi-technical (power) users to access, but don't expect everyone to build their own. Encourage power user solutions to spread to other.

Q: any empirical information on which dashboards are actually being used?

A: most successful dashboards are the ones linked to specific events or regular meetings.

A: Cy - Ed-Fi dashboards not a lot of data available to us. Best success with counselors and principals working toward graduation plans.

## Change Events API on the ODS

- Still in early development, spiking internally to evaluate efficiency gains
- Incremental updates to clients of the API, e.g. synchronizing data from ODS to another tool (BI tool?). Getting a list of the resources that have a change so that you can pull only those resources.
- Security concerns have to be addressed carefully, granular.
- Who needs this? 6-7 hands raised ("need it yesterday").
- Q: How does this tie into the analytics?
- A: Not as important to those who have direct access to the ODS. More useful for e.g. analytics vendors to run incremental builds instead of full rebuilds. Also SIS and Assessment vendors who might need data access without direct SQL queries.
- Q: is there a table in the database that we can link to?
- A: yes, coding the API to some change tables.
- Q: when do we anticipate making this available for comment?
- A: roadmap for 3.1, 2018 Q3 for now. Subject to change.
- Yesterday doesn't just mean soon, it means preferentially in version 2. For larger installations there is pain everywhere and bottlenecks that this might be able to solve.
  - Should start a ticket thread...

## Community Solutions

### Teacher Prep Dashboards

- Dashboards are in process.
- Data model is in the Exchange now.
- This project is in the "teacher prep" working group.
- Trying to meet 80-90% of what different groups need, with room for customization.
- <https://exchange.ed-fi.org/#7af1d0f6-ab26-4ad1-b6d6-72b186299d8d>

### Other Solutions

Quick view of several vendor solutions that are driven by the ODS. See the slides.

EASOL dashboards directly querying the ODS. Look for it in GitHub.

Tulsa using the T-ODS to power their custom-built solution. Not self-serve right now but exploring.

## General Discussion

- The dashboards may not be ideal for everyone, but they are a good quick win. Whatever the future is, it needs the quick win for demonstrating Ed-Fi capability to non-technical users who want something visual / tangible. Doesn't have to be all-encompassing.
  - Whose job is it to supply that win? Is that for Ed-Fi Alliance or ... ? Can community provide?