

The D3A2 Discourse

*A Periodic Publication of the Ohio
Data-Driven Decisions for Academic Achievement Project
April 2007*



Introduction

The Data Driven Decisions for Academic Achievement (D3A2) project is a long-term initiative focused on developing the capacity of educators while improving instruction and student achievement. D3A2 will provide pervasive access to timely data and educational resources aligned to Ohio's Academic Content Standards. The primary goals of D3A2 are to:

- Improve educator's comfort and proficiency in analyzing data to inform instruction and practices.
- Contribute to a sustainable infrastructure to promote and enhance information-based education practice and content alignment across the state.
- Leverage technology user groups (i.e., school districts, application vendors and information technology centers) to accelerate the integration of existing educational tools and the development of new data systems.

D3A2 is a cooperative effort that is being developed and governed by stakeholder groups rather than any single entity. Numerous school districts and professional education organizations are supporting this initiative. D3A2 will provide teachers with access to item analysis assessment data, tools to interpret areas needing improvement, and links to aligned educational content resources. The initial release of this multi-year multi-phased project moved to an operational "beta" testing status in December 2006.

The D3A2 initiative is one of several new statewide collaborative projects that are being enabled by the Ohio K-12 Network with its utilization of the Ohio Supercomputer Center Network (OSCnet) fiber-based high-speed backbone that provides the Ohio K-12 educational community with the most advanced K-12 statewide network in the nation. The D3A2 and Ohio K-12 Network projects demonstrate a collaborative strategy of using technology to help meet educational needs of students.

Phase 1 Pilot Districts

Four Ohio school districts were chosen to be (alpha) pilots for the initial phase of the D3A2 statewide data warehouse initiative. These districts include Bryan City Schools, Columbus Public Schools, Greenon Local Schools, and Kettering City Schools. These districts have provided student assessment and demographic information for a three-year period that is being loaded into the initial implementation of the D3A2 statewide data warehouse. In addition, these sites have been the first to test and provide feedback to developers as they utilize the system to analyze student results and needs.

Eight additional school districts were selected to be (beta) pilots for Phase 1 of the D3A2 initiative. These districts include: Fort Recovery Local Schools, Madison Local (Richland), Northwestern Local Schools (Clark), Painesville Township Local Schools, Southwest Licking Local Schools, TRECA Digital Academy, Tri-valley Local Schools (Muskingum), and Westlake City Schools. These schools have been helping test newly designed data validation and loading routines, as well as provide feedback on the ease of use of the system.

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School District Readiness for Release 1.0

School districts that wish to be ready to participate in Release 1.0 of the D3A2 initiative can take several actions now in preparation. These steps include, but are not limited to, the following:

1. Begin providing your instructional staff, administrators, board of education, and public with information about the D3A2 initiative so that each individual has a basic understanding of the project and its potential benefits for your school district.
2. Encourage your district staff to visit the D3A2 web site (www.d3a2.org) regularly to keep updated on the latest information regarding the project.
3. Identify a small group of volunteers from among your school district's instructional staff and administrators to be "D3A2 Pioneers" (early adopters) that will be among the first in your school district to utilize the D3A2 item analysis tools when they become available in your district. These volunteers should ideally be individuals that are comfortable with the use of computers and data, who can share their experiences with others within your school district.
4. Locate your detailed item analysis data and test results from state assessments (OGT and Achievement) for the past three years (2003-2004, 2004-2005, and 2005-2006) and be prepared to work with your Information Technology Center (ITC) to load the data into the D3A2 secure data warehouse. Many school districts have already loaded this data into DSL, DASL, or eSIS, but it may be more efficient to transfer the data to the D3A2 secure data warehouse by reloading the data from the CDROM provided by the assessment vendor.

All vendor test result files, within the testing year ranges, being submitted for the initial phase of the D3A2 project are being requested to be named (or separated in folders) by test type and year (i.e. ach_fall_2004.txt, ogt_spring_2005.txt, item_ach_fall_2004.txt, item_ogt_fall_2004.txt). Special attention should be given that the OGT Item Analysis test results are specifically named by test year. This is because there is no test year within the vendor test results to indicate which year the test was given.

Also required are crosswalk files which need to contain the teacher name (as it appears in the assessment vendor test results files) and the state teacher identifier. A web-based utility known as the D3A2 Data Scrubber has been developed and deployed to permit assessment data preparation by all districts which desire to do so.

5. The initial loads of student demographic data will be made from EMIS data structures. This is to allow this data to be loaded and utilized prior to any student information software providers (e.g. – DASL, eSIS, Pentamation, etc.) developing extraction routines for this data. The specific EMIS files that will be required from each district will be the following files from reporting period "N" for 2003-2004, 2004-2005, and 2005-2006:

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- a. EMIS Configuration file - EMSCFG.REL
- b. Student Demographic/Attendance file - EMSSTU.IDX
- c. Staff Demographic file - EMSDEM.IDX
- d. Staff Employment file - EMSEMP.IDX
- e. Course Master file - EMSCLS.IDX
- f. Student Subject file - EMSCLA.IDX

Information Technology Center (ITC) Readiness for Release 1.0

As with school districts there are a number of actions that an ITC can begin taking in preparation for Release 1.0 of the D3A2 initiative. These steps include, but are not limited to, the following:

1. Begin providing your internal staff and your participating school districts with information about the D3A2 initiative as it becomes available.
2. Have members of your staff participate in one or more of the various committees of the D3A2 initiative as staff time permits.
3. Identify a small group of volunteers from among your participating school districts' instructional staff and administrators to be "D3A2 Pioneers" (early adopters) that will be among the first of your school districts to utilize the D3A2 item analysis tools when they become initially available. These volunteers should ideally be individuals that are comfortable with the use of computers and data, who can share their experiences with others.
4. It is believed that the initial deployment will utilize the following technologies that should be researched by your technical staff: Apache web server, Fedora digital content manager, Tomcat application server, LDAP (Lightweight Directory Access Protocol), and Oracle Identity and Access Management Suite. Training will be planned for these software technologies, but starting to learn about these tools and how they work will be beneficial to your ITC. Research on these topics can be done by technical personnel at the following URL's:
 - <http://www.apache.org/> (local)
 - <http://www.fedora.info/> (state-level)
 - <http://tomcat.apache.org/> (local)
 - <http://process.com/techsupport/pmdf/rfc/rfc1777.html> (local and/or state-level)
 - http://www.oracle.com/technology/products/id_mgmt/index.html (state-level)
 - <http://d3a2wiki.nwoca.org/> (D3A2-specific information)
5. Prepare for the need to provide a method of user identification and authentication for each user to be provided access to the D3A2 item analysis tools through your ITC. This will be implemented using LDAP in conjunction with one or more existing directory structures (e.g. – MS Active Directory, Novell, etc.) already in use by your ITC and/or participating school districts.

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Levels of Support and Utilization

The Phase 1.0 D3A2 implementation will permit varied levels of support and utilization of D3A2 resources by both districts and ITC's. It is possible that some schools may initially want to utilize the electronic resource search capacity of D3A2 to permit school personnel to identify electronic resources correlated to state curriculum standards without utilizing the assessment item analysis features provided by D3A2. Other schools may utilize the assessment item analysis, and have other means of identifying curricular resources for teachers to address the specific needs of the school's students. However, it is anticipated that many schools will need and want to utilize the full scope of features available through Phase 1.0 of the D3A2 initiative.

It is also expected that support efforts for D3A2 will be led by regionally by ITC personnel, but in many portions of the state this support role is expected to be shared collaboratively with ESC personnel. D3A2 initiative planners are making it a priority to try to find available personnel and monetary resources to allow all Ohio schools to participate in Phase 1.0 of the D3A2 initiative at no direct cost to the district (other than the time commitment of district personnel).

Interaction With Other Initiatives

There are frequently questions about the D3A2 initiative and how it does (or will) interact with the Value Added initiative. The Value Added data is a longitudinal view of how the student is performing, with an indication of whether or not the student(s) is/are on track. The VA data are presented at the building and student level, but not at the classroom level. The D3A2 Item Analysis tool really focuses on performance against the standards and benchmarks, down to a classroom level view. D3A2 can also see how each student performed at the standard level and re-roster students to view past performance of the students the teacher currently has in the classroom. This re-rostering capability will be broadly available in D3A2 in the Spring of 2007.

Presently, the D3A2 tools do not interact with the Value Added tools, but D3A2 planners are looking to integrate the tools in a future release. D3A2 planners are also focusing on acquisition and integration of short-cycle assessment data and tools for the next release. It would be very powerful data for a teacher to be able to go from high level, longitudinal Value Added data, to D3A2 Item Analysis data, to short cycle assessment data ... for a specific group of students. This is a glimpse of where D3A2 planners are headed with this initiative.

Setting Expectations

With a project of the scope and depth of the D3A2 initiative it is necessary to set expectations for all involved within the project. While the initial releases of various components of Phase 1 of the D3A2 initiative were generally available in December 2006, this was not a fully-functional release. Further, there will be time needed for training for ITC personnel, district-level administrative personnel, as well as classroom personnel. Both districts and ITC's will need to be able to dedicate personnel time to working with the D3A2 system, and the speed with which districts can be implemented will be dictated by the personnel resources made available by both the district and the ITC in order to support these efforts.

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The skill set of the individuals needed to help school districts implement the use of the D3A2 statewide data warehouse will be those of EMIS coordinators, testing/assessment directors, and/or district technology coordinators. At the ITC level the skill set needed will be similar to those personnel which currently support student information services and/or EMIS services offerings, with some assistance required by those individuals needed to establish an authentication and authorization system for D3A2 users. The time commitment that will be required of these types of individuals will be determined by the skill sets of these individuals and the manner in which a district implementation is operationalized.

It is known that not all districts will be ready, or want, to begin utilizing the D3A2 statewide data warehouse immediately. There will be some districts that will want to be early adopters, others that will want to defer an implementation until summer months, etc. These types of decisions will need to be made collaboratively by school districts and ITC's statewide. There is an implementation request form on the D3A2 web site (www.d3a2.org) that districts interested in participation in D3A2 should complete. The information gathered via this form is used by D3A2 initiative planners to assist in developing resources to support desired implementation requirements and resources.

Around the end of May 2007 it is planned that additional districts will be able to begin the implementation process for utilizing the D3A2 statewide data warehouse. Each ITC will be permitted to work with two districts simultaneously in conjunction with data loads and the D3A2 Operations Group. This limitation is being implemented to make the process manageable for both ITC and D3A2 Operations Group personnel.

It will be the responsibility of each ITC to contact and prioritize districts it serves to assist the district in this implementation process. It is expected that the ITC's will be in a position to begin making these contacts in late May 2007, and that they will utilize the information in the implementation request form on the D3A2 web site as a basis for making initial district contacts.

Additional D3A2 Information

Additional information regarding the D3A2 initiative can be found at the D3A2 web site (www.d3a2.org). Queries regarding the project can also be made to Eric James (eric.james@ode.state.oh.us).