PESC Winter 2007 Summit Announced

PESC is pleased to announce that the Winter 2007 Workgroup Summit will be held Monday, January 29 – Tuesday, January 30, 2007 at the Tropicana Hotel in Las Vegas, NV. Thanks to our generous sponsor, EdFinancial, PESC offers workgroup summits FREE of charge to all parties interested in participating. While there is no fee, space is limited and registration is required for this event. Workgroup summits, held during the fall and winter of each year, are the perfect opportunity to gather face-to-face with fellow workgroup members to collaborate on PESC initiatives, to cultivate relationships with other members, and to be updated on all PESC activities. Please keep in mind that summits are working meetings, so many of the workgroups currently active will congregate to discuss and progress on their respective standards development efforts.

Our tentative meeting schedule which includes the Standards Forum for Education, AACRAO’s SPEEDE Committee, and the PESC Board of Directors is as follows:

Saturday 1/27/07
• SPEEDE meets from 8am – 5pm in the Tradewind 3 Room.

Sunday 1/28/07
• SPEEDE meets from 8am – 5pm in the Tradewind 3 Room.

Monday 1/29/07
• Continental Breakfast opens at 7:30am in the conference foyer.
• Registration opens at 7:30am in the conference foyer.
• Winter 2007 Workgroup Summit kicks off from 8:30am – 5:00pm with concurrent meetings held in Caribbean 1, 3 and 4 Rooms.
• Workgroups tentatively scheduled to meet include Admission Application, Student Aid Inquiry, National Test Score, Data Transport, High School Transcript, Course Catalog and Taxonomy.
• Boards tentatively scheduled to meet include the Change Control Board (CCB) and Technical Advisory Board (TAB).
• Buffet Lunch will be provided from noon – 1:30pm.

See Summit, Page 2
PESC Public Comments to SIFA

As PESC looks to align PK – 12 and higher education, we find it extremely important to become more familiar with SIF’s Specification and XML architecture. On October 18, 2006 Mark Reichert, SIFA’s Chief Technology Officer, announced that the SIF Implementation Specification 2.0 had been approved for release and then open for a 30-day public comment period. A number of groups and boards within the Standards Forum for Education, particularly the Change Control Board (CCB), High School XML Transcript Workgroup, and Steering Committee found this the perfect opportunity and provided a number of comments. Those comments can be found on page 9.

On behalf of the Board of Directors and Standards Forum for Education of the Postsecondary Electronic Standards Council (PESC), PESC congratulates SIFA on the release of SIF Specification 2.0! The work of SIFA is making great strides in bringing the PK – 12 sector together and as interoperability is PESC’s main mission as well, we fully support SIFA’s work efforts.

NCES Summer 2006 Data Conference

The National Center for Education Statistics (NCES) recently released the session and demonstration descriptions, presentations, and links to various documents associated with the Summer Data Conference: STATS-DC 2006. The conference, sponsored by NCES, was held on July 26-28, 2006 at the Renaissance Mayflower Hotel in Washington, DC. The High School XML Transcript was presented at the conference on behalf of PESC by High School XML Transcript Workgroup Co-Chairs Bruce Marton of the University of Texas at Austin and AACRAO SPEEDE Committee Member; and Tom Stewart of Miami Dade College (retired) and AACRAO SPEEDE Committee Member. Moderating the session was Dr. Barbara Clements of the National Transcript Center and PESC Board of Directors Member.

Their presentation is available at: http://www.nces.ed.gov/whatsnew/conferences/statsdc2006/conference/session_I.asp

Summit, from Page 1

- **PESC Board of Directors** will meet 1:30pm – 5:00pm.
- **Steering Committee** will meet from 5:00pm – 7:00pm.

Tuesday 1/30/07

- **Continental Breakfast** opens at 7:30am in the conference foyer.
- **Registration** opens at 7:30am in the conference foyer.
- **A general session** takes place from 8:30am – noon in Caribbean 3 and 4 Rooms and includes updates from PESC, the Steering Committee, and all of the Workgroups and boards that met on the previous day.

Online registration for the PESC Winter 2007 Workgroup Summit is available at www.PESC.org. Hotel reservations can be made by contacting the hotel directly: Las Vegas Tropicana, (800) 634-4000 or online at www.tropicanalv.com. The hotel is located at 3801 Las Vegas Blvd., Las Vegas, NV 89109. Please use the group name “PESC” to ensure you receive the discounted hotel rate of $95.00 for Sunday – Tuesday night stays, $145.00 for Friday – Saturday night stays. The hotel cut-off date is Friday, December 29, 2006.

Sponsorship opportunities are still currently available. Please contact Jennifer Kim at Jennifer.Kim@PESC.org or (202) 263-0296 for more details or for additional information regarding this event.
Barry Billing, Senior Business Analyst, OCAS Application Services Inc. (OCAS). Barry has been with OCAS for 11 years, working in various application development positions. For the last two years, Barry has been the Canadian Representative on the ACCRAO SPEEDE Committee. Over the last three years, Barry has also been the project manager and business analyst for a college-wide initiative to convert Ontario’s 28 community colleges from producing paper transcripts to being able to send and receive electronic transcripts.

Q Tell us a little about OCAS Application Services Inc.

A OCAS Application Services Inc. is a subsidiary non-profit corporation of the Association of Colleges of Applied Arts and Technology of Ontario. It is commonly known as Ontario College Application Services (OCAS). It is governed by a board of directors consisting of College Presidents, Registrars and Admission Officers.

Created in 1992 by the 24 Ontario college presidents, OCAS is located in Guelph, Ontario, Canada. OCAS provides administrative systems and application processing services for Ontario’s 24 colleges, three regional campuses of the University of Guelph and the Michener Institute for Applied Health Sciences.

OCAS is a central agency for 150,000 college applicants yearly, 28 colleges, and 1,100 provincial high schools. OCAS ensures that a college applicant’s application, data, grades and supporting documents are delivered accurately and efficiently from high school to college, college to college, college to university and university to college. Additional services we offer include:

- A common application to college
- Electronic high school grade matching
- Postsecondary electronic transcript exchange
- International document assessment
- Data warehousing
- System enrolment planning

Each year, OCAS has more than 400,000 applications, 188,000 supporting documents, 9,000 international document assessments, 34,000 high school transcripts, 105,000 post secondary transcripts, 170,000 phone calls, 11,000 emails, and over 3 million high school grade records. During the same period, applicants make more than 50,000 changes to their original college and program choices.

Q How much is spent on technology?

A We spend about 30% of our budget on technology.
Q: What are the biggest issues OCAS faces?

A: Our biggest challenge is adopting and changing as the needs of the colleges change. OCAS has met these challenges by being more flexible in terms of people, processes and technology by providing 24/7 system support, extended contact centre hours, and more value-added solutions beyond applications.

Q: What is your IT Strategy?

A: Our IT Strategy is comprised of the following primary strategic components:

1. Focus internally on IT skills for project management, business analysis, service and quality assurance competencies.

2. Leverage strong partnerships with IT organizations for other needed IT competencies.

3. Leverage the advantage of a strategic relationship with an India IT development company to provide a 24/7 development team/support. Onsite: project management, business requirements, quality assurance. Offsite: development and quality assurance.

4. Leverage other strategic relationships for IT service support, for example, 24/7 remote DBA and IBM hosting services to ensure high level of security and availability.

5. Composite development strategy to get the best of both worlds of pre-built software and developed work.

6. Empower the service delivery team (end user) with management tools and change day-to-day business processes. IT resources are project focused, not operationally focused.

7. Leverage standards and best practices in all IT development, e.g. J2EE, SOA, PESC.

Q: How do PESC standards help you achieve your goals?

A: The use of standards has allowed OCAS to create applications that can be used with different student information system software vendors at multiple colleges, universities and high schools. When interacting with 28 different colleges, it should be no surprise to anyone in the educational sector that there are numerous software products and versions in use. The use of a standard allows all parties to interact with each other easily and simplifies expandability to future trading partners. Since everyone has the same definitions when using a standard, it allows everyone to understand what is being sent and received.

Q: Quantify savings gained by using standards.

A: In 2005, the cost to process a hardcopy Ontario post-secondary transcript was $4.18. The calculated cost to exchange an electronic transcript is estimated at $1.14, resulting in a savings of $3.04 for each transcript processed. This represents a reduction of approximately 73% in the preparation and transport cost. This does not include any savings being realized by the institution for not having to manually load grade records into admission systems.

Q: Quantify process efficiencies gained by using standards.

A: The previous manual transcript request process system was cumbersome and time consuming. Turnaround time was taking approximately 4 - 6 weeks. The admission to college was contingent on supporting credentials being processed. College admission decisions could not be made until an academic record had been received.

There was a general concern among receiving institutions about the authenticity of paper transcripts and there was a risk of processing fraudulent documents. Applicants had dissatisfaction with the overall process. There was a high volume of calls in the Customer Contact Centre seeking information on the status of their transcripts.

Three years ago, we implemented an online post-
secondary electronic transcript request system that
allowed applicants to request and pay for transcript
requests online to 28 colleges and 19 universities.
The use of the SPEEDE ANSI X12 v4010 EDI stan-
dard and the draft schema of the PESC XML College
Transcript enabled a simpler and more student
friendly process. By using a standard that was
agreed upon by all Ontario colleges and universi-
ties, it provided the opportunity to reduce the costs
of requesting, producing and receiving transcripts at
colleges.

The process became efficient in numerous ways; the
applicants were pleased to have ‘one stop shop-
ing’ online and no longer needed to contact their
institutions separately. The colleges were pleased to
process less paper transcripts and became more
efficient because they were able to produce elec-
tronic transcripts for distribution within a day of the
request (as opposed to waiting numerous weeks due
to mail, etc.). OCAS was pleased because the status
of an applicant’s transcript was now provided to
them online and this significantly cut down the num-
ber of phone calls received. Also, we were no longer
making copies of transcripts and sending them to
colleges after they were received here.

We have recently taken the same approach with
high school transcripts because of similar customer
concerns. We have used the PESC XML high school
standard to provide the same efficiency in our high
school transcript process.

Q Do you require standards in RFP language?
A Yes. When we started our electronic transcript
initiative three years ago, we specified that it
must follow the SPEEDE ANSI X12 Version 4010
standards. The recent high school initiative was to
use the recently approved PESC XML high school
transcript standard.

Q How many trading partners do you have?
A Using the new electronic transcript exchange
service we have 28 Colleges, 19 Universities,
3 School boards (approximately 200 high schools at
this time) with expansion to over 60 school boards
and over 1,000 high schools in the spring and
1,000 high schools are using our proprietary elec-
tronic exchange services for current active Ontario
High School Students.

Q How do you handle trading partner communi-
cations?
A We are continuously in contact with all our
trading partners. We meet annually with high
school student information vendors; attend institu-
tion registrar, admissions, records management
committee meetings; continuously share information
with the Ontario Universities’ Application Centre
(and their university trading partners); and have col-
lege account reps who share college issues with
OCAS. We also maintain contact through general
emails.

Q What are the biggest technological concerns
we face in higher education?
A Keeping pace with the technology required for
the demand of change within the college
community.

Q What is your take on this concern?
A Funding will be a challenge if each college
creates their own system. There needs to be a
sense of sharing and common goals within the col-
lege community. The introduction of standards with-
in the community simplifies the time, effort and cost
involved in creating a workable solution for data
exchanges amongst various partners.

Also, once there are more institutions using stan-
dards, it will become easier to assist other potential
trading partners to come on board, since experi-
ences learned can be shared within the trading part-
ner community.

Q How does OCAS deal with privacy and securi-
ty?
A Applicants and college users access the sys-
tem with a secure login and password. Data
exchanges occur through secure FTP transmissions.
Secure data is housed on servers in a secure facility off site, in a Class A data centre. We do regular security audits of our technology and business processes. OCAS has a dedicated privacy officer to ensure compliance to both federal and provincial privacy legislation.

Q Is interoperability achievable?
A Yes, in fact we are doing it in Ontario.

Our college trading partners have homegrown student information solutions as well as various vendor software solutions and versions. On top of that, across the province, the 24 colleges have used three different EDI vendor software solutions as well as an XML solution to exchange data.

Our university trading partners have a separate network hub to exchange information between themselves. The college community also created a separate network hub for inter-collegial exchanges. In this scenario, we have interoperability because we have a ‘hub to hub’ exchange between colleges and universities. For example, college applicants can request university transcripts online and they are delivered seamlessly because of the ability for the two separate networks to exchange data.

Our school board trading partners also have various student information systems. We have been working with the institutions and their vendors to ensure that we can interact with their systems using the recent PESC XML High School standard.

Q To what should we all be paying more attention?
A In our case, it is the culture of youth. We cannot overlook the fact that our applicants have embraced technology and influence it. There is now a general expectation with this demographic group that systems will be online, easy to use, and provide near real-time solutions. The educational sector needs to excel in providing these services to their current students as well as their future ones and at an affordable price.

Individual solutions to this issue may isolate institutions from further data exchange opportunities and may prove costly. Using agreed-upon standards amongst trading partners will ultimately reduce the costs and resources required to maintain a successful solution.

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**Technology Tidbits**

- **Listen In on PESC Podcast featuring Michael Sessa**, PESC Executive Director, speaking with Educause during Educause’s Annual Conference held in Dallas this past October 2006. Listen in as Michael talks about the implementation of PESC standards and how PESC is moving forward. [http://connect.educause.edu/blog/mpasiewicz/an_interview_with_michael_sessa/10266](http://connect.educause.edu/blog/mpasiewicz/an_interview_with_michael_sessa/10266)

- **The Internet’s domain-name architecture is a major stumbling block for developing non-English speaking nations**, according to delegates at a recent UN summit. The inability to allow non-English-language characters with domain names left delegates feeling that a language divide more than a digital divide was hampering development. The issue now appears to be a mute point, however. Both Internet Explorer and Mozilla’s Firefox now support.

**PESC Holiday Hours**: Please be advised that PESC offices will be closed Monday, December 25 and Tuesday, December 26, 2006; and Monday, January 1, 2007. We wish everyone a happy, healthy and safe holiday season and New Year! The Standard takes a break during December each year and will resume in January 2007.
characters from other languages.

- **Eduventures recently conducted a survey of 2,000 people who are planning to attend college.** Of those, 19 percent said they wanted to earn a degree completely online, 18 percent wanted to enroll in a program that was primarily online with some face-to-face instruction, and 14 percent said they wanted equal time online and on campus. Most of the rest wanted all or most of their courses in a traditional classroom.

- **American colleges and universities should quickly build a better set of shared high-speed networking tools and protocols for research if the United States is to maintain leadership in technology and higher education,** said Arden L. Bement Jr., director of the National Science Foundation, according to the Chronicle of Higher Education. He said that colleges have "a responsibility" to embrace a vision of sharing computing resources and developing better digital tools for research, and to do so "at a fast clip."

- **XML is approaching 10 years old. How closely depends on how you're counting.** The W3C Recommendation Extensible Markup Language (XML) 1.0 was published on 10-February-1998. Work on XML started around 1996, however, rooted in almost thirty years of SGML. The design principles for XML, which guided its development were published on 25 August 1996. So, IBM Systems Journal accounts 2006 the year of XML's decade. Regardless of whether you agree with their counting, it is a volume well worth a thorough read by all XML professionals as it combines an interesting retrospective of XML with some useful articles discussing specific techniques and development, providing a glimpse into the future of the technology. http://www-128.ibm.com/developerworks/library/x-think38.html.

- **Over the years, the scope of business processes and BPM has broadened.** Less than a decade ago, BPM, known then as "workflow," was a groupware technology that helped manage and drive largely human-based, paper-driven processes within a corporate department. BPM today is an enterprise integration technology complementing Service-Oriented Architecture (SOA), Enterprise Application Integration (EAI), and Enterprise Service Bus (ESB). These processes are designed, by business and technical analysts, using a graphical editor that supports the visual flowchart language BPMN, the...
**SAVE THE DATE...**

For the 4th Annual Conference on Technology and Standards, April 23-25, 2007 at the Wyndham Washington in Washington DC. With a spectacular line up of featured speakers already confirmed, next year’s conference is already shaping up to be an event you cannot afford to miss.

**Using Data to Improve Student Achievement**
- Aimee Guidera, Director, Data Quality Campaign

**Open Source, Learning and Patents**
- Michael Feldstein, Assistant Director, Learning Network, State University of New York (SUNY)

**Standards within the US Department of Education**
- Katie Blot, Chief Information Officer, Chief Information Office, Federal Student Aid, US Dept of Education
- Lee Hoffman, National Center for Education Statistics, US Dept of Education
- Ross Santy, Deputy Assistant Secretary for Data and Information, Office of Planning, Evaluation & Policy Development, US Dept of Education

**Data as a Resource - State Policymaker's Perspectives**
- Hans P. L'Orange, Director, SHEEO/NCES Network and Director of Data and Information Management, State Higher Education Executive Officers

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**Bridging the Cultural Divide in Higher Education**
- Dr. Michael Zastrocky, Vice President & Research Director for Academic Strategies, Gartner, Inc.

**Learning Consortium, The e-Learning Environment**
- Rob Abel, Chief Executive Officer, IMS Global

“I wanted to thank you and the entire sponsorship for the [Annual] Conference. This was the most interesting and useful conference I have ever attended. The combination of industries on the speaker panels provided the necessary diverse aspects to make the information valuable and applicable…I have worked outside of student aid for approximately 11 years and my recent return was 3 weeks prior to this conference. I feel that this was excellent training for me…I am learning what systems [our partners] have in place in addition to the procedures we have here – then determining how we can make improvements or integrate programming to benefit the students and the schools. Again, the conference provided me with a lot of information to help answer those questions as well as which direction to go in to ask more questions.”

- Conference Attendee, 3rd Annual Conference on Technology and Standards

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**XSLT 2.0, the latest specification released by the W3C, is a language for transforming XML documents.** It includes numerous new features, with some specifically designed to address shortcomings in XSLT 1.0. XSLT 2.0 has features that allow a gradual upgrade of 1.0 stylesheets. However, some situations call for an overhaul, so that the whole architecture can be reviewed and improved. Should you overhaul or try the gradual approach? This collection of articles provides a high-level overview and an in-depth look at XSLT 2.0 from the point of view of an XSLT 1.0 user wishing to fix old problems, learn new techniques, and discover what to look out for. We provide examples derived from common applications and practical suggestions for those who wish to upgrade. To help you begin to use XSLT 2.0, migration techniques are provided. http://www-128.ibm.com/developerworks/library/x-xslt20pt2.html.

November 16, 2006

Larry Fruth, PhD
Executive Director
Schools Interoperability Framework Association (SIFA)
1090 Vermont Avenue, N.W.  6th Floor
Washington, D.C.  20005

Dear Dr. Fruth,

On behalf of the Board of Directors and Standards Forum for Education of the Postsecondary Electronic Standards Council (PESC), congratulations on the release of SIF Specification 2.0! The work of SIFA is making great strides in bringing the PK – 12 sector together and as interoperability is PESC’s main mission as well, we fully support your work efforts.

As PESC looks to align PK – 12 and higher education, we find it extremely important to become more familiar with SIF’s Specification and XML architecture. On October 18, 2006 Mark Reichert, SIFA’s Chief Technology Officer, announced that the SIF Implementation Specification 2.0 was approved for release and open for a 30-day public comment period. A number of groups and boards within the Standards Forum for Education, particularly the Change Control Board (CCB), High School XML Transcript Workgroup, and Steering Committee found this the perfect opportunity and provided a number of comments. Those comments are attached.

If it would be beneficial to SIF and increase understanding, we offer the opportunity to walk through these comments with representatives of SIF in a special meeting or conference call. I look forward to continued work efforts with you and SIFA.

Sincerely,

Michael Sessa
Executive Director
PESC

cc:  PESC Board of Directors
     Standards Forum for Education
     Rob Abel, IMS
     Sarah Porter, JISC
     Chuck Allen, HR-XML

Enabling Interoperability
PUBLIC COMMENT 1

We feel the extensive use of a RefID type to cross-reference different parts of the academic record to related school data within E-Transcripts is a sophisticated and complex XML design technique that fits quite well when used in implementations with SIF certified/compliant entities. We have concerns regarding the interoperability of this standard from SIF-compliant to non-SIF compliant entities. We would recommend using a simplified "lowest common denominator" design approach to facilitate document exchange across the education community. Looking at past experience, for example, the U.S. Department of Education's Office of Federal Student Aid (FSA) initially implemented its Common Origination and Disbursement (COD) system using RefIDs. The technical evaluation from the community was not well received, and as a result FSA will not use RefID in future releases of COD.

With that initial experience in mind, PESC has created, and continues to create, re-usable types covering the education community. Using those as a starting point, individual workgroups design relatively simple document schemas that describe the allowable layout and content values for a particular application; but these do not contain the level of sophistication that SIF utilizes.

On the technical side, PESC's early research found that RefID is not easily dealt with via XPath expressions, and RefID relationships are deemed to require a relatively high amount of processing resources to follow their references. However, the technical reasons for PESC choosing not to use RefIDs were outweighed by the decision to keep document schemas relatively simple.

PUBLIC COMMENT 2

Based on our understanding of how SIF schema is written, it appears that it is not possible to send a single XML document that contains the two objects (student academic record and student demographic record) that make up an E-Transcript. Is our understanding correct?

PUBLIC COMMENT 3

Note that our concerns were interpolated from the implementation guide and the 2.0 SIF_Message schema. It may have helped us to have instance documents and a reference implementation with examples of compliant E-Transcript messages, but our overall time for the review effort was limited.

PUBLIC COMMENT 4

In addition to the previously mentioned concerns with the technical structure of the SIF E-Transcript, we would like to point out certain data that are not represented in the SIF specification. Some of these data elements would be very beneficial to the higher education community and we would recommend their inclusion in the specification.
- Canadian SIN - The Social Insurance Number issued by Canada is equivalent to the US Social Security Number and is used in a similar manner to support data exchange between the countries. We recommend that it be included as a possible person identifier.

- Student Name Suffix - The ability to distinguish generational differences between students and parents (Jr., III etc.) is critical to accurate record matching. We highly recommend it be included.

- Alternate Names - If known, additional name variations and changed last name are useful for record matching, though not critical.

- Deceased Indication - If the student whose record is being transmitted, is known to be deceased it is very important that Institutions be made aware of this. This is useful to prevent academic fraud and identity theft. It also can help avoid institutions making recruitment contacts that may be painful to parents.

- Immunizations - Many postsecondary institutions require certification of various immunizations and vaccinations. We strongly recommend that this data element be made available within the SIF E-transcript.

- Local School ID State Identification - The SIF specification allows for State and Province student identifiers to be transmitted but does not provide an indication of which State or Province is being referenced. Although this information can be inferred from other data elements in the record, we recommend that it be explicitly indicated.

- College Board/ACT CEEBACT - The SIF specification calls for the NCESID as a national school identifier code set (in addition to StateProvince and Local ID). We recommend the inclusion of College Board/ACT (CEEBACT) code set as an option since this is the most widely used High School identifier in postsecondary usage. We recommend that it be included.

- Diploma Honors Title - We recommend that the ability to list the literal name of a graduation honor be allowed.

- Level of Diploma Honors - It is important to know the relative level of an honors award. For example, if a student was awarded a diploma with "honors", the recipient may not be aware that the school also awards diplomas with "high honors" and "highest honors". We recommend that it be included.

- Academic Completion Indicator - Since transcripts are often sent around the time of graduation, it is desirable to know if the student has actually graduated as of the date of the transmission instead of having to infer the information from graduation date or anticipated graduation date. We recommend that it be included.
- Academic Program - It is important to know if a student is participating in a particular program of study such as a science or arts concentration. Several states are adopting a statewide coding system (equivalent to the CIP code set) and we feel that a National code set may be developed in the near future.

- Grade Point Average Minimum and Maximum - In assessing a GPA it is important to know the theoretical maximum GPA possible: e.g. whether it is possible to earn a 4.5 or 5.0 on a "4-point" scale.

- Course Credit Basis - It is extremely important to know under what basis credit is being awarded, for example: Advanced Placement, Advanced Standing, International Baccalaureate, Remedial, CreditByExam, HighSchoolTransferCredit, HighSchoolDualCredit, etc. We highly recommend it be included.

- Course Credit Units - Although Carnegie Units are the most common in secondary schools, other units are sometimes used. We recommend that other options for credit units be made available.

- Course Grade Status - It is valuable to know additional context regarding a particular grade award, for example if it was an honors grade awarded in a regular course, whether a grade of Pass was awarded in a course that is normally letter-grade, whether the student withdrew because of failing status and so on.

- Course Repeat Code - Has this course been repeated and is this particular instance counted or not counted toward the GPA. This data element would help provide clarification.

- CourseGPAApplicabilityCode - Is this course normally counted toward GPA? For example, Physical Education or Driver's Ed. course may be granted credit and a letter grade but not be computed into the GPA. We highly recommend it be included.

- Language Proficiency - It is often necessary to know the student's language as spoken at home and whether they have proficiency in languages other than their native language, including English as a foreign language. We highly recommend it be included.
DATA QUALITY CAMPAIGN CELEBRATES ONE YEAR of Championing Longitudinal Data

States making progress in building longitudinal data systems, but still more work to be done

November 17, 2006—Little Rock, AR: The Data Quality Campaign (DQC), on the first anniversary of its launch, released a progress report highlighting states’ successes in building longitudinal data systems. Over the past year, the DQC, a national partnership to improve the quality, accessibility and use of data in education, has highlighted the power of developing and using longitudinal data systems as a key tool to improve student achievement. This intense focus on building and using data systems that follow individual students’ progress over time is bearing results:

- 42 states report having a unique student identifier (an integral part of a longitudinal data system) in place, up from 37 last year.
- Nine states have eight or nine of the 10 essential elements the DQC has identified as necessary building blocks for a longitudinal data system. No state reports having all 10, but only six states have three or fewer.
- 36 states have put in place an audit system to ensure quality data, which is one of the 10 essential elements the DQC identified.
- 26 states indicate they have or are working on building data warehouses.
- 28 states have some form of Web-based data and analysis tools available for local educators.

The progress made over the past year is encouraging, but there is still much work to do.

“As we work to provide a quality education, our hopeful vision of the future requires us to take a hard look at the past,” states Secretary of Education Margaret Spellings. “By measuring children’s performance over time, we can determine how best to educate the next generation. The Data Quality Campaign is committed to making reliable and relevant longitudinal data accessible to all. Its member partners include some of the nation’s most dedicated and serious educational organizations. I am confident that with their help, policymakers will clearly see the educational challenges ahead so they can make the very best decisions to meet them.”

Together with national partners and states, DQC will work to ensure that statewide longitudinal data systems are completed and widely accessible so they can be used to inform important policy and program discussions about improving America’s schools. Without longitudinal data, these conversations are limited; therefore, states must continue to build and maintain these functional, informative data systems to address such pressing issues as:
• Identifying which schools produce the strongest academic growth for their students. (23 states report having the data systems to do so)
• Calculating the state’s graduation rate, according to the 2005 National Governors Association (NGA) graduation compact. (26 states)
• Determining which high school performance indicators (e.g., enrollment in rigorous courses or performance on state tests) are the best predictors of students' success in college or the workplace. (4 states)

“Ensuring all high school graduates are prepared for college or work is the goal of Achieve’s American Diploma Project (ADP) — and having robust longitudinal data systems is a necessary tool for reaching that goal,” says Michael Cohen, president of Achieve, Inc. “Achieve is proud to be a managing partner of the Data Quality Campaign to promote the vital need for rich information systems to drive student achievement in every state.”

“In the past year, governors have helped their states make significant progress in building longitudinal data systems. Fourteen of the National Governors Association Honor States now have put in place all the elements necessary to begin reporting the NGA Graduation Rate,” said Dane Linn, education director for the NGA Center for Best Practices. “The remaining 12 states also are taking great strides toward constructing systems that will allow them to report accurate graduation rates. DQC has made the case for states to build these data systems, which help answer essential questions about policy and school performance.”

The DQC’s national partners have renewed their commitment to work together to build support and political will among policymakers to:

• Fully develop high-quality longitudinal data systems in every state by 2009;
• Increase understanding and promote the valuable uses of longitudinal and financial data to improve student achievement; and
• Promote, develop and use common data standards and efficient data transfer and exchange.

“States’ efforts to implement longitudinal data systems and the need for increased state capacity have been highlighted as a result of the Data Quality Campaign’s goal of engaging states and national policymakers around the need for higher quality education data,” states Council of Chief State School Officers Executive (CCSSO) Director, Gene Wilhoit. “As a founding partner of the Campaign, CCSSO is pleased that our Annual Policy Forum could host both the 2005 launch of the Data Quality Campaign and the Campaign’s one-year anniversary. We look forward to another successful year of working with the DQC and its education partners to advance state strategies to improve student achievement through better data.”

In year two, the DQC will focus on promoting the use of longitudinal student-level data for accountability purposes and for tailoring instructional programs and policies, while continuing to support state efforts to build longitudinal systems. The following actions will guide the campaign’s work:

• Build longitudinal data systems with end users in mind;
• Create toolkits for education stakeholders that demonstrate the power of longitudinal data;
• Advocate for continued investments in state data systems; and
• Generate opportunities for states to learn from one another.
10 Essential Elements of Longitudinal Data Systems

Longitudinal data — data gathered on the same student from year to year — make it possible to follow individual student academic growth, determine the value-added of specific programs, and identify consistently high-performing schools and systems. The DQC has identified the following 10 essential elements of a longitudinal data system and annually reports state progress in implementing each element:

1. A unique statewide student identifier (42 states report having this element, up from 36 last year)
2. Student-level enrollment, demographic and program participation information (46, up from 38 last year)
3. The ability to match individual students’ test records from year to year to measure academic growth (41, up from 32 last year)
4. Information on untested students (30, up from 25 last year)
5. A teacher identification system with the ability to match teachers to students (16, up from 13 last year)
6. Student-level transcript information, including information on courses complete and grades earned (12, up from 7 last year)
7. Student-level college readiness test scores (9, up from 7 last year)
8. Student-level graduation and dropout data (40, up from 34 last year)
9. The ability to match student records between the P-12 and postsecondary systems (18, up from 12 last year)
10. A state audit system assessing data quality, validity and reliability (36, up from 19 last year)

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The Data Quality Campaign is a national, collaborative effort to encourage and support state policymakers to improve the collection, availability and use of high-quality education data and to implement state longitudinal data systems to improve student achievement. The campaign provides tools and resources that assist state development of quality longitudinal data systems, while providing a national forum for reducing duplication of effort and promoting greater coordination and consensus among the organizations focusing on improving data quality, access and use.

For more information on the Data Quality Campaign, its tools/resources and the 2006 survey results, visit www.DataQualityCampaign.org or e-mail Info@DataQualityCampaign.org.

The campaign is managed by the National Center for Educational Accountability (NCEA) and supported by the Bill & Melinda Gates Foundation.

In September 2006, NCEA, with support from The Broad Foundation and the Bill & Melinda Gates Foundation, conducted a survey about state data systems to determine the number of states that have built the infrastructure to tap into the power of longitudinal data. Similar surveys were conducted by NCEA in 2003, 2004 and 2005.
Additional Quotes from DQC Partners

“The Schools Interoperability Framework Association is proud to be one of the original managing partners of the DQC. It is critical that educational decisionmaking at the local, state and national levels be based on accurate data, and the DQC is helping to frame the state data management needs. It is critical for this data to be of high quality and managed and reported in an automated and seamless manner. The more than 400 members of our association are passionate about the movement and use of educational data in a manner that does not place an undue reporting burden on states, districts and teachers.”

— Larry L. Fruth II, Ph.D., Executive Director, Schools Interoperability Framework Association

“Access to high-quality data is becoming increasingly important as more and more parents and practitioners turn to the Internet as a place to share, gather and research information about their local public schools. During the last year, the Data Quality Campaign (DQC) has proven valuable by taking on the challenging task of helping states and national organizations, like Standard & Poor’s School Evaluation Services, streamline the data collection process so access to high-quality data can become the norm, and not the exception, for those who seek detailed information about public education. Standard & Poor’s is looking forward to another year of working with its DQC partners on the important and timely issue of access to education data.”

— Thomas Sheridan, Vice President, Standard & Poor’s School Evaluation Services

“The Data Quality Campaign understands the importance of providing guidance to states on developing and implementing state longitudinal data systems both for reporting and enhancing teaching and learning. DQC takes its leadership role very seriously - both in establishing essential elements, providing resources and encouraging sharing throughout the education community. SETDA is very pleased to be a part of this important work.”

— Mary Ann Wolf, Executive Director, State Educational Technology Directors Association

“ACT has long been a proponent of using data to help all students prepare for, and succeed in, college and work. DQC’s efforts will help to promote access to quality data that can be used to ensure that more and more of our young people are ready to succeed. We applaud the progress that the DQC has made this past year in their fine work toward improving student achievement and readiness. ACT is proud to be a part of this endeavor.”

— Cynthia B. Schmeiser, President and COO, Education Division, ACT

“Colleges and universities are committed to answering the nation’s call for greater accountability and student achievement. The DQC provides higher education officials with valuable resources for improving the quality of information used in decision-making processes.”

— Ed Elmendorf, Vice President, American Association of State Colleges and Universities

“Quality data, used appropriately, can be knowledge. And knowledge is about constantly learning, using and sharing. Congratulations to the Data Quality Council upon the completion of its first year, helping all of us understand how quality data are used as knowledge to improve education.”

— C. Jackson Grayson Jr., Chief Executive Officer, APQC
“At its one-year anniversary, the Data Quality Campaign has a lot to celebrate. Taking on one of the most critical issues in education reform — the collection, availability, and use of high-quality education data to improve student achievement — the Campaign has already made real progress. The issue has moved front and center in states and nationally; states are accelerating their adoption and use of longitudinal data systems to drive improvement; and the partnership that is the Campaign’s hallmark is getting key education reform organizations singing from the same hymnal.”

— Marlene Seltzer, President and CEO, Jobs for the Future

“We need to let evidence drive school improvement. To do so, we need far better information about the value added over time by individual schools. This is particularly important for autonomous public charter schools that often enroll students who have struggled in other settings. That’s why we endorse the Data Quality Campaign’s call for reliable longitudinal data on student outcomes — not only for charter schools but for all public schools.”

— Nelson Smith, President, National Alliance for Public Charter Schools

“The National Association of Secondary School Principals is proud to have joined the Data Quality Campaign as a supporting organization. While states have an important role to play in designing reliable data systems, ultimately, principals are responsible for making the best use of student data to improve teaching and learning in their school buildings. As end users of data, we welcome the opportunity to help establish data systems that will build our capacity to serve all students.”

— Gerald Tirrozi, Ph.D., Executive Director, National Association of Secondary School Principals

“Enabling interoperability takes commitment, passion, understanding, patience — and most of all, collaboration. No single organization by itself can make interoperability happen. But together we are building the foundation that helps create the future of education. The Postsecondary Electronic Standards Council is very pleased and proud to be a partner in this very important effort, and we are dedicated to bridging P–12 and higher education.”

— Michael Sessa, Executive Director, Postsecondary Electronic Standards Council

“As we work to focus Colorado on quality teaching, the need for accessible and quality data has become more and more obvious. The lack of data keep us from answering some of the most important questions about teaching, teacher quality and student achievement. We have turned to the Data Quality Campaign resources and staff members as we educate ourselves and others about data and data systems. We will continue to rely on this resource as we drive policy actions to improve Colorado’s data systems, and we are pleased to be part of this national effort.”

— Jacqueline J. Paone, Executive Director, Alliance for Quality Teaching
DQC Managing and Endorsing Partners

Managing partners include:

Achieve, Inc.
Alliance for Excellent Education
Council of Chief State School Officers
Education Commission of the States
The Education Trust
National Association of State Boards of Education
National Association of System Heads
National Center for Educational Accountability
National Center for Higher Education Management Systems
National Governors Association Center for Best Practices
Standard & Poor's School Evaluation Services
Schools Interoperability Framework Association
State Educational Technology Directors Association
State Higher Education Executive Officers

Endorsing partners include:

ACT
Alliance for Quality Teaching
American Association of Colleges for Teacher Education
American Association of State Colleges and Universities
American Board for Certification of Teaching Excellence
APQC
Center for Teacher Quality
College Summit, Inc.
Consortium for School Networking
Educational Policy Institute
GreatSchools
Jobs for the Future
League of Education Voters Foundation
National Alliance for Public Charter Schools
National Association of Secondary School Principals
National Education Knowledge Industry Association
Postsecondary Electronic Standards Council
Roads to Success
Southern Regional Education Board

For more information, visit the Data Quality Campaign web site at www.DataQualityCampaign.org.
Creating a Longitudinal Data System
To Improve Student Achievement

Update 2006

www.DataQualityCampaign.org
Does your state collect the data you need to answer these questions?

- Which schools produce the strongest academic growth for their students? (23 states report having the data to answer this question)

- What achievement levels in middle school indicate that a student is on track to succeed in rigorous courses in high school? (5 states)

- What is the state’s graduation rate, according to the calculation agreed to in the 2005 National Governors Association compact? (26 states)

- What high school performance indicators (e.g., enrollment in rigorous courses or performance on state tests) are the best predictors of students’ success in college or the workplace? (4 states)

- What percentage of high school graduates take remedial courses in college? (14 states)

- Which teacher preparation programs produce the graduates whose students have the strongest academic growth? (9 states)
A rapidly changing global economy and concerns about our ability to create a competitive workforce have focused national attention on the quality of America’s education system. Our schools are expected to perform better than ever in preparing all students to meet rigorous educational requirements for postsecondary education and the workplace. As a result, many states have embraced an aggressive policy agenda to strengthen the rigor and relevance of high school, improve the quality of curriculum and teaching, and increase the percentage of students graduating with the skills needed for success.

But gauging the effect of these efforts will be difficult and time consuming if states do not have data systems that provide ready access to the high-quality information decisionmakers need.

There is no shortage of data in our education system today. States and school districts are gathering large amounts of information on school and student performance. The challenge now is to make sure states are collecting the most relevant data and that they have a coordinated system for using them effectively.

THE MANY BENEFITS OF LONGITUDINAL DATA

To provide educators with the data they need to improve student achievement, states need more than a series of one-time snapshots of student performance. They need a system that collects high-quality data about how individual students are doing over time, from prekindergarten through 12th grade and into postsecondary education. This information — also known as longitudinal data — makes it possible to:

- follow students’ academic progress as they move from grade to grade;
- determine the value-added and effectiveness of specific schools and programs;
In September 2006, the National Center for Educational Accountability (NCEA), with support from The Broad Foundation and the Bill & Melinda Gates Foundation, updated its annual survey about state data systems to report on how many states have put in place the 10 essential elements of a longitudinal data system. The results: Over the past year, progress has been made on all indicators, but no state has all 10 elements. Only nine states have at least eight elements of a longitudinal data system. The number of states with three or fewer elements has dropped from 12 last year to six this year. Progress is being made, but there is work to be done across the states.

To see state-by-state results and find out more about what it takes to create a longitudinal data system, go to www.DataQualityCampaign.org.

To take full advantage of the power of longitudinal data, states need systems that can exchange information within and across P–12 and postsecondary systems and states. This will allow states to continue monitoring achievement as students move from place to place and through the education pipeline.

In addition, states need a strategy for training policymakers, educators and others to use this information — both to improve policies and practices and to hold schools accountable for achievement gains.
To build a complete longitudinal data system, states must include the following 10 essential elements:

1. **A unique statewide student identifier.** As students move from grade to grade and from district to district, this ID number will allow states to accurately measure the progress of every student over time, from prekindergarten through grade 12.

2. **Student-level enrollment, demographic and program participation information.** This information will help identify which programs are helping students succeed. It also will help account for students who transfer from school to school and ensure that test data are disaggregated correctly.

3. **The ability to match individual students’ test records from year to year to measure academic growth.** Being able to match test records for individual students from last year to this year will provide valuable diagnostic information to teachers and principals and will help educators monitor each student’s academic growth.

4. **Information on untested students.** With this information, states can ensure that students from all groups are participating in state tests and account for students who were exempted from the tests.

5. **A teacher identifier system with the ability to match teachers to students.** Many states collect data on teacher education and certification, but matching teachers to students by classroom and subject is critical to understanding the connection between teacher training and qualifications and student academic growth.
Student-level college readiness test scores. Student performance on the SAT, SAT II, ACT, Advanced Placement, International Baccalaureate and other college readiness exams is a good indicator of whether students are prepared to succeed in postsecondary education and work; however, currently only nine states maintain this information from year to year at the student level. But some states are going a step further by building college readiness tests into their statewide assessment systems.

Student-level graduation and dropout data. A majority of states currently collect annual records on individual graduates and dropouts. But the National Governors Association (NGA) compact signed by all states aims to create a more valid, reliable and consistent graduation rate that tracks students from 9th to 12th grade. Based on NCEA analyses, only 26 states currently have the necessary elements in place to calculate the graduation rate defined in the NGA compact.

The ability to match student records between the P–12 and postsecondary systems. Opening the lines of communication between P–12 and higher education is critical to ensuring that students succeed at the postsecondary level. Connecting student performance in college to what happens in high school will give high schools the information they need to align curriculum and instruction to ensure that graduates are better prepared for college and work.

A state data audit system assessing data quality, validity and reliability. The decisions made in education are only as good as the information on which they are based.
FUTURE DIRECTIONS OF STATE DATA SYSTEMS

These 10 elements are essential but not sufficient. States need to plan for a series of next-generation improvements — in fact, some states are already working on them. In the future, data systems can make it possible to:

▸ Connect school performance with spending. A longitudinal data system identifies which schools and school systems perform well. But to better understand what it costs to improve student performance, states also need to collect financial information at the school and program levels and link it to individual student achievement data over time. Twenty-nine states report that they do this today.

▸ Connect school performance to employment and other systems. Educators and policymakers need to know whether schools are preparing students for long-term success in the workplace, not just in college. Obtaining this information requires matching the academic (both P–12 and postsecondary) and employment records of individual students. States also should consider incorporating into their education data systems, as needed, records from other social service agencies that have information that is relevant to students’ health and safety.

▸ Transfer records across systems and states. In an increasingly mobile world, people regularly move across state borders, making it difficult to tell, for example, whether a student has dropped out or has moved to a new state. Therefore, not only do data systems need to be able to exchange information with other systems — such as postsecondary — within the state, but they also need to be able to exchange information with systems in other states. The key is ensuring that data systems built by different vendors in different states use common data standards and definitions.

CALL TO ACTION

Just as more education leaders are recognizing the need for better data, more states are doing the hard work of addressing this need by putting in place longitudinal data systems. But no state data system currently includes every one of these 10 essential elements. (To see how your state stacks up, visit www.DataQualityCampaign.org.)

All states should make it a priority to put them in place by 2009. For this reason, a group of 14 national organizations is leading the Data Quality Campaign to encourage and support policymakers’ efforts to fully develop and use longitudinal data in education.

States are spending hundreds of millions of dollars to improve student achievement. But without quality data, they are essentially flying blind. Policymakers need to act now to put in place the policies and resources to ensure that each state has a longitudinal data system and the culture and capacity to translate the information into specific action steps to improve student achievement.
DATA QUALITY CAMPAIGN
The Data Quality Campaign is a national, collaborative effort to encourage and support state policymakers to:

- improve the collection, availability and use of high-quality education data and
- implement state longitudinal data systems to improve student achievement.

The campaign provides tools and resources that states can use as they develop quality longitudinal data systems and also serves as a national forum for reducing duplication of effort and promoting greater coordination and consensus among like-minded organizations.

DATA QUALITY CAMPAIGN PARTNER ORGANIZATIONS
Managing Partners:
- Achieve, Inc.
- Alliance for Excellent Education
- Council of Chief State School Officers
- Education Commission of the States
- The Education Trust
- National Association of State Boards of Education
- National Association of System Heads
- National Center for Educational Accountability

Endorsing Partners:
- ACT
- Alliance for Quality Teaching
- American Association of Colleges for Teacher Education
- American Association of State Colleges and Universities
- American Board for Certification of Teaching Excellence
- APQC
- Center for Teacher Quality
- College Summit, Inc.
- Consortium for School Networking
- National Center for Higher Education Management Systems
- National Governors Association Center for Best Practices
- Schools Interoperability Framework Association
- Standard & Poor's School Evaluation Services
- State Educational Technology Directors Association
- State Higher Education Executive Officers
- Educational Policy Institute
- GreatSchools
- Jobs for the Future
- League of Education Voters Foundation
- National Alliance for Public Charter Schools
- National Association of Secondary School Principals
- National Education Knowledge Industry Association
- Postsecondary Electronic Standards Council
- Roads to Success
- Southern Regional Education Board

The campaign is managed by the National Center for Educational Accountability and supported by the Bill & Melinda Gates Foundation.

FIND OUT MORE
Visit the Data Quality Campaign Web site (www.DataQualityCampaign.org) for more about the:

- 10 essential elements and the state policy actions required to establish, maintain and use a quality longitudinal data system;
- results of NCEA’s 2006 update of its annual survey that show where your state stands on the 10 essential elements;
- tools, materials, meetings and information that can aid states and interested organizations seeking to ensure increased quality, accessibility and use of data; and
- information on how your organization can partner with DQC to generate the understanding and will to build and use state longitudinal data systems.