

U.S. Department of Education

Washington, D.C. 20202-5335



APPLICATION FOR GRANTS UNDER THE

**STATEWIDE LONGITUDINAL DATA SYSTEM RECOVERY ACT GRANTS
CFDA # 84.384A
PR/Award # R384A100042**

Closing Date: DEC 04, 2009

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Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission	* 2. Type of Application:* If Revision, select appropriate letter(s):	
<input type="checkbox"/> Preapplication	<input checked="" type="checkbox"/> New	
<input checked="" type="checkbox"/> Application	<input type="checkbox"/> Continuation	* Other (Specify)
<input type="checkbox"/> Changed/Corrected Application	<input type="checkbox"/> Revision	

* 3. Date Received:	4. Applicant Identifier:
12/4/2009	

5a. Federal Entity Identifier:	* 5b. Federal Award Identifier:
	CFDA 84.384A

State Use Only:

6. Date Received by State:	7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Vermont Department of Education

* b. Employer/Taxpayer Identification Number (EIN/TIN):	* c. Organizational DUNS:
036000274	884902701

d. Address:

* Street1:	120 State Street
Street2:	
* City:	Montpelier
County:	Washington
State:	VT
Province:	
* Country:	USA
* Zip / Postal Code:	05620

e. Organizational Unit:

Department Name:	Division Name:
Vermont Department of Education	Information Technology

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:	Ms.	* First Name:	Lisa
Middle Name:			

* Last Name: Gauvin

Suffix:

Title: Information Technology Director

Organizational Affiliation:

Vermont Department of Education

* Telephone Number: (802)828-3719 Fax Number: (802)828-1444

* Email: LISA.GAUVIN@STATE.VT.US

Application for Federal Assistance SF-424

Version 02

9. Type of Applicant 1: Select Applicant Type:

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

10. Name of Federal Agency:

U.S. Department of Education

11. Catalog of Federal Domestic Assistance Number:

84.384A

CFDA Title:

Statewide Longitudinal Data System Recovery Act Grants

*** 12. Funding Opportunity Number:**

ED-GRANTS-072909-001

Title:

Statewide Longitudinal Data Systems Grants
under the American Recovery and Reinvestment Act of 2009

13. Competition Identification Number:

84.384A2010-1

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Schools and school districts across the state of Vermont

*** 15. Descriptive Title of Applicant's Project:**

V-DEP - Vermont Data Enhancement Project

Attach supporting documents as specified in agency instructions.

Attachment:

Title :

File :

Attachment:

Title :

File :

Attachment:

Title :

File :

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

* a. Applicant: VT-01

* b. Program/Project: VT-01

Attach an additional list of Program/Project Congressional Districts if needed.

Attachment:

Title :

File :

17. Proposed Project:

* a. Start Date: 5/3/2010

* b. End Date: 5/3/2013

18. Estimated Funding (\$):

a. Federal	\$ 15747810
b. Applicant	\$
c. State	\$
d. Local	\$
e. Other	\$
f. Program Income	\$
g. TOTAL	\$ 15747810

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

a. This application was made available to the State under the Executive Order 12372 Process for review on .

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)**

Yes No

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name: Armando

Middle Name:

* Last Name: Vilaseca

Suffix:

Title: Commissioner, Vermont Department of Education

* Telephone Number: (802)828-3135 Fax Number: (802)828-3140

* Email: ARMANDO.VILASECA@STATE.VT.US

* Signature of Authorized Representative:

* Date Signed:

Application for Federal Assistance SF-424

Version 02

*** Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.



U.S. DEPARTMENT OF EDUCATION
BUDGET INFORMATION
NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1894-0008

Expiration Date: 02/28/2011

Name of Institution/Organization:
Vermont Department of Education

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

SECTION A - BUDGET SUMMARY
U.S. DEPARTMENT OF EDUCATION FUNDS

Budget Categories	Project Year 1(a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2. Fringe Benefits	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
3. Travel	\$ 12,000	\$ 12,000	\$ 12,000	\$ 0	\$ 0	\$ 36,000
4. Equipment	\$ 742,089	\$ 0	\$ 0	\$ 0	\$ 0	\$ 742,089
5. Supplies	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
6. Contractual	\$ 7,958,650	\$ 4,049,100	\$ 2,866,900	\$ 0	\$ 0	\$ 14,874,650
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 83,907	\$ 5,582	\$ 5,582	\$ 0	\$ 0	\$ 95,071
9. Total Direct Costs (lines 1-8)	\$ 8,796,646	\$ 4,066,682	\$ 2,884,482	\$ 0	\$ 0	\$ 15,747,810
10. Indirect Costs*	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 8,796,646	\$ 4,066,682	\$ 2,884,482	\$ 0	\$ 0	\$ 15,747,810

***Indirect Cost Information (To Be Completed by Your Business Office):**

If you are requesting reimbursement for indirect costs on line 10, please answer the following questions:

(1) Do you have an Indirect Cost Rate Agreement approved by the Federal government? Yes No

(2) If yes, please provide the following information:

Period Covered by the Indirect Cost Rate Agreement: From: ___/___/___ To: ___/___/___ (mm/dd/yyyy)

Approving Federal agency: ED Other (please specify): _____ The Indirect Cost Rate is _____%

(3) For Restricted Rate Programs (check one) -- Are you using a restricted indirect cost rate that:

Is included in your approved Indirect Cost Rate Agreement? or, Complies with 34 CFR 76.564(c)(2)? The Restricted Indirect Cost Rate is _____%



U.S. DEPARTMENT OF EDUCATION
BUDGET INFORMATION
NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1894-0008

Expiration Date: 02/28/2011

Name of Institution/Organization:
 Vermont Department of Education

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

SECTION B - BUDGET SUMMARY
NON-FEDERAL FUNDS

Budget Categories	Project Year 1(a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2. Fringe Benefits	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
3. Travel	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
4. Equipment	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
5. Supplies	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
6. Contractual	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
9. Total Direct Costs (lines 1-8)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
10. Indirect Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Standard Form 424B (Rev.7-97)

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management, and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. "4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. "1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. '794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act
9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. "276a to 276a-7), the Copeland Act (40 U.S.C. '276c and 18 U.S.C. "874) and the Contract Work Hours and Safety Standards Act (40 U.S.C. " 327-333), regarding labor standards for federally assisted construction sub-agreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. "1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. "7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. "1721 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance

of 1975, as amended (42 U.S.C. " 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) " 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. " 290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. ' 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with the provisions of the Hatch Act (5 U.S.C. "1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. '470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. "469a-1 et seq.).

14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. "2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. "4801 et seq.) which prohibits the use of lead- based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

Signature of Authorized Certifying Representative:

Name of Authorized Certifying Representative: Armando Vilaseca

Title: Commissioner

Date Submitted: 12/03/2009

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

1. Type of Federal Action: <input type="checkbox"/> Contract <input checked="" type="checkbox"/> Grant <input type="checkbox"/> Cooperative Agreement <input type="checkbox"/> Loan <input type="checkbox"/> Loan Guarantee <input type="checkbox"/> Loan Insurance	2. Status of Federal Action: <input type="checkbox"/> Bid/Offer/Application <input checked="" type="checkbox"/> Initial Award <input type="checkbox"/> Post-Award	3. Report Type: <input checked="" type="checkbox"/> Initial Filing <input type="checkbox"/> Material Change For Material Change only: Year: 0 Quarter: 0 Date of Last Report:
4. Name and Address of Reporting Entity: <input checked="" type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier, if known: 0 Name: Vermont Department of Education Address: 120 State Street City: Montpelier State: VT Zip Code + 4: 05620-	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Name: Address: City: State: Zip Code + 4: - Congressional District, if known:	
6. Federal Department/Agency: Department of Education	7. Federal Program Name/Description: Statewide, Longitudinal Data Systems CFDA Number, if applicable: 84.384A	
8. Federal Action Number, if known:	9. Award Amount, if known: \$0	
10. a. Name of Lobbying Registrant (if individual, last name, first name, MI): Address: City: State: Zip Code + 4: -	b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI): Address: City: State: Zip Code + 4: -	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Name: Armando Vilaseca Title: Commissioner Applicant: Vermont Department of Education Date: 12/02/2009	
Federal Use Only:		Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

Project Narrative

Project Narrative - Project Abstract

Attachment 1:

Title: **Project Abstract** Pages: **1** Uploaded File: **C:\Documents and Settings\staceymurdock\Desktop\SLDS\final pdfs\Abstract.pdf**

Vermont Data Enhancement Project (V-DEP)

The overall goal of the V-DEP is to build on Vermont's current work to create a comprehensive, P-20 longitudinal data system that includes all required data system capabilities and elements, markedly improving the ability of the education system at every level to use data to improve achievement, close gaps, and achieve equity.

To achieve this goal, this project will leverage and expand existing P-12, postsecondary, workforce and human service partnerships and seek the involvement of students, parents, educators, researchers and government partners to identify effective instructional practices, inform policy, and create a culture of accountability and continuous improvement. This work will be informed by Vermont's continuing collaboration with the states of Maine, New Hampshire, Rhode Island, and Connecticut through the New England Secondary School Consortium (NESSC), by developing regionally-comparable indicators to evaluate the effectiveness of these instructional strategies and forming a multi-state research partnership.

The project is designed to meet or exceed the seven capabilities and 12 elements as prescribed in the America COMPETES Act, enable timely and accurate reporting, and provide training to stakeholders in collecting and reporting quality data and how to use and interpret data. To support this work, Vermont will carry out the following major activities:

1. Implement a uniform statewide information system toolset for all Vermont districts utilizing the School Interoperability Framework (SIF) including a portal for parents, students, and educators;
2. Develop a state operational data store to house required data elements;
3. Expand the data warehouse to include all required data system elements and increase the frequency of data loads to facilitate state and federal reporting requirements;
4. Provide stakeholder training for statewide student information system, data warehouse reports, and portal;
5. Form a P-20 research partnership to assess stakeholder needs, develop a research agenda, disseminate findings, and institute a professional development/feedback plan to improve education system practices.

The expected outcomes of these activities include:

1. Vermont will meet the seven capabilities and 12 elements required by this longitudinal data systems grant. Specifically,
 - a. Elimination of data gaps including linking teachers to students, transcript data, post-secondary data, and workforce data;
 - b. Improved data exchange between VT DOE and other Vermont agencies;
 - c. Improved accuracy and timeliness of data availability;
 - d. Increased accessibility to data for all stakeholders;
 - e. Increased efficiency in maintaining student identifiers.
2. Vermont will have concrete strategies to ensure that the data will support continuous improvement, especially instructional improvement, and informed decision-making by school, district and education leaders.
3. Vermont will have a comprehensive research plan guiding effective and appropriate use of the available education data.
4. Statewide, Vermont will have improved efficiency and reduced burden of data collecting and reporting.

Project Narrative

Project Narrative - Project Narrative

Attachment 1:

Title: **Project Narrative** Pages: **30** Uploaded File: **C:\Documents and Settings\staceymurdock\Desktop\SLDS\final pdfs\Project_Narrative_Final.pdf**

A. Need for the Project

Overview of Vermont's Current Longitudinal Data System

For the past ten years, the Vermont Department of Education (VT DOE) has dedicated its data efforts toward implementing a statewide student identifier, meeting vastly expanding statutory reporting requirements, and building a data warehouse to provide longitudinal data to its educational community. In 1998 VT DOE implemented a statewide student identifier which now exists in all student-level datasets across the department. The student identifier initially provided student demographic and program participation information. In 2004 our student-level data systems were dramatically expanded to meet the requirements of the No Child Left Behind Act (NCLB). The expansion of the student census allowed tracking of P-12 mobile students and verification of student transfers and dropouts. Also in response to NCLB requirements, Vermont implemented a unique teacher identifier, and an incident level discipline data system.

Shortly thereafter, VT DOE created an Education Data Warehouse (EDW) in collaboration with a consortium of local school districts called the Vermont Data Consortium (VDC). The VDC represents about half of Vermont school districts. The member districts pay consortium dues providing the benefit of loading local data into the district model of the EDW. All districts have access to the state model storing data collected by the state from schools and districts. The EDW contains student, program, teacher, discipline, assessment, and school finance data. Depending on the data, the EDW in the state model contains between six to 13 years of longitudinal data.

There are two important distinctions between the state and district model of the EDW. The state model does not allow the link between teachers and students. The district model allows for this linkage and member districts can upload local assessment data. The population of the district model is available only to VDC members and is entirely optional. Only 13 of the 31 VDC members have loaded local data into the district side of the model.

The new data reporting requirements and implementation of the EDW proved challenging for both the state and local districts. Most local districts lack the financial, technical and human resources necessary to accumulate, clean, report and analyze data. In an attempt to improve data quality and reduce local burden, VT DOE hired a consulting firm (through a National Center for Education Statistics (NCES) cooperative system grant) to conduct site visits and create a best practices guide for meeting core data reporting requirements. Technological barriers documented during the site visits include too few computers, out-of-date computers, no wide area network, and a lack of technology staff (or staff working on contract). A major finding was that, even in districts with no technological barriers, the staff expected to complete data requests lack the time and tools to meet the requirements efficiently. Technical staff members are typically unavailable because of competing needs and the opinion that data reporting is largely a data entry task. Data reporting is a tremendous burden on schools; some school secretaries have to complete the task "gratis" nights, weekends, and after the school year end.

Another surprising finding in Vermont, which is a strong local control state, was that superintendents were open to or even expected the state to provide a single student information solution. It is important to note, this sentiment expressed by a few superintendents five years ago is currently unanimously held throughout the Vermont Superintendents Association.

The dual data model of the EDW seemed an ideal solution over and above creating more data reporting requirements for local districts to allow linking between student data with teacher data and all the rich analysis that linkage allows. Unfortunately, the implementation of the district side of the model has progressed slowly. As mentioned above, fewer than one third of Vermont

districts have taken advantage of the EDW to link students and teachers to the wealth of performance, program participation and demographic information included in the EDW. Other schools either rely on their local data system or lack the ability to access and analyze linked student/teacher data. Even those districts successful in loading their data into the EDW have difficulty using their data for a number of reasons. Two major issues are the following:

- The local data tends to have many errors in student identifiers. The accuracy of the student identifiers is essential to linking between local and state data and looking at student achievement longitudinally.
- The EDW ad hoc query tool and the extensiveness of the EDW data model prove difficult for most EDW users except those with additional data analysis training. Even districts employing data analysts trained to use the ad hoc query tool do not take advantage of this resource because administrators unaccustomed to using data for decision making do not provide these analysts with questions that can be answered using longitudinal data.

To respond to the difficulties using the ad hoc query tool and to make education information more accessible, VT DOE gained an NCES cooperative system grant to create a data-driven reporting system. We sought to expand and enhance the data warehouse reporting capabilities by developing a series of new report “templates.” These report templates are used to create new reports that can be available to both internal users and the general public via the VT DOE web site. The templates can also be used to clone future reports using the same report design but accessing different aggregated source data.

Once developed or cloned, the report file is published to the report server which then renders the reports on demand for the end-users in HTML when the report is accessed through an URL. The reports draw data from a set of custom tables in the EDW.

The design approach is “database-centric” in that the report definition elements are contained in the report database. Very minimal configuration needs to be done with the report development tool when cloning report templates. One of the guiding principles for this project was to minimize the amount of complex, custom coding for the report templates.

Reports are parameter-driven to focus the report data, typically for a particular school and/or time period. Most reports have dynamic links to automatically change the displayed report statistic (i.e. switch from showing breakdown by race to breakdown by poverty level), as well as offering direct linking to other reports where the linked report parameters are automatically picked up from the linking report. All reports have help pages set up to provide documentation and definitions for the report viewers. One result of this project is that VT DOE is perfectly poised to quickly create data reports cloned from existing report templates and driven through a report database in the EDW.

Vermont’s Current Data System Status and Needs According to the 12 Essential Elements

Vermont has made tremendous gains in developing a longitudinal data system with an agile reporting tool. This grant will provide us with the opportunity to expand our existing system, provide easy access to the information contained in the system, and further analyze education data to inform policy and enhance instructional practices. This planned expansion will be available to all education stakeholders and not limited by VDC membership.

Vermont’s important strides over the past ten years, attest to VT DOE’s commitment to building a robust and valuable longitudinal data system. We recognize that there are still some key gaps, which we haven’t been able to address due to funding and personnel shortages. Local choices and priorities have also resulted in inequitable educator access to high quality

information and system tools to inform instruction. The Vermont Data Enhancement Project (V-DEP) will enable us to target those areas, and create the data system we envision, markedly increasing our ability to use data to measure and improve outcomes for all children in Vermont. In addition, we are coordinating this project with other ARRA grant opportunities. Specifically we are seeking funds to implement a Single Statewide Education Portal (Race to the Top) which will aggregate high quality information and systems resources for educators, parents, students and other stakeholders. We are also planning on using the School Improvement Grant administration funds to implement a Curriculum Managements System which will enable educators to develop and share high quality curriculum and align it to standards.

V-DEP will ensure that Vermont meets all seven capabilities and 12 required data elements required by this grant. At the same time, Vermont is committed to meeting these requirements in a manner that minimizes the burden on local schools and districts to enable educators to focus on instruction. For this reason, we are proposing a statewide student information toolset using a school interoperability framework (SIF) to automate the transfer of data between schools and the state. See Appendix C for a summary.

Following is an explanation of Vermont's current data system status organized by the required capabilities and elements (the capabilities and elements are listed in summary form).

C1. Examine student progress and outcomes over time...[and] include data at the individual student level from preschool through postsecondary education and into the workforce. Status: *Requirement Under Development*

Vermont has invested nearly \$1.5 million in a longitudinal data warehouse. The EDW currently houses P-12 student level information including enrollment, demographics, program participation, and achievement. The EDW includes an ad hoc query tool but most users find this tool and the extensive data model too difficult to use for even the most routine data analysis. With a National Center for Education Statistics (NCES) cooperative system grant and state funds, Vermont has developed a number of "point and click" report templates to present multiple education indicators from the EDW over time at the school, district, supervisory union, and state level. These reports make education information easily accessible to all stakeholders, including educators, parents and the public. One priority of this project is to develop more reports and enhance existing reports to expand the available information beyond P-12.

Identified Need: In order to examine student performance from preschool to postsecondary efforts, VT DOE needs a comprehensive set of P-12, post-secondary and workforce information. Further, this information needs to be easily available to education stakeholders. We will expand EDW data objects to include preschool assessments, SAT scores, advanced placement course taking, college enrollment and workforce information. In addition, we intend to expand EDW reports in order to improve access to information identified in this area. These reports will provide local high schools with information on how well they prepare their students for college and careers and will help inform policy related to reforming secondary education in Vermont.

C2. Facilitate and enable the exchange of data among agencies and institutions within the State and between States so that data may be used to inform policy and practice... Support interoperability...to ensure linkage and connectivity among the various levels and types of data. Status: *Requirement Under Development*

Vermont DOE currently shares a number of datasets with the Agency of Health and Human Services (AHS). The shared data includes weekly updates on students in state custody, monthly updates on students in families receiving food stamps, annual analysis of performance outcomes on students in state custody, annual performance analysis on students receiving mental health

services and homeless students, and Medicaid information. This sharing of information serves many purposes: data regarding students in state custody impacts the state education fund, food stamps information helps ensure that students receive their subsidized meals benefits and other analyses inform policy around supporting students at the greatest risk of academic failure. Typically, student level data are given to the VT DOE and aggregate data is returned to AHS. With two exceptions, there is no automated flow of information between VT DOE and schools. These two exceptions include sharing Youth Risk Behavior Survey data from AHS with local school districts through our EDW. Relevant staff members of AHS and local school districts have access to the EDW for analysis and reporting of these important data. Secondly, VT DOE also shares information from AHS with schools regarding Vermont students eligible for meal benefits.

Identified Need: Vermont is currently engaged in an initiative to transform its educational system. Two key components of this transformation are engaging community partners and sharing results and indicators of a successful transformation. Consistent with the goals of this initiative, VT DOE is committed to a research agenda that promotes data exchange between institutions and other agencies. VT DOE will access student-level program participation data from AHS and load these data into the EDW. Role-appropriate access to education indicators by program area will be allowed for AHS staff. VT DOE will also receive data from the VT Department of Labor, including wage earnings information. Vermont State Colleges has agreed to provide course-taking (including remedial courses) information to VT DOE. As a participant in NESSC (See Appendix A, Artifact 6 for more information) we have agreed to develop a standard New England data ask to receive from National Student Clearinghouse data capturing other college enrollment information. We will continue to receive student-level data from the College Board. We will expand EDW data objects and reports to include this information. A priority of our research advisory council is to define the best approach for sharing this newly available information among agencies, institutions and researchers to best inform education policy and improve essential services for Vermont citizens.

C3. Link student data with teachers, i.e...so that a given student may be matched with particular teachers primarily responsible for providing instruction in various subjects.

Status: Requirement Under Development.

Vermont assigns educators, candidates for educator licensing and graduates of Vermont educator preparation programs a unique educator identifier. Vermont conducts an annual census of educators by employing district; this census links educators to the schools they serve and the courses they teach. This educator census provides the information for our Highly Qualified Teacher analysis. The educator census and certification information is available through the EDW. Local districts are able to link students and teachers through their own data systems or using the district model of the EDW. Vermont DOE does not currently have the capacity to link student, course and teacher information. This sort of linked data can be very useful for identifying which teachers have the greatest impact on student achievement in select courses. For instance, a teacher may want to know how a particular student performed on the math assessment after spending a year in the classroom with this teacher. These data can also be viewed in aggregate by school administrators to identify highly effective teachers or those in need of professional development. Only when teachers and students are linked together can these sorts of analysis take place.

Identified Need: VT DOE intends to collect information that allows student/course/teacher linkages from all school districts. In order to collect this information without increasing the data

