

ARIZONA DEPARTMENT OF EDUCATION

REQUEST FOR INFORMATION
RFI # ADED16-0002

ARIZONA SCHOOL ACCOUNTABILITY COMPONENTS & SYSTEM

Submitted by

RANDA
simply innovative.

Due | July 15, 2016 3:00 p.m. (MST)



TO
State of Arizona Department of Education
ADE Chief Procurement Officer
1535 W. Jefferson Street
Phoenix, AZ 85007
Procurementinbox@azed.gov

FROM
RANDA Solutions
Marty Reed
5000 Meridian Blvd, Suite 400,
Franklin, TN 37067





Request for Information

State of Arizona
Department of Education
1535 W. Jefferson Street
Phoenix, AZ 85007

RFI No.: ADED16-0002

Description: **Arizona School Accountability Components & System**

PLEASE COMPLETE THIS FORM AND SUBMIT THE COMPLETED FORM WITH YOUR RESPONSE TO THE RFI.

I/We _____ the undersigned, do hereby submit this response for information with regard to Arizona's Statewide School Accountability System in accordance with ARS §41-2555 Request for Information specification contained herein.

Name

Date

Company Name

Title

Address

Telephone Number

Information Being Requested

1. Demonstration of values

a) How does a transparent and fair accountability system define an “excellent” school in regards to:

i. Preparing all students for College/Career readiness

We support educational leaders by delivering access to accurate, validated, understandable information educational leaders can use, which in turn facilitates a transparent and fair accountability system.

Our objective is to deliver accurate information and useful tools educational leaders can use for insight into student performance outcomes and barriers, and inform the high stakes decisions educators must make every day.

RANDA Solutions mission is *"innovation with a purpose, education data you can trust and information you can use"*.

Achieve.org, is an independent, nonpartisan, nonprofit education reform organization dedicated to working with states to raise academic standards and graduation requirements, improve assessments, and strengthen accountability. The following quote from achieve.org briefly summarizes the process of preparing students for college/career readiness.

"Simply put, "college and career readiness" is the umbrella under which many education and workforce policies, programs and initiatives thrive. From high-quality early education and strong, foundational standards in elementary school to rigorous career and technical education programs and college completion goals, college and career readiness is the unifying agenda across the P-20 education pipeline.

To facilitate a student's educational process, teachers and educational leaders need accurate comprehensible information to enable educators to assess each student's progress and provide him or her with the necessary support and guidance.

ii. Improving achievement and outcomes among student subgroups

Improving achievement and outcomes for specific student subgroups requires insight into relevant performance factors for the subgroup. Accurately assessing subgroup performance requires access to information about barriers to improved outcomes and the ability to measure a program's effectiveness to drive progress toward defined goals. Tools which allow an educator to select a student subgroup and drill down into detailed information, supports the identification of the most effective programs and strategies.

We understand access to timely, accurate information can inform educators and administrators to confidently make high-stakes decisions, efficiently allocate resources and ultimately improve achievement and educational

outcomes. We deliver the ability to access specific information, analyze the data, and drill down into information for student subgroups, including access to correlative data.

In most cases educational leaders have vast amounts of data, often from individually siloed and disparate systems which can result in mismatched or conflicting information. We have the skills and experience to address the challenges involved in validating data, improving accuracy, and delivering tools to effectively analyze the information in an comprehensible view.

iii. Graduating students prepared for postsecondary workforce and/or education

Current educational thought leader research reports conflicting viewpoints between institutions of higher education and employers regarding the degree graduating students are prepared for the workforce. Work cited: <http://www.mheducation.com/highered/ideas/educator/prepare-students-work> Brad C. Phillips, PHD.

Recommendations are to align student learning with workforce requirements including Degree Qualifications Profiles and matching student skillsets to industry requirements. These strategies helps a student align his or her skills to career or educational goals which can facilitate a seamless transition to the workforce.

In a rapidly evolving workplace, identifying student skillsets is essential in preparing students for their chosen career or higher education course of study. Access to accurate relevant data can equip educators with the tools necessary to identify skill gaps and provide training to build the student's skills.

iv. Demonstrating growth on standardized assessments aligned to Arizona's standards

RANDA has a multi-decade of experience in managing, validating, improving accuracy, and reporting on assessment data. Since 2001, we have served the Tennessee Department of Education's (TDOE) Assessment, Evaluation and Research Division. In 2008, RANDA was awarded the full technical services contract for assessment data management for TDOE. In the fall of 2014, RANDA was awarded a contract renewal and expansion of services, through a competitive process. In collaboration with TDOE, RANDA developed an enterprise level educational data management system TDOE calls EdTools, which is an educational data management suite designed to manage workflows, security and compliance behind the scenes, while its user-friendly dashboard and reporting interfaces make sure valid, useful information reaches the right stakeholders at the right times. EdTools manages over 125 million active education data records representing over 85,000 educators and 1 million students while supporting 99.4% accurate student to teacher linking system-wide. EdTools automated processes improved raw Student Information System (SIS) data alignment accuracy from 70% to 86% before handing off data validation to teachers who used a version of our Teacher/Student Data Link interface to achieve 99.4%

accuracy. An intelligent algorithm then completes the data set. We report on longitudinal data to provide insight into growth over time in assessment data.

We can align proven strategies and processes to manage, validate, and improve the accuracy of Arizona's assessment data and align to Arizona's standards.

v. Providing a high-quality, well-rounded education to families regardless of income

Access to accurate, relevant, understandable data can help educators and educational leaders identify disparities in educational performance for various student demographics. Educators can then align the resources and make any necessary changes to provide a high-quality, well-rounded education to all students regardless of income.

vi. Meeting the needs of parents and students in the community

As cited in the ADE AZ Kids Can't Wait 2015 Plan, parent involvement increases student performance, overcomes socioeconomic barriers, reduces student behavior problems, increases graduation rates, and helps students take advantage of AP opportunities. Parents can support the child more effectively when the parent is aware of the student's performance and needs on a timely basis. We work with clients to deliver data which is accessible to authorized users based upon role. We focus on protecting student data and within this context can provide reporting and access to students and parents on student performance and progress as required by the State.

b) How does a transparent and fair accountability system define a “failing” school in regards to:

i. Preparing all students for College/Career readiness

We support educational leaders by delivering access to accurate, relevant data you can use and understand, which facilitates a transparent and fair accountability system. The definition of a successful or failing schools is often framed in a range of factors including the students, the educators, and the environment in the school and community.

We can inform educators and administrators to confidently make high-stakes decisions, efficiently allocate resources and ultimately improve achievement and educational outcomes. We can deliver the ability to access and analyze information including the ability to drill down into information for specific student subgroups, deliver understandable information about current performance including barriers to improving student achievement. Access to accurate actionable quantitative and qualitative data addresses not only assessment data but also the conditions for learning, which can be a game changer to support and turn around schools identified as a failing school.

[Achieve.org](https://www.achievethecore.org/), is an independent, nonpartisan, nonprofit education reform organization dedicated to working with states to raise academic standards

and graduation requirements, improve assessments, and strengthen accountability. The following quote summarizes the process of preparing students for college/career readiness.

"Simply put, "college and career readiness" is the umbrella under which many education and workforce policies, programs and initiatives thrive. From high-quality early education and strong, foundational standards in elementary school to rigorous career and technical education programs and college completion goals, college and career readiness is the unifying agenda across the P-20 education pipeline.

In order to facilitate the educational process, teachers and educational leaders need accurate understandable information to assess each student's progress and in turn effectively provide support and guidance for his or her education.

ii. Improving achievement and outcomes among student subgroups

Improving achievement and outcomes for specific student subgroups requires insight into the relevant performance factors for each subgroup. Accurately assessing performance progress also requires access to information about barriers to improved outcomes and the ability to measure program effectiveness and drive achievement toward defined goals. Tools which allow an educator to select a student subgroup and drill down into detailed information, supports the identification of the most effective programs and strategies.

iii. Graduating students prepared for postsecondary workforce and/or education

Current recommendations on strategies to prepare students for a successful future whether he or she pursues a higher education or position in the workforce are readily available from informed engaged educational thought leaders. To ensure strategies are effective requires access to accurate, actionable, information which measures student progress and gauges program impact to ensure educational resources are allocated appropriately. Educational leaders can then focus on the most effective strategies to guide student preparation and outcomes.

iv. Demonstrating growth on standardized assessments aligned to Arizona's standards

We understand the challenges of delivering timely results for high-stakes assessments and recognize the detailed workflow of physical document collection, scanning and processing, psychometric analysis, and score distribution. It's not uncommon to find versions of this process in many states taking significant time, often counted in months. In a recent report (December 2015) four out of 10 districts in the CGCS (Council of Great City Schools) survey reported having to wait between two and four months before receiving their state test results. The lag in delivery makes it nearly-impossible to make decisions — such as grouping students by ability or signing them up for special tutoring — before students pass on to the next grade.

We also understand the need for both speed and accuracy in reporting results and know how to deliver the required information. RANDA worked with TDOE to re-engineer their process, gave it a web interface and in turn were able to dramatically speed up the delivery of results. Within 24 hours of online assessment and scanning, RANDA's system delivers a representative evaluation set to the psychometric team, where they determine the validity of the assessment, which then empowers the state to immediately release EOC and Achievement results directly to Tennessee school systems, based on district compliance with the business rules in place. This equips districts to quickly make their determinations for report cards and graduation requirements. In Tennessee, this process is called "QuickScore." Once all the procedural hurdles have been cleared, individual authorized educators can log in to the online system and download their students' scores as secure PDF reports. This workflow re-engineering has contributed to our ability to deliver assessment results with maximum accuracy and transforms a months-long process into a time frame that is the fastest in the industry.

During the 2015 spring assessment administration, we delivered statewide assessment results for all students, in one day.

v. Providing a high-quality, well-rounded education to families regardless of income

Access to accurate, relevant, understandable data educators and educational leaders can use helps identify disparities in educational performance for students. Educators can then align the resources and make the required changes to provide a high-quality, well-rounded education to all students regardless of income.

vi. Meeting the needs of parents and students in the community

As cited in the ADE AZ Kids Can't Wait 2015 Plan, parent involvement increases student performance, overcomes socioeconomic barriers, reduces student behavior problems, increases graduation rates, and helps students take advantage of AP opportunities. Parents can support the child more effectively when the parent is aware of the student's performance and needs on a timely basis. We work with clients to deliver data accessible to authorized users based upon role. We continually focus on protecting student data and within this context can provide reporting and access to students and parents on student performance and progress as required by the State.

c) How does a transparent and fair accountability system differentiate among schools that are neither "excellent" nor "failing"?

Transparency and fairness in an accountability system is underpinned by access to accurate, relevant, understandable data with the ability to deliver the ability to drill down into each school's and student's progress. Correlation of related data elements supports educational leaders in framing student and school performance in the context of the educators, learning environment, student demographics, and the student's community.

2. Background

a) Provide a brief history of the organization and its governance structure, if applicable, or provide a brief overview of the individual's experience with accountability of K-12 public schools and districts

At RANDA, we focus exclusively on education data, which is frequently used to inform high stakes assessment and evaluation decisions. We bring a depth of experience managing education data assets from disparate data sources in a variety of formats and inputs. Each time your data is sourced and utilized, it is audited, validated, and subjected to accuracy checks, all with exception handling for data validation designed to meet your specific needs and requirements. Our strategy is intentional – we validate data at every stage of the process, starting with assessment content input, such as scanned images and vendor scoring, to identify and report on errors in the initial vendor data inputs. We can then apply proprietary processes which are already proven to increase accuracy and accountability for the Tennessee Department of Education (TDOE). We can identify and address process problems and uncover innovative solutions to improve data quality, efficiency, and areas for cost savings. We understand the decisions based on one scope of data can cascade with unpredictable results unless the data is utilized with a full understanding of the source, context and validity which is defined in collaborative requirements-gathering sessions during system design and implementation. We have an extensive background in sourcing, managing and utilizing existing education data assets and we bring our significant expertise to projects so we can assist and guide you through the data utilization processes. Common elements of data will be managed and reconciled when received from any input and validated according to your requirements and business rules. Our commitment to the State is this: we will provide true seamless integration of any data source because enterprise education data management is our business, we know how to do it and we have proven we can do it quite well.

We understand data import and management techniques must not only validate data upon import, but also effectively audit previously imported data in order to seek, report on, and correct errors, when required and allowed according to your business rules. We will apply the same successful data audit techniques and forensic compliance monitoring which we used to increase Teacher/Student Data Link and student demographic data accuracy from 84% to 99.4% for TDOE.

Unless otherwise required, for example by secure workflow restrictions in an approval process, all data becomes instantly available upon processing, which is managed on a real-time basis, or when supplied by batch as soon as processing is scheduled. Our active data reporting delivers your data immediately after processing to inform relevant actionable decisions. RANDA's standard of performance is real-time data aggregation and presentation (as well as reporting) and we will only modify that performance based on business logic rules to meet your needs and specifications.

RANDA will utilize some of the same algorithms and techniques we use to align disparate data sets for TDOE's summative assessment technology, in which RANDA aligns teachers of record, student/teacher records, and demographic data for Student Demographic Data Validation (SDDV) across various supporting systems, including multiple levels of SIS data and scanned assessment results. RANDA's accuracy both in automated matching and in human-supported

matching and exception reporting via online interface has been exemplary in this system. We will utilize the same skills to align and triangulate data for your accountability components and system.

While others may propose consulting services to accomplish the tasks set forth in this RFP, RANDA has proven software and processes in place to accomplish those tasks and services.

What You Can Expect from RANDA as Your Partner

Our multi-decade experience and proprietary process are valuable assets to efficiently and accurately handle, manage, verify and report on assessment data and is also what sets us apart as being the right choice to provide your data management services. We understand the validation and reporting processes, and more importantly, we understand the business processes involved to get things done accurately and on time.

b) Identify the individuals from the organization that will be working with Arizona officials on all aspects of the accountability system's implementation.

We have assigned Dallas Dover, a highly skilled experienced RANDA Project Manager, to fulfill the project lead requirements, should we be awarded the contract. We have selected RANDA project team members with the requisite skills to perform all aspects of your project.

RANDA's operations group is comprised of Software Development and Quality Assurance, Project Management, and IT Support teams, each of which is dedicated to providing high quality solutions with unmatched service and support for our customers. RANDA's Chief Operating Officer, Adam Engle, directs the organization and ensures all staffing requirements are fulfilled to exceed customer expectations. Damon Tindall, Chief Information Officer, oversees all corporate and customer activities from an information technology standpoint and directs security and quality policies. Your RANDA Project Manager will be designated as your primary point of contact and is responsible for the successful delivery of all components.

We have included proposed team member resumes following this section.

Dallas A. Dover



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Senior Project Director Enterprise Accounts

RANDA Solutions - Nashville, TN

August 2014 - Present

Serving as Project Director for long-term web application contracts with state level client including Department of Education entities in Tennessee, Colorado and Ohio. Actively engaging with clients to aid in the timely execution of project deliverables supporting continuously evolving requirements ensuring both project and client success.

RANDA Solutions - Nashville, TN

2011 - August 2014

- Project Director
- Supported state and district level client projects and the associated software development teams through; project management, business analysis and client facilitation efforts. Led development teams in project scope development/architecture, backlog grooming and requirements development.

Environmental Systems Corporation - Knoxville, Tennessee

1996 - 2011

- Manager, Software Development (June 2008 - January 2011)
- Technical Manager, Operations (July 2006 - June 2008)
- Sr. Project Manager – Electrical/Control Projects (January 2005 - July 2006)
- Project Engineer – Embedded Systems/Controls Engineering (June 1999 - January 2005)
- Engineering Assistant (August 1996 - June 1999)

Education

B.S., Electrical Engineering (with honors) - **University of Tennessee** – Knoxville, Tennessee

1995 to 1999

Leslie Kendall



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Project Manager

RANDA Solutions - Nashville, TN

2012 - Present

Daily contact with clients throughout the implementation process (from close of the sale to support). Daily management of staff to ensure on-time delivery of the product, including prioritization of tasks. Continual communication between development staff and client to ensure expectations are being properly set and met. Focuses include, but not limited to, TOWER Management System and Observer Training System, and Edvisor Observer Training and Calibration System.

Client Services and Business Manager

Coordinate substantial portions of RANDA's cross-project communications and escalation procedures (operations, support, business development). Catalog customer support and escalation tickets for bugs and features on mature products and new market entries. Manage day-to-day project and product interactions as specified in client and product SLAs. Coordinate customer interactions for process maturity and development through support and maintenance.

Comcast Corporation - Nashville, TN

2003 - 2012

- Project Manager
- Develop, implement, and manage project for Digital Migration Initiative
- Accountable for ensuring all milestones and objectives were obtained for deployment of product

AT&T Wireless - Nashville, TN

2001 - 2003

- Manager- Indirect Channel Operations
- Implement processes for Indirect Operations
- Manage Indirect Channel members ensuring goals and objective were being met and ensuring all procedures were being followed.

Education

Bachelor's of Science, Accounting - University of Phoenix – Nashville, Tennessee, 2006

T. Preston Wills



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Project Manager

RANDA Solutions - Nashville, TN

2011 - Present

Agile project manager and leader of software scrums and sprint planning. Engineers software implementation and configuration of teacher observation software for school districts and oversight of software deployment to customer base. Design and recommend software functionality to improve market needs and product quality. Experience in TOWER Customers, TEM, TEAM API.

Environmental Systems Corporation - Knoxville, TN

2006 - 2011

- Software Engineer
- Integrated emissions monitoring software, programmable logic controllers, emissions analyzers and additional equipment with plant networks and control systems
- Designed, installed and maintained Data Acquisition Systems (DAS) for Continuous Emission Monitoring Systems (CEMS) for the Electric Power Generation and Utility Industry
- Oversaw progress during development of web-based data aggregation utility FleetVision as well as launch and deployment strategies of the same to 27 power plants
- Managed engineering team and provided training with documentation for additional customers

Education

B.S., Electrical Engineering - The University of Tennessee, Knoxville, TN, 2002 - 2006

Travis Shepherd



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Lead Developer

RANDA Solutions - Nashville, TN

2013 - Present

Lead software developer/application architect responsible for the timely design, delivery and delivery of product features innovating business solutions. Develops and modifies existing applications and provides post production support. Participates in requirements gathering sessions with clients. Leads design discussions ensuring overall business objectives are met through collaborating with both internal and external stakeholders. Responsible for development and production of software projects. Focus on maintaining good practices and high standards during development and maintenance of applications, resulting in quality user experiences and fast response to customer requests.

Involved in the development of Tennessee educator data management solution combining educator evaluation and licensure into an integrated system.

Cigna- Franklin, TN

2001 - 2013

- Application Developer (2007-2013) - Architect, designer, and developer of small to large scale business applications, team lead for 5 developers and 3 business analysts. Designer and programmer for business web applications and MS Office tools.
- Senior Business Project Specialist (2005-2007) - Led Small/Medium projects solving complex business problems, authored business policies and procedures, synchronized complicated tools and datasets regarding HealthCare coding and fee schedules.
- Quality Improvement Analyst (2004-2005) - Led training classes and developed curriculum to support operations and analyzed data sets targeting improvement opportunities.
- Hospital Data Administrator (2001-2004) - Reimbursement specialist for hospitals/ancillaries ensuring accurate data loading.
- Data Analyst (2001-2001) - Pilot member of Cigna's Transformation Team and Subject Matter Expert for various special projects.

Education

Bachelor of Music Performance (2000) Bowling Green State University Bowling Green, OH

Six Sigma Yellow Belt (2006) CIGNA HealthCare Franklin, TN

Project Management Systemation (2006) Franklin, TN

Six Sigma Green Belt (2007) Smarter Solutions Bloomfield, CT

Caleb Goff



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Sr. Developer

RANDA Solutions - Nashville, TN

2015 - Present

Senior level software developer/application architect responsible for the timely design, delivery and delivery of product features innovating business solutions. Develops and modifies existing applications and provides post production support. Participates in requirements gathering sessions with clients. Leads design discussions ensuring overall business objectives are met through collaborating with both internal and external stakeholders. Responsible for development and production of software projects. Focus on maintaining good practices and high standards during development and maintenance of applications, resulting in quality user experiences and fast response to customer requests.

Involved in the development of Colorado Online Performance Evaluation System (COPMS) and in the development of Tennessee's education data management system integrating educator evaluation and licensure.

DaVita Innovation Team - Franklin, TN

2015 - 2015

- Full stack developer
- Leveraged Microsoft and open source technologies for rapid SPA web development, assisted in designing/prototyping high-profile application port to iOS on iPad. Helped establish an agile development team for rapid prototyping of projects using lean methodologies

Smart Data Strategies - Franklin, TN

2014 - 2015

- Senior Developer
- Led development efforts on a web-based multi-million dollar project for DOTs. Identified key data delivery processes to automate, severely reducing time-to-delivery

Jackson National Life Insurance - Franklin, TN

2008- 2014

- Software Developer
- Led projects, mentored software developers, involved in redesigning automated job system, assisted in revamping multiple ETL process to improve runtimes.

Education

B.S. Computer Science & Discrete Mathematics - Michigan Technological University, Houghton, Michigan

c) Disclose and discuss the organization's work within and around Arizona's state education agency, local education agencies, and/or public education agencies including assurance any work or deliverables produced by the organization will exclude bias or undue influence, if applicable.

We do not currently have contracts in Arizona and as such have no bias or undue influence to disclose.

3. Overview of System

a) List and define the metrics included in a potential accountability system which meets the needs of Arizona's various school types and uses multiple measures. Please highlight the extent to which academic achievement on Arizona's statewide assessments (i.e. AzMERIT, NCSC, AIMS, etc.) and/or results from a menu of assessment can be meaningfully integrated in the proposed system.

RANDA will facilitate the effective rollout of the aggregating, disaggregating and reporting on as many demographic facts as required in a fully extensible format to meet the State's needs. We can deliver this solution programmatically. Because of the nature of data capture, we have the capacity to programmatically report on any data point for which we have access because they are all captured in isolation. We can utilize your existing reports and have a considerable number of reports we can utilize to form a starting point for the development of the reports ADE needs.

RANDA's active data strategy removes the traditional barriers from the reporting process, and creates possibilities such as high-level parent and caregiver access. Client users can be granted any combination of permissions via RBAC security to view and edit data whenever the workflow allows it. Active data reporting enables qualitative improvements in real world processes. When reports accurately reflect current environments in the classrooms, they allow for decisive action based upon relevant, timely data.

Specialized regulatory reports like AYP and AMAO are simply strongly controlled collections of data presented in prescribed formats. With this system, as regulations change the State, District, Consortium or School can order changes to the process and workflow, readjust roles and permissions as needed, and produce the new reports without significant investment in core system changes. We will define the data and format required for each report and as long as we have access to the data we can produce all of the reports you require.

Preliminary AYP Reports (pdf)

We deliver AYP reports for TDOE and we can utilize your AYP reports in conjunction with those we produce for TDOE as a starting point for developing the AYP reports you require. Once report format and content is finalized, we can produce preliminary AYP reports for your analysis prior to production of your final AYP reports.

Providing ACT Rosters

We can provide rostering for any single or combination of data points as long as we have access to the data points. Once we have access to the data, this is a solution that can be easily delivered programatically.

Providing Rosters

We can provide rostering for any single or combination of data points as long as we have access to the data points. Once we have access to the data, this is a solution that can be easily delivered programatically.

School Subgroup Component Reports (pdf)

This is a report that could easily be delivered programmatically. Because of the nature of data capture, if desired in the future, we have the capacity to programmatically report on any data point because they are all captured in isolation.

Providing Graduation Cohort Rosters

We can provide rostering for any single or combination of data points as long as we have access to the data points. Once we have access to the data, this is a solution that could easily be delivered programatically.

Accountability Bluedot Reports and Files

We will provide reports in the specified format and receive approvals as required. File processing and report schedules will be maintained in a shared documentation library with access for your authorized Officials, Project Managers and Stakeholders and your RANDA project team. We are familiar with the many instances in which the schedule must be modified, and we are also aware that some key dates cannot be changed due to regulations or legislative mandate. We develop a schedule within the time constraints of the key dates schedule, using the knowledge of which dates are "soft" and which dates are set in stone.

We recognize that your assessment, scoring and reporting schedule is subject to critical narrow time constraints and also the circumstances which will require changes to your schedule. We also realize that accuracy, quality control, transparency and responsiveness are essential to project success.

We will discuss any Bluedot processing needs in depth during detailed requirements-gathering sessions to ensure that we fully understand your requirements and can deliver the results you need.

Report Templates

We will create report templates to meet your specifications and will provide them to your Officials, Project Managers and stakeholders for your review, modification and approval prior to creating the final report templates.

b) Describe how the proposed metrics are aligned to college / career expectations and include any alignment studies, if available.

We do not dictate the metrics, we implement metrics and align to the State's college / career expectations as required. We can assist the state in aligning metrics as required. We have a depth of experience in reporting metrics via dashboards and reports and significant expertise in validating and improving data accuracy.

c) Describe how differentiated weights and metrics resulting in an overall letter grades can be compared between schools and across years to inform the following:

i. Achievement of all students and progress of student subgroups

We currently provide extensive reporting on both processing progress, demographic data, and assessment results for the Tennessee Department of Education (TDOE) and can use this reporting as a starting point to deliver reporting for the State. We have included screenshot examples of some of the reports we currently provide following this section of our response. We can report on demographic data as defined and directed by the State's project owners as long as we have access to the data points.

We can also provide data visibility and analysis of correlative data with RANDA Solutions' Empower system, a data alignment, aggregation, and analytics platform, which presents, in aggregate, a data dashboard for ongoing analysis and reporting for correlative data analysis. We will design the data elements for Empower in collaboration with your RANDA Project Manager and the State's project owners and stakeholders. Our design process will include initial mockups of data presentation models, approval of said models, and implementation services for end-user presentation. We have included screenshot examples of the Empower platform following this section of our response.

Reports – Assessment Score Selection

RANDA's system delivers a representative evaluation set to the psychometric team which determines the validity of the assessment and empowers the State to immediately release EOC and Achievement results directly to Tennessee school systems, based on district compliance with the business rules in place. This equips districts to quickly make their determinations for report cards and graduation requirements. In Tennessee, this process is called "QuickScore."

Once all the procedural hurdles have been cleared, individual educators can login to the online system, assuming authorized role based access control, and download their students' scores as secure PDF reports. This workflow re-engineering has contributed to transforming a months-long process into a process that in the Spring 2013 assessment cycle took 2 days to deliver QuickScores to TDOE.

COMMUNICATIONS MATERIALS PROCESSING REPORTING

REPORTING > QUICK SCORES

ASSESSMENT: 2013 SPRING END OF COURSE * [\[change\]](#)

DISTRICT: 00010 - [redacted] COUNTY [\[change\]](#)

Select a school:
ALL Schools ▼

Select a content area:
ALL Content Areas ▼

Generate Quick Score Report (PDF) Export Quick Score (CSV)

Reports – Assessment Score Results

When all the procedural hurdles have been cleared, individual educators can login to the online system, assuming authorized role based access control, and download their students' scores as secure PDF reports. This workflow re-engineering has contributed to transforming a months-long process into a process that in the Spring 2013 assessment cycle took 2 days to deliver QuickScores to TDOE.

EOC - Algebra I

Quick Score Report

Report Date: 6/18/14 2:45 PM

Test Date: Spring 2013 Teacher of Rcd: Class Period: System: 00010 COUNTY School: 0002 CO HS						Purpose: This report provides preliminary data from the EOC test.
Student	Form	Grade	Student Unique ID	Score	Performance Level	Notations
 , AUSTIN W	K	09		94	Advanced	
 , EMILY R	K	09		95	Advanced	

Another Assessment Score Result

End of Course - English I

Report

Report Date: 12/8/09 1:27 PM

Test Date: Spring 2009 Teacher: LMNOP ABCDEFG Class Period: 0 System: 00190 DAVIDSON COUNTY School: 0335 HILLSBORO COMP HIGH						Purpose: This report provides preliminary data from the End of Course test.
Test Site: DOE - Nashville			Run: eoc006			
Student	Form	Grade	Student Unique ID	Score	Performance Level	Notations
ABCDEFGF, PQRST X	T	09		17	Below Proficient	
BCDEFGH, QRSTU X	T	09		24	Proficient	
CDEFGHI, RSTUV X	T	09		23	Proficient	
DEFGHIJ, STUVW X	T	09		18	Below Proficient	
EFGHIJK, TUVWX X	T	09		19	Below Proficient	
FGHIJKL, UVWXY X	T	09		23	Proficient	
GHIJKLM, VWXYZ X	T	09		30	Proficient	
HIJKLMN, ABCDE X	T	09		22	Proficient	
RSTUVWX, MNOPQ X	T	09		33	Proficient	
STUVWXY, NOPQR X	T	09		29	Proficient	
TUVWXYZ, OPQRS X	T	09		29	Proficient	
Coded Student Count:		11	Actual Student Count:		11	

Reports – Assessment Score Lookup and Results

Locate specific assessment results with Score Lookup tools. Enter student information and the results immediately display for all matches with the data you enter.

REPORTING > SCORE LOOKUP

Enter the criteria that you would like to search for in the area below and then click the 'Search' button. If you would like to export the results from the grid into Excel, click on the 'Export List to Excel' link.

First Name:	<input type="text" value="John"/>	<input type="checkbox"/> Exact Match
Last Name:	<input type="text" value="Smith"/>	<input type="checkbox"/> Exact Match
SSN/USID:	<input type="text"/>	
DOB:	<input type="text" value="mm"/> / <input type="text" value="dd"/> / <input type="text" value="yy"/>	<input type="button" value="Search"/>

Search Results returned 150 record(s)

[Export List to Excel](#)

DB	Administration	Last Name	First Name	DOB	System	SYS No	School	School No	Test	SBJ	Score	SSN	US
DW	2001 Fall Gateway Test	SMITH	JOHN		NTY				G	A	43		
DW	2001 Fall Gateway Test	SMITH	JOHN		NTY				G	B	39		
DW	2001 Fall Gateway Test	SMITH	JOHN		TY				G	A	32		
DW	2001 Fall Gateway Test	SMITH	JOHN		NTY				G	B	22		
DW	2001 Fall Gateway Test (29)	SMITH	JOHN		TY				G	A	32		
DW	2001 Fall Gateway Test (29)	SMITH	JOHNNY		TY				G	A	52		
DW	2001 Fall Gateway Test (29)	SMITH	JOHN		NTY				G	A	43		
DW	2001 Fall Gateway Test (29)	SMITH	JOHN		NTY				G	B	39		
DW	2001 Fall Gateway Test (29)	SMITH	JOHN		TY				G	B	22		
DW	2002 Spring Gateway Test	SMITH	JOHN		NTY				G	B	43		
DW	2002 Fall Gateway Test	SMITH	JOHNNY		TY				G	E	28		
DW	2002 Fall Gateway Test	SMITH	JOHN		TY				G	E	18		
DW	2002 Fall End Of Course Test	SMITH	JOHN		TY				E	M	21		
DW	2003 Spring Gateway Test	SMITH	JOHNA*		NTY				G	B	27		
DW	2003 Spring End Of Course Test	SMITH	JOHNAT		NTY				E	M	17		
DW	2003 Spring End Of Course Test	SMITH	JOHNAT		NTY				E	E	28		
DW	SPRING 2004 Gateway	SMITH	JOHN		COUNTY				G	A	44		
DW	SPRING 2004 Gateway	SMITH	JOHN		COUNTY				G	A	40		
DW	SPRING 2004 Gateway	SMITH	JOHN		COUNTY				G	E	43		
DW	SPRING 2004 Gateway	SMITH	JOHN		COUNTY				G	E	37		
DW	SPRING 2004 Gateway	SMITH	JOHN		COUNTY				G	B	38		
DW	SPRING 2004 Gateway	SMITH	JOHN		COUNTY				G	A	47		
DW	SPRING 2004 End of Course	SMITH	JOHN						E	E	39		
DW	SPRING 2004 End of Course	SMITH	JOHN		TY				E	E	23		
DW	FALL 2004 Gateway	SMITH	JOHN		COUNTY				G	B	42		
DW	FALL 2004 End of Course	SMITH	JOHN						E	E	43		
DW	2005 SPRING - Gateway	SMITH	JOHNAT		NTY				G	A	40		
DW	2005 SPRING - End of Course	SMITH	JOHN		NTY				E	E	44		

[Export List to Excel](#)

Empower Correlative Data Analysis

Select District, School(s), Academic Year and Rubric,
click any data element to select filter(s) and then click
to inspect factors for further analysis.

[Switch to side-by-side comparison view](#)

Customer: [Show Customer Name](#) Academic Year: 2012-2013

129 2012-2013

School: All Schools Rubric: TEAM Educator Rubric

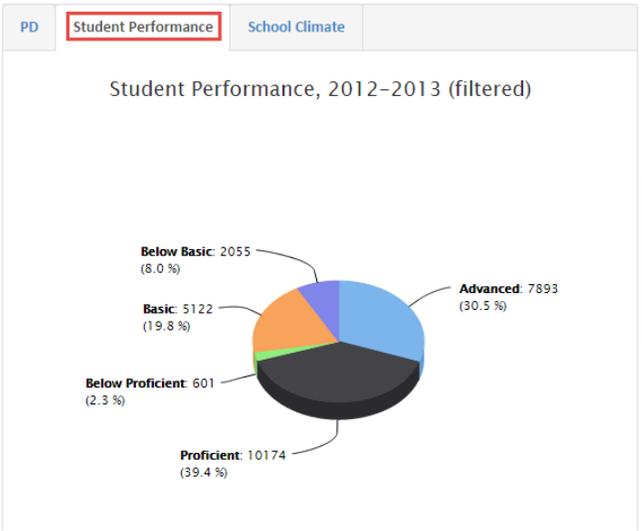
Go

Filters: Managing Student Behavior (MSB) = 5

Indicators Observations Teacher Timeline

Indicator Values
■ 1 ■ 2 ■ 3 ■ 4 ■ 5

Domain	Indicator	Results (observations by value)
Environment	Expectations (EX)	
Environment	Managing Student Behavior (MSB)	
Environment	Environment (ENV)	
Environment	Respectful Culture (RC)	
Instruction	Standards and Objectives (SO)	
Instruction	Activities and Materials (ACT)	



Empower Correlative Data Analysis

Select District, School(s), Academic Year and Rubric, click any data element to select filter(s) and then click to inspect factors for further analysis.

empower Settings Hello RandaTestUser! Log off

School: All Schools Rubric: TEAM Educator Rubric

Go

Filters: Managing Student Behavior (MSB) = 5

Indicators Observations Teacher Timeline

Show Teacher Name

Show 15 entries

Events (time line)

Educator	Average Rating	PD Events
[Redacted], James	~1.5	1
[Redacted], Sheryl L	~1.5	1
[Redacted], Cheri	~1.5	1

PD Student Performance School Climate

Student Performance, 2012-2013 (filtered)

Performance Level	Count	Percentage
Advanced	7893	30.5 %
Proficient	10174	39.4 %
Basic	5122	19.8 %
Below Basic	2055	8.0 %

Empower Correlative Data Analysis

Select District, School(s), Academic Year and Rubric, click any data element to select filter(s) and then click to inspect factors for further analysis.

empower Settings Hello RandaTestUser! Log off

[Switch to side-by-side comparison view](#)

Customer: [Show Customer Name](#)
129

Academic Year: 2012-2013

School: All Schools

Rubric: TEAM Educator Rubric

Go

Filters: Managing Student Behavior (MSB) = 5

Observations | Indicators | Teacher Timeline

Show Teacher Name

School Name	Observer	Date	Time	Rating
[Redacted], James				
High School	, Steven	2012-12-12T00:00:00	1900-01-01T19:00:00	4.3125
[Redacted], Sheryl L				
Elementary	[Redacted], Kayla	2013-02-06T00:00:00	1900-01-01T09:00:00	3.75
[Redacted], Cheri				
[Redacted] School	[Redacted], Mark	2013-01-29T00:00:00	1900-01-01T11:00:00	4.1875
[Redacted], Amy				
High School	[Redacted], Rebecca	2013-02-	1900-01-	3.789473

PD | **Student Performance** | School Climate

Student Performance, 2012-2013 (filtered)

Performance Level	Count	Percentage
Proficient	10174	39.4 %
Advanced	7893	30.5 %
Basic	5122	19.8 %
Below Basic	2055	8.0 %

Empower Correlative Data Analysis

Select District, School(s), Academic Year and Rubric,
click any data element to select filter(s) and then click
to inspect factors for further analysis.

Customer: [Show Customer Name](#)

129

Academic Year:

2012-2013

School:

All Schools

Rubric:

TEAM Educator Rubric

Go

Filters: Managing Student Behavior (MSB) = 5 ✕

Indicators		Observations	Teacher Timeline
Indicator Values			
■ 1 ■ 2 ■ 3 ■ 4 ■ 5			
Domain	Indicator	Results (observations by value)	
Environment	Expectations (EX)		
Environment	Managing Student Behavior (MSB)		
Environment	Environment (ENV)		
Environment	Respectful Culture (RC)		
Instruction	Standards and Objectives (SO)		
Instruction	Activities and Materials (ACT)		

PD		Student Performance	School Climate
Show 50 entries			
Content	%	Educators	
Charting the COREse	4.6747	74	
Family Engagement Standard V Online Training	4.3588	69	
Common Core State Standards Training	3.7903	60	
Middle School Course Syllabus Posted	2.6532	42	
Reading Street K-5	2.59	41	
Family Engagement Standard IV Online Training	2.5268	40	
Reach Them to Teach Them - It's Worth It!	2.5268	40	
Family Engagement Standard III Online Training	2.1478	34	
High School Course Syllabus Posted	2.0215	32	
Middle School Honors Boot Camp	2.0215	32	

Empower Correlative Data Analysis

Select District, School(s), Academic Year and Rubric,
click any data element to select filter(s) and then click
to inspect factors for further analysis.

[Switch to side-by-side comparison view](#)

Customer: [Show Customer Name](#) Academic Year: 2012-2013

129 2012-2013

School: All Schools Rubric: TEAM Educator Rubric

Go

Filters: Managing Student Behavior (MSB) = 5

Indicators		
Domain	Indicator	Results (observations by value)
Environment	Expectations (EX)	
Environment	Managing Student Behavior (MSB)	
Environment	Environment (ENV)	
Environment	Respectful Culture (RC)	
Instruction	Standards and Objectives (SO)	
Instruction	Activities and Materials (ACT)	

School Climate	
Measure	Value
TNS3I Value: 64.54	
Academic Challenge Points	8.575714285714286
Attendance Rate Points	4.6328571428571435
Bullying Points	7.516428571428571
Physical Safety Points	6.107857142857144
Suspension and Expulsion Points	4.267857142857143

Showing 1 to 5 of 5 entries

Empower Correlative Data Analysis

Select side by side comparison to compare Districts, Schools, Academic Years or Rubrics. click any data element to select filter(s) and then click to inspect factors for further analysis.

[Back to single dashboard view](#)

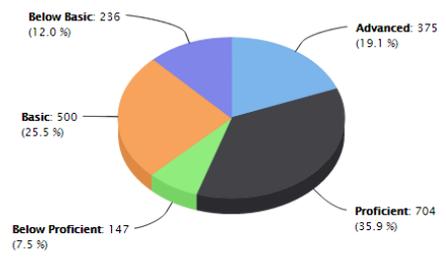
Customer:

 Academic Year:
 School:
 Rubric:

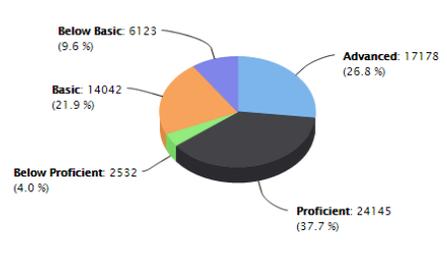
Customer:

 Academic Year:
 School:
 Rubric:

Student Performance, 2012-2013



Student Performance, 2012-2013



Indicators



Domain	Indicator	Results (observations by value)
Environment	Expectations (EX)	[Bar chart showing distribution of values 1-5]
Environment	Managing Student Behavior (MSB)	[Bar chart showing distribution of values 1-5]
Environment	Environment (ENV)	[Bar chart showing distribution of values 1-5]
Environment	Respectful Culture (RC)	[Bar chart showing distribution of values 1-5]
Instruction	Standards and Objectives (SO)	[Bar chart showing distribution of values 1-5]
Instruction	Activities and Materials (ACT)	[Bar chart showing distribution of values 1-5]
Instruction	Teacher Content Knowledge (TCK)	[Bar chart showing distribution of values 1-5]
Instruction	Teacher Knowledge of Students (TKS)	[Bar chart showing distribution of values 1-5]
Instruction	Motivating Students (MS)	[Bar chart showing distribution of values 1-5]
Instruction	Questioning (QU)	[Bar chart showing distribution of values 1-5]

Indicators



Domain	Indicator	Results (observations by value)
Environment	Expectations (EX)	[Bar chart showing distribution of values 1-5]
Environment	Managing Student Behavior (MSB)	[Bar chart showing distribution of values 1-5]
Environment	Environment (ENV)	[Bar chart showing distribution of values 1-5]
Environment	Respectful Culture (RC)	[Bar chart showing distribution of values 1-5]
Instruction	Standards and Objectives (SO)	[Bar chart showing distribution of values 1-5]
Instruction	Activities and Materials (ACT)	[Bar chart showing distribution of values 1-5]
Instruction	Teacher Content Knowledge (TCK)	[Bar chart showing distribution of values 1-5]
Instruction	Teacher Knowledge of Students (TKS)	[Bar chart showing distribution of values 1-5]
Instruction	Motivating Students (MS)	[Bar chart showing distribution of values 1-5]
Instruction	Questioning (QU)	[Bar chart showing distribution of values 1-5]

Empower Correlative Data Analysis

Flexible customer settings allow focus on selected data elements in the analysis

empower 

Customer Settings

General

- Supports Side-by-Side view
- Show un-redact button

Single Page Features

- Indicators
- Observations
- Teacher Timeline
- Professional Development
- Student Performance
- School Climate
- Teacher Growth

Side-by-Side Comparison Page Features

- Indicators
- Observations
- Teacher Timeline
- Professional Development
- Student Performance
- School Climate
- Teacher Growth

Apply Changes

Empower
Correlative Data Analysis – Drill Down Capability

Select data element to analyze contributing data.
For example, select advanced or below basic student performance to analyze the factors producing each set of results.

Lagging Indicators

Instruction	Problem Solving (PS)	
Instruction	Lesson Structure and Pacing (LS)	
Instruction	Grouping Students (GRP)	

Select indicator to identify contributing data for focused remediation efforts.

Filters: Problem Solving (PS) = 1 ✕

Indicators
Observations
Teacher Timeline

Show Teacher Name

School Name	Observer	Date	Time	Rating
☐, Carol				
☐ Elementary	☐, Adam	2012-11-18T00:00:00	1900-01-01T18:00:00	1.75
☐, Heather				
☐ Alternative Sch	Nicki	2013-03-21T00:00:00	1900-01-01T17:00:00	2.625
☐, Joel				
☐ Elementary	Jessica	2013-01-02T00:00:00	1900-01-01T14:00:00	1.5

ii. Information needed by parents/communities to inform school choice

We can deliver school performance, demographics, and value added factors as instructed and directed by State project owners. The reporting framework can aggregate and disaggregate data across any of the required dimensions in a fully extensible UX format. RANDA does not dictate how the tools will work, we accurately facilitate the rollout of exactly the requirements specified by State project owners. The reporting tool allows for reporting at the aggregate and individual level on variables such as: school and student performance (report card, yearly progress); student demographics; student programs; student growth models; student assessment, attendance, college readiness, and grade history information; and other data as required.

Organizational leveling is entirely extensible based on roles and system design. You can aggregate and disaggregate in whatever configuration is required. The system is not pre-designed to force any particular setup. Comparison between representative entities is a UX configuration option that can be enabled depending on role requirements.

Drill-down can be enabled for any data type or dimension for which source data is provided or available. All of the specifics for this functionality will be determined during requirements gathering where the State's project owners define the exact behavior and presentation of each link.

Information available to public users is composite information cleansed to prevent exposure of individual student identification.

iii. Improvement of various types of schools within Arizona iv. Construct relevant components of school quality

We can deliver improvement metrics for relevant components of school quality as defined and directed by the State's project owners.

d) Describe how the proposal may reduce administrative burden for LEAs and the SEA given the variation in accountability requirements related to applicable federal laws, state laws, State Board of Education rules, charter school authorizers, and other regulatory bodies.

Key performance and reporting metrics can be included in the solution to facilitate LEAs and the SEA in monitoring metrics and reporting requirements to comply with the various laws and rules. This not only reduces administrative burden it also delivers immediate insight into key metrics effecting funding, reporting, and compliance with applicable laws and rules.

4. Measuring Student Growth

a) What are the advantages of utilizing this measure of growth on Arizona's statewide assessments and in Arizona's new A-F Letter Grade Accountability System?

We currently report on Student Learning Objectives (SLOs)/ Student Growth Measures (SGMs) on a statewide basis in Colorado and Ohio. We can discuss in depth the pros and cons of measuring SLOs/SGMs on the State's accountability

measures. We currently offer a SLO/SGM template as part of our educator evaluation solution which supports individual, subject related, school level, LEA, and SEA SLOs/SGMs and recognized student growth can be measured in many different aspects and at many different levels.

b) Please discuss evidence of technical appropriateness and statistical robustness to support the validity and reliability of student-level growth scores based on each of the following assessment scenarios:

i. Vertically scaled assessments of grades 3 through 8 ELA standards

We currently report on assessments of ELA by grade level for Tennessee Department of Education (TDOE) and can provide the State with student growth on ELA assessments. We focus on accuracy and validating results to deliver trustable data for educational leaders and can perform those services for the State.

ii. Vertically scaled assessments of grades 3 through 8 Mathematics standards

We currently report on these assessments for TDOE and can provide this reporting for the State.

iii. Vertically scaled, non-sequential with extreme variability in the instructional format for end of course assessments of high school ELA and Mathematics standards

We currently report on EOC assessments for ELA and Mathematics for TDOE and can provide this reporting for the State.

iv. Across test administration modality (Paper and computer-based) equated on a common vertical scale in each of the subjects above

RANDA has been performing high-stakes calculations and scoring of education data since 2001, as well as intensive involvement in assessment scoring, calculations, and data management for the Tennessee Department of Education (TDOE) assessments system since 2008. We are the primary data feed provider for Tennessee Value-Added Assessment System (TVAAS), including our implementation of what TDOE calls QuickScore, which drives TDOE's high-stakes assessment data and information dissemination.

Tennessee is the only state, of which we are aware, that uses a different assessment data management vendor (RANDA) than the assessment content vendor (Pearson). RANDA takes over the assessment data management process at the point where the assessment documents are scanned through the final reporting of scores. Our proprietary processes and techniques have dramatically increased the accuracy of the assessment data, reduced reporting time and increased accountability by all involved. While others may propose consulting services to accomplish the required tasks, RANDA already has proven software and processes in place to accomplish those tasks.

All programmers and other RANDA project team members, will cultivate a

detailed understanding of your scoring algorithm. Programmers will identify key indicators, develop strategies for validation, and create the mathematical formulas required to perform each calculation. After coding is developed, rigorous testing in a sandbox environment, according to Agile Software Development guidelines, will ensure calculations and scoring algorithms, along with your demographic factors function as required.

v. Varying assessments selected off of a menu of assessments potentially available in high school grades and administered in various modalities

We can report on assessments as required by the State as long as we have access to the data.

vi. Varying assessments selected off of a menu of assessments potentially available to students in elementary grades and administered in various modalities

We can report on assessments as required by the State as long as we have access to the data.

vii. Annual tests of English language proficiency as measured by AZELLA administered in Grades K through 12

We can report on test assessment proficiency as required by the State as long as we have access to the data.

viii. Summative assessments of Science standards administered to students enrolled in grades 4, 8, and high school

We can report on assessments as required by the State as long as we have access to the data.

c) Please describe the organization's professional experience and technical capacity for conducting this type of work on behalf of education agencies locally, nationally, and/or internationally.

RANDA has been performing high-stakes calculations and scoring of education data since 2001, as well as intensive involvement in assessment scoring, calculations, and data management for the Tennessee Department of Education (TDOE) assessments system since 2008. We are the primary data feed provider for Tennessee Value-Added Assessment System (TVAAS), including our implementation of TDOE's QuickScore, which drives TDOE's high-stakes assessment data and information dissemination.

RANDA improved student demographic data and Teacher/Student Data Link data accuracy from 86% to 99.4% correct. We serve 1,746 schools with 948,508 student and 64,228 teachers. The system has more than 88,800 production users. The TDOE implementation features statewide data integration and reporting (via dashboard, print and export) and reconciles data sources across many different systems to achieve increased accuracy.

d) Describe any services or assistance the vendor might provide to expedite the calculation of student growth scores so they are available to ADE,

schools, students, and parents via student score reports produced by Arizona's test vendor(s).

These are services we currently provide for TDOE which we have illustrated in the following mockup examples of Achievement Comparisons by Demographic, QuickScore Selection from the menu, QuickScore EOC Results, and Graduation Eligibility.

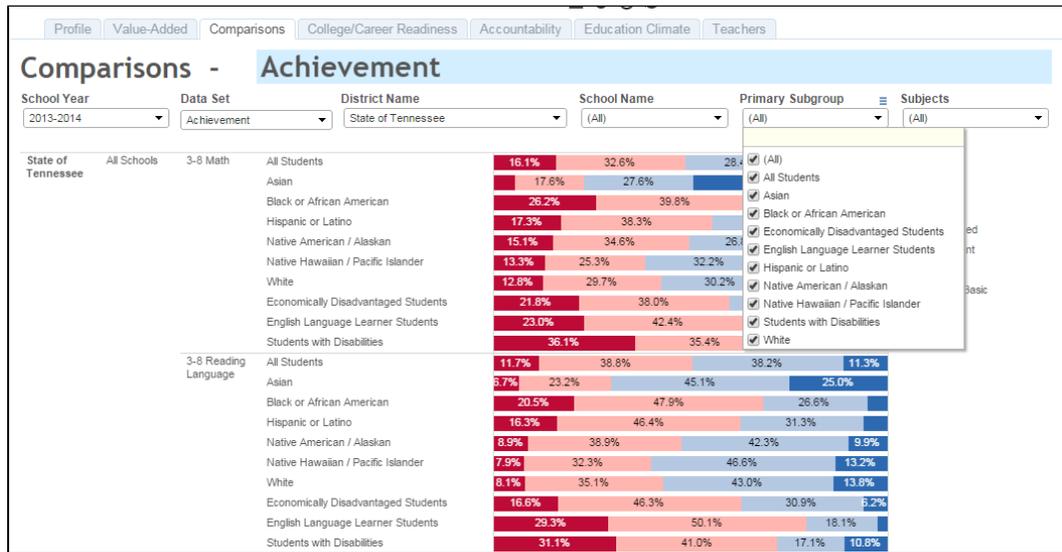
Our comparable experience with Tennessee Department of Education (TDOE) is a valuable asset which allows us to bring a depth of knowledge and a vast store of existing processes to validate and report on your data. We have a team of talented technologists who understand your objectives and what needs to happen to achieve them.

In 2001, RANDA began serving the Tennessee Department of Education's Assessment, Evaluation and Research Division. RANDA has had a full technical services contract with the Tennessee Department of Education since 2008. For the original project, RANDA created an Assessment Data Management system to collect and report statewide assessment data for grades K-12. The system was later enhanced and upgraded to an enterprise education data system to provide greater functionality. The system links student achievement metrics to teacher performance, contributes to formal reporting and compliance, and provides longitudinal data aggregation via a secure, web-based data dashboard. We cut the amount of time it takes to get critical assessment scores from weeks, and at times months, to a matter of days, allowing administrators to make timely decisions on students such as determination of graduation eligibility before graduation happens.

Our Teacher/Student Data Link (TSDL) process increased the accuracy of student/teacher linking data from 86% to 99.4%. The TDOE system presents a student's instructional time as a percentage. The workflow's claiming process breaks total instructional time (100%) into representative percentages for each teacher to claim. A team of two teachers might, for example, equally share instructional time in math, and would therefore each claim 50% responsibility for that student and his or her classmates. As the claiming process proceeds, state personnel can pull detailed reports on under-claimed or over-claimed students, and can assist system and school personnel in rectifying the discrepancies. At the end of the process, every student should be 100% claimed so his or her testing results can be properly attributed to the correct educators for all aspects of reporting.

RANDA was recently awarded a contract extension to develop and manage Tennessee's single sign-on solution for all of their education data vendors and we were awarded a contract for Tennessee's Assessment Data Management services, further demonstrating our abilities as a secure data partner for high-stakes data and identity management. Our experience in assessment data management with TDOE has provided the opportunity for RANDA technologists to develop and implement a number of assessment and SIS data management innovations, all of which have enhanced both the efficiency and the accuracy of the statewide system. These innovations save the TDOE time and money and have solidified a model of best practices for assessment data management.

We have a proven record of meeting and exceeding expectations for fulfilling objectives and requirements for similar projects and contracts, including our current work with TDOE, Ohio Department of Education (eTPES) and systems for teacher and principal evaluation (ePTES), Maine educator evaluation, the Colorado Statewide Performance Management System (COPMS), and the DC Public Schools and Denver Public Schools Observer Training Systems. As the contracted TDOE Assessment technical services vendor, we have demonstrated our commitment to careful stewardship of education data, as well as our capabilities in the areas of data integration, data validation, data management and reporting.

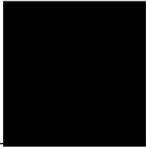


System Name:
00190 - DAVIDSON COUNTY

Select a test:
2009 Spring End of Course

Select a school:
0335 - HILLSBORO COMP HIGH

Select a content area:
ALL Content Areas

		 End of Course - English I  Report				Report Date: 12/8/09 1:27 PM	
		Test Date: Spring 2009 Teacher: LMNOP ABCDEFG Class Period: O System: 00190 DAVIDSON COUNTY School: 0335 HILLSBORO COMP HIGH					Purpose: This report provides preliminary data from the  End of Course test.
Test Site: DOE - Nashville			Run: eoc006				
Student	Form	Grade	Student Unique ID	Score	Performance Level	Notations	
ABCDEFGH, QRST X	T	09		17	Below Proficient		
BCDEFGH, QRSTU X	T	09		24	Proficient		
CDEFGHI, RSTUV X	T	09		23	Proficient		
DEFGHIJ, STUVW X	T	09		18	Below Proficient		
EFGHIJK, TUVWX X	T	09		19	Below Proficient		
FGHIJKL, UVWXY X	T	09		23	Proficient		
GHIJKLM, VWXYZ X	T	09		30	Proficient		
HIJKLMN, ABCDE X	T	09		22	Proficient		
RSTUVWX, MNOPQ X	T	09		33	Proficient		
STUVWXY, NOPQR X	T	09		29	Proficient		
TUVWXYZ, OPQRS X	T	09		29	Proficient		
Coded Student Count:		11	Actual Student Count:		11		

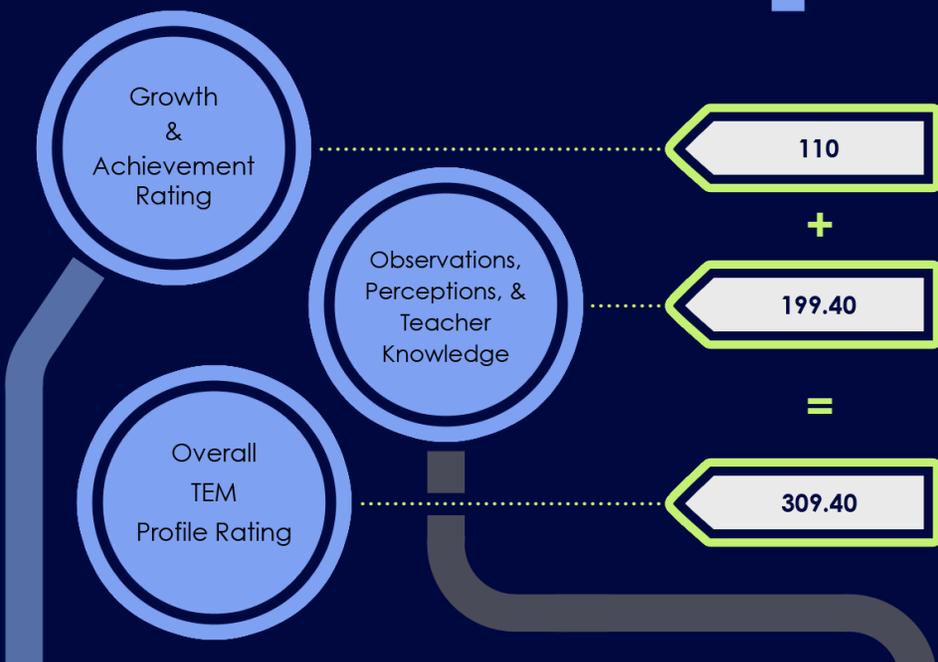
e) How can parents, teachers, students, and schools use growth score(s) to interpret individual student trajectory relative to Arizona’s academic standards?

We understand student growth measures and academic standards can be complex algorithms. Making complex processes and information easy to understand is a complex process in itself. The following infographics illustrate student growth for an individual student based on Tennessee standards. We can create easy to interpret student reports for the State and also design trajectory for educational leaders to gauge student growth for a class, school, LEA, and SEA.

How did David Abrams do for 2011 - 2012?



How do we get this number?



Each component is measured and calculated based on the these percentages of weight:



Growth & Achievement Rating

Based on 2010 - 2011 Data*



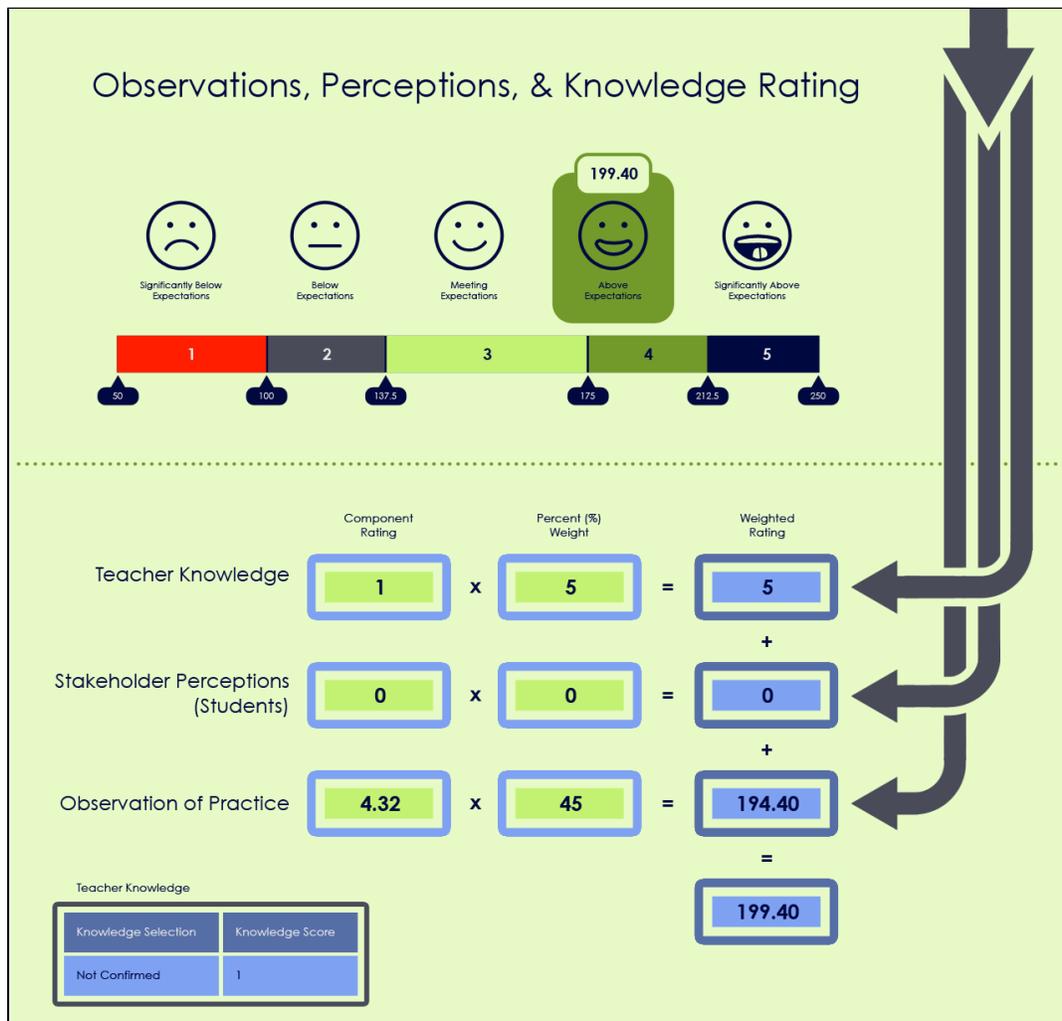
	Component Rating	x	Percent (%) Weight	=	Weighted Rating
Student Growth: TVAAS Data*	1		35		35
Student Achievement	5		15		75
				+	
				=	110

Student Growth: TVAAS Data*

TVAAS Type	TVAAS Level
TVAAS School Composite - 3 yr Overall	1

Student Achievement

Chosen Measure on 15% Form	Approved Measure	Additional Detail	Achievement Measure Score
School-wide TVAAS (overall or applicable subject) for the achievement measure.	School-wide TVAAS	2010 - 2011 TVAAS Overall	5



Observation of Practice				
Rubric Name	Indicator	11 / 17 / 2011	3 / 22 / 2012	Indicator Avg Score
MCS Exceptional Children Self-Contained Rubric (2011 - 2012)	1. Object-Driven Lessons	4		4.00
	2. Explain Content	4		4.00
	3. Appropriately Challenging Work	4		4.00
	4. Engagement Strategies	4		4.00
	5. Higher-Level Thinking Skills	4		4.00
	6. Check for Understanding	4		4.00
	7. Instructional Time	4		4.00
	8. Classroom Community	4		4.00
	9. Procedures & Routines	4		4.00
	10. Space & Resources	4		4.00
	11. Manage Student Behavior	4		4.00
MCS Teaching and Learning Framework (2011 - 2012)	1. Object-Driven Lessons		4	4.00
	2. Explain Content		5	5.00
	3. Appropriately Challenging Work		5	5.00
	4. Engagement Strategies		4	4.00
	5. Higher-Level Thinking Skills		4	4.00
	6. Check for Understanding		4	4.00
	7. Instructional Time		5	5.00
	8. Classroom Community		5	5.00
	9. Procedures & Routines		5	5.00
	10. Space & Resources		5	5.00
	11. Manage Student Behavior		5	5.00
Overall Score		4.00	4.64	4.32

* NOTE: Per State Requirements, achievement data for the 2011 - 2012 school year will be used to calculate final evaluation scores. The information above is the existing achievement information for this teacher, and is included to provide historical information related to student achievement.






f) How can growth scores be aggregated and integrated into accountability determinations which may include varied weighting of proficiency results and other indicators of school performance?

The RANDA reporting framework can aggregate and disaggregate data across any of the required dimensions in a fully extensible User Experience (UX) format.

RANDA does not dictate how the tools will work, we simply facilitate the effective rollout of the exact requirements specified. Organizational leveling is entirely

extensible based on roles and system design. The system is not pre-designed to force any particular setup, but simply complies with the outlined requirements. Report scheduling and messaging subsystems are part of the framework. We can build role based dashboards to delivery accountability determinations for school performance as defined and required by State project owners.

Drill down can be enabled for any data type or dimension for which source data is provided or available. All of the specifics for this functionality will be determined during requirements-gathering sessions where project owners will determine the exact behavior and presentation of each link. Key performance indicators for any data dimension can be set based on administrative thresholds. Essentially, if the data exists and RANDA has appropriate access to load it, then it can be reported and alerted upon.

5. Other Technical Considerations

a) Describe any detailed analyses currently available or could be conducted to support the validity, reliability, and fairness of a proposed system as well as the methodology and validation process for standard setting the overall A-F letter grade determinations. The ADE will model all components for possible inclusion in a final accountability system.

RANDA has worked extensively in high-stakes assessment data validation and reporting for the Tennessee Dept. of Education (TDOE). Our experience with the Tennessee Department of Education (TDOE) Tennessee Value Added Assessment System (TVAAS) and the enterprise system we have created for TDOE, which they call EdTools, has afforded RANDA the opportunity to develop proven processes and innovative solutions to SIS and assessment data issues. We have also implemented a full complement of active data reports (dashboards and interfaces that update in real-time based on current system conditions) and snapshot reports to allow for durable historical benchmarking.

We have designed and implemented reporting from start to finish on the assessment materials supply chain and have demonstrated capabilities to report on processes where we control 100% of the process to those where we only aggregate other vendors' process data. Overall the reporting paradigm through RANDA has been one of transparency and flexibility first whereby any authorized user can report on pertinent data, many times before and after having had the opportunity to interact with that data on a read/write basis in order to make it more accurate. The combination of clarity, transparency, usability, and access has made Tennessee's student demographic data and Teacher-Student Data Link information as it relates to assessments 99.4% accurate — up from 86% which is the accuracy level when RANDA first started working with TDOE's demographic and value added data. In short, we know reporting inside and out and we know exactly what questions to ask and how to ask them to shed light on the process and offer suggestions for improvement.

RANDA has developed mature data interface documentation and standards of service validated against the import and processing of tens of thousands of transactional files per day. We maintain rigorous data dictionary standards for all

formats including some of the first documents of their kind for existing data assets and assessment data formats and proprietary Student Information System (SIS) implementations. We have internal test beds already implementing a full range of data import and Extract, Transform and Load (ETL) processes, which are well-documented. We feel very comfortable working within these frameworks. In order to inter-operate among data formats (standard and proprietary), RANDA has created an ETL layer we call the RANDA Translation Layer, which comprises a fully abstracted translation engine providing us with the capability to model and translate between any two data standards for import and export facilitation.

All import and export functions will be logged for transactional and data quality errors both for batch-level and real-time processing. All import and export processes will employ data quality validation schemes when required. ETL is facilitated via a combination of SQL Server Integration Services (SSIS) and TSQL through a fully managed process and schedule based entirely on ADE's needs and requirements. Business rules are maintained via custom transformations in SSIS with user- and super-user based documentation and support. The system can provide extensive monitoring and audit trail tracking specifically for the ongoing improvement of data processing from inter-agency and intra-agency connections. All exceptions are caught and documented in human-readable format for issue resolution.

All schedules will be maintained in a shared documentation library with access limited to authorized RANDA technologists and ADE Officials and Project Managers. We currently manage similar data validation, processing, scoring algorithms and reporting for TDOE, and we can deliver the quality results that you require.

When we identify development needs, RANDA utilizes agile software development methods based on iterative and incremental processes. In this environment, continuous collaboration among project stakeholders is mandatory for project success and superior results. Delivering software functionality that passes Quality Assurance (QA) and User Acceptance Testing (UAT) is a primary measurement of progress. Our QA effort is complimented with collaborative client interaction during development cycles and feedback from UAT results.

We can implement ADE's letter grading system algorithm to include all of the factors the State views as relevant to District, School, and Student performance. Our only requirement is being able to have access to the data. We will also implement steps to validate and where required exception report in readable format for data accuracy improvement.

b) Describe the timeline necessary to produce school accountability ratings which will differentiate and support the variety of public schools and districts within Arizona.

Our experience with data integration and reporting and our background with incremental data accuracy improvement affords RANDA technologists with the skills and techniques to perform all aspects of your accountability components and system. Integration of statewide data from the Arizona districts and delivering school accountability ratings including the reports and data analysis ADE requires can be defined, developed, and implemented in a 12 month time window. During

subsequent contract periods we can collaborate with ADE project owners and stakeholders to identify additional data needs, identify and resolve data accuracy issues, and develop additional report and data analysis tools.

c) Describe the level of complexity and ability to replicate the statistical techniques which may be utilized throughout the system to differentiate school performance.

We have developed significant expertise in building data translation processes and deliver systems to interact smoothly with other data formats and components. RANDA technologists are highly skilled and aware States and Districts often have disparate systems which often cannot "talk" to each other. Existing systems may also be in the process of being upgraded or replaced. We have the knowledge and experience to work within these types of environments to successfully integrate, validate, improve the accuracy and report on your existing data

Our multi-decade experience in education data management, data sourcing, data integration, and utilization of data gives us a depth of insight into educational reporting requirements, data submission standards for various government entities, meaningful teacher and student performance rubrics, and ways to integrate various data sets to deliver cleaner data at the end of the process.

Detailed data definitions will be established during the requirements-gathering phases of the project so we can fully understand what external data linkages are required. We integrate with numerous data sources and technologies for the educational data management solutions in place in Colorado, Ohio, and Tennessee, and in numerous district and international applications. We will collaborate with your project owners and stakeholders to confirm systems integrate as required and all data is accessible. Existing stored data can be accessed and transformed into information you can analyze, understand and act upon. Common elements of data will be managed and reconciled when received from any input source, including imported or uploaded sources, to enable accurate and consistent reports and dashboards in the output layer.

We have experience reviewing our client's current processes, determining what works and what does not work, and identification of additional parameters to improve data quality. We use this analysis to design strategies to integrate source data into required processes and data structure. We have worked through numerous iterations and use cases to develop the necessary protocols and techniques, improve the accuracy of your data, and ensure meaningful data is sourced and delivered to your user's screens and reports. Our goal is to transform your data into meaningful information you can use to inform the high stakes decisions educational leaders must make every day.

Our insight into the effective use of education data gives us an in-depth understanding of education data system standards, and we bring our store of accumulated knowledge and experience to your business rules consultation sessions. We can then focus our time and resources to fully understand and consult with your officials and stakeholders to accurately and completely define your unique needs in the system business rules.

We can also offer RANDA Solutions' Empower system, which is a data alignment,

aggregation, and analytics platform, which presents, in aggregate, a data dashboard for ongoing analysis and reporting for related data investigation. For example we are able to correlate data elements on a granular level for specific aspects of student performance such as student behavior, school climate survey results, and teacher professional practice evaluation down to the individual elements of the evaluation rubric, including comparisons over time, and the teacher's completed professional development courses. We will design the data elements for Empower in collaboration with your designated RANDA Project Manager and your project owners and stakeholders. Our design process includes initial mockups of data presentation models, approval of said models, and implementation services for end-user presentation. We have provided Empower screenshots in our response to provide an example of reporting for correlated data elements.

d) Describe any resources related to personnel, data, and/or technology the proposal may require, including any additional resources, data collection, management, and storage needed by the Department.

In all of our previous experiences, including statewide data systems for Colorado, Ohio and Tennessee, we have always kept client commitments to a minimum.

We welcome your input and will value your participation in the process; however, the lack of availability of your project resources must not derail the project, which is why we staff the project sufficiently to not introduce bottlenecks and to avoid overburdening your assigned resources. Generally, only a few of your resources will be needed for any significant amount of time except during training when we meet in larger groups. We have built our processes to communicate clearly and transparently without requiring onerous meeting schedules. We document everything online in an easy to read format.

Outside of requirements-gathering, access to your data and systems, and oversight, we don't foresee your staff having to expend a great deal of time on this project. The project manager and his or her staff will need to be available to implement changes that occur over time, but most of the functionality is already proven.

e) Please highlight any significant deviations from previous practice or changes to operational definitions currently utilized within Arizona's system of holding schools accountable.

We do not foresee requiring any deviations from Arizona's system of holding schools accountable.

We deliver access to timely, accurate information designed to inform educators to confidently make high-stakes decisions, efficiently allocate resources and ultimately improve educational outcomes. RANDA's education data systems provide immediate, relevant, and actionable data in a wide range of formats to support broad organizational priorities. Our dashboard and reporting systems update reports and data views immediately when new data has been introduced. Active data reporting enables qualitative improvements in real world processes. When reports accurately reflect current environments in the classrooms, the reports support decisive action based upon accurate, relevant,

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timely data. Administrators no longer have to navigate through lengthy bureaucratic processes to free critical performance data from external vendors or internally siloed IT organizations. Instead, the right data is available to the right people at the right time. This combination of accuracy and speed allows administrators and educators to make informed decisions based on useful information able to make a difference in the classroom and an increase in student and educator performance, often with tight alignment around performance goals, which was previously impossible using static paper reports.

RANDA systems deliver your data in an accessible in a format which allows a results (presentation) layer to display and make sense of it — without extensive translation — thus the efficiency and utility of the overall system is dramatically improved. We deliver your data in a current, relevant, actionable presentation layer and, when new data is introduced, your reports and data views update to reflect current environments. We adhere to industry standards such as Ed-Fi and CEDS, within the context of your business rules and requirements.