

U.S. Department of Education
Washington, D.C. 20202-5335



**APPLICATION FOR GRANTS
UNDER THE**

EAG-Accessibility

CFDA # 84.368A

PR/Award # S368A120001

Grants.gov Tracking#: GRANT11158435

OMB No. , Expiration Date:

Closing Date: Jun 15, 2012

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This application was generated using the PDF functionality. The PDF functionality automatically numbers the pages in this application. Some pages/sections of this application may contain 2 sets of page numbers, one set created by the applicant and the other set created by e-Application's PDF functionality. Page numbers created by the e-Application PDF functionality will be preceded by the letter e (for example, e1, e2, e3, etc.).

Application for Federal Assistance SF-424

* 1. Type of Submission:

- Preapplication
 Application
 Changed/Corrected Application

* 2. Type of Application:

- New
 Continuation
 Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

06/12/2012

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Kansas State Department Education

* b. Employer/Taxpayer Identification Number (EIN/TIN):

48-6029925

* c. Organizational DUNS:

8798970980000

d. Address:

* Street1:

120 SE 10th

Street2:

* City:

Topeka

County/Parish:

* State:

KS: Kansas

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

66612-1182

e. Organizational Unit:

Department Name:

Division Name:

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

Prefix:

* First Name:

Scott E. Smith

Middle Name:

* Last Name:

Smith

Suffix:

Title:

Organizational Affiliation:

* Telephone Number:

1-785-296-4351

Fax Number:

* Email:

Sesmith@ksde.org

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

U.S. Department of Education

11. Catalog of Federal Domestic Assistance Number:

84.368

CFDA Title:

Grants for Enhanced Assessment Instruments

*** 12. Funding Opportunity Number:**

ED-GRANTS-043012-002

* Title:

Office of Elementary and Secondary Education (OESE): Enhanced Assessment Instruments Grants Program: Enhanced Assessment Instruments (Accessibility Competition) CFDA Number 84.368A-2

13. Competition Identification Number:

84-368A2012-2

Title:

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

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

Accessibility of Technology-Enhanced Assessments

Attach supporting documents as specified in agency instructions.

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant

b. Program/Project

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

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

* a. Federal	<input type="text" value="1,838,446.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="1,838,446.00"/>

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

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

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

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

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

Yes No

If "Yes", provide explanation and attach

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

** I AGREE

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

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title:

* Telephone Number: Fax Number:

* Email:

* Signature of Authorized Representative: * Date Signed:

ASSURANCES - NON-CONSTRUCTION PROGRAMS

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

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

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

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

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

<p>* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL</p> <p>Scott Smith</p>	<p>* TITLE</p> <p>Assistant Director of Assessments</p>
<p>* APPLICANT ORGANIZATION</p> <p>Kansas State Department Education</p>	<p>* DATE SUBMITTED</p> <p>06/12/2012</p>

DISCLOSURE OF LOBBYING ACTIVITIES

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

Approved by OMB
0348-0046

1. * Type of Federal Action: <input type="checkbox"/> a. contract <input checked="" type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. * Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input checked="" type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. * Report Type: <input checked="" type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change
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4. Name and Address of Reporting Entity:
 Prime SubAwardee

* Name:

* Street 1: Street 2:

* City: State: Zip:

Congressional District, if known:

6. * Federal Department/Agency: <input type="text" value="Not Applicable"/>	7. * Federal Program Name/Description: <input type="text" value="Grants for Enhanced Assessment Instruments"/> CFDA Number, if applicable: <input type="text" value="84.368"/>
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8. Federal Action Number, if known: <input type="text"/>	9. Award Amount, if known: \$ <input type="text"/>
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10. a. Name and Address of Lobbying Registrant:

Prefix * First Name Middle Name

* Last Name Suffix

* Street 1: Street 2:

* City: State: Zip:

b. Individual Performing Services (including address if different from No. 10a)

Prefix * First Name Middle Name

* Last Name Suffix

* Street 1: Street 2:

* City: State: Zip:

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

* Signature:

* Name: Prefix * First Name Middle Name
* Last Name Suffix

Title: Telephone No.: Date:

NOTICE TO ALL APPLICANTS

The purpose of this enclosure is to inform you about a new provision in the Department of Education's General Education Provisions Act (GEPA) that applies to applicants for new grant awards under Department programs. This provision is Section 427 of GEPA, enacted as part of the Improving America's Schools Act of 1994 (Public Law (P.L.) 103-382).

To Whom Does This Provision Apply?

Section 427 of GEPA affects applicants for new grant awards under this program. **ALL APPLICANTS FOR NEW AWARDS MUST INCLUDE INFORMATION IN THEIR APPLICATIONS TO ADDRESS THIS NEW PROVISION IN ORDER TO RECEIVE FUNDING UNDER THIS PROGRAM.**

(If this program is a State-formula grant program, a State needs to provide this description only for projects or activities that it carries out with funds reserved for State-level uses. In addition, local school districts or other eligible applicants that apply to the State for funding need to provide this description in their applications to the State for funding. The State would be responsible for ensuring that the school district or other local entity has submitted a sufficient section 427 statement as described below.)

What Does This Provision Require?

Section 427 requires each applicant for funds (other than an individual person) to include in its application a description of the steps the applicant proposes to take to ensure equitable access to, and participation in, its Federally-assisted program for students, teachers, and other program beneficiaries with special needs. This provision allows applicants discretion in developing the required description. The statute highlights six types of barriers that can impede equitable access or participation: gender, race, national origin, color, disability, or age. Based on local circumstances, you should determine whether these or other barriers may prevent your students, teachers, etc. from such access or participation in, the Federally-funded project or activity. The description in your application of steps to be taken to overcome these barriers need not be lengthy; you may provide a clear and succinct

description of how you plan to address those barriers that are applicable to your circumstances. In addition, the information may be provided in a single narrative, or, if appropriate, may be discussed in connection with related topics in the application.

Section 427 is not intended to duplicate the requirements of civil rights statutes, but rather to ensure that, in designing their projects, applicants for Federal funds address equity concerns that may affect the ability of certain potential beneficiaries to fully participate in the project and to achieve to high standards. Consistent with program requirements and its approved application, an applicant may use the Federal funds awarded to it to eliminate barriers it identifies.

What are Examples of How an Applicant Might Satisfy the Requirement of This Provision?

The following examples may help illustrate how an applicant may comply with Section 427.

- (1) An applicant that proposes to carry out an adult literacy project serving, among others, adults with limited English proficiency, might describe in its application how it intends to distribute a brochure about the proposed project to such potential participants in their native language.
- (2) An applicant that proposes to develop instructional materials for classroom use might describe how it will make the materials available on audio tape or in braille for students who are blind.
- (3) An applicant that proposes to carry out a model science program for secondary students and is concerned that girls may be less likely than boys to enroll in the course, might indicate how it intends to conduct "outreach" efforts to girls, to encourage their enrollment.

We recognize that many applicants may already be implementing effective steps to ensure equity of access and participation in their grant programs, and we appreciate your cooperation in responding to the requirements of this provision.

Estimated Burden Statement for GEPA Requirements

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is **1894-0005**. The time required to complete this information collection is estimated to average 1.5 hours per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. **If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to:** U.S. Department of Education, 400 Maryland Avenue, S.W., Washington, D.C. 20202-4537.

Optional - You may attach 1 file to this page.

CETEBudgetNarrative_060512_Final_lm_cb.pdf		Delete Attachment	View Attachment
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KSDE PERSONNEL	FTE	SALARY YR1	SALARY YR2
<p>Project Coordinator will coordinate the day-to-day tasks of the project with the Project Director. He/she will be the primary liaison between the Kansas State Department of Education and CETE. The Project Coordinator will have primary responsibility for soliciting participants for cognitive labs and for field testing the survey of student characteristics prior to large-scale data collection. He/she will manage processes related to obtaining informed consent from cognitive lab participants. This person will also coordinate the planning, user-testing, and development of the web-based data collection and reporting interfaces. The Project Coordinator will be responsible for managing the funding of CETE activities for the ATEA project and will ensure that the project is on track with regard to all activities and expenditures.</p>	1.0	\$56,118	\$56, 118
<p>FRINGE BENEFITS Fringe benefits are calculated as a percentage of (1) KPERS, (2) Social Security, (3) Unemployment Insurance, (4) Sick/Annual Leave, and (4) Worker’s Compensation multiplied by the salary. Added to that is the “flat rate” of Health Insurance.</p>		<p>YR 1 0.1037 0.0765 0.0028 0.0062 0.00526 \$10,233</p>	<p>YR2 0.1134 0.0765 0.0028 0.0062 0.00526 \$11,000</p>
	Total Fringe	21, 146	22,457

TRAVEL		YR1 x 2 Conferences	YR2 x 2 Conferencess
<p>Purpose of Travel Travel will be provided for three general purposes: Conferences</p>	<p>Airfare (\$500) Lodging(\$250) Perdiem ((\$64) Mileage</p>	<p>Airfare: (\$1000) Lodging (\$1500) Perdiem (\$512)</p>	<p>Airfare: (\$1000) Lodging (\$1500) Perdiem (\$512)</p>

	Registration (\$450)	Registration(\$900)	Registration(\$900)
Cognitive labs, and	Lodging (\$100)	200	
	Perdiem (\$64)	256	
	Mileage (.55)	44	
Teacher panels	Airfare (\$500)	1000	1500
	Lodging (\$150)	300	450
	Perdiem (\$64)	256	384
Total Travel		5,968	6,246
SUPPLIES			
Office: Includes consumable office supplies and other necessary consumable expenditures, consistent with the needs and scope of this specific project: \$500 each year		500	500
Computers: One laptop is needed for the Programmer Consultant to use		1,800	
	TOTAL	2,300	500

Contractual		Year 1	Year 2
The University of Kansas, Center for Educational Evaluation and Testing		875, 182	758,621
Total Direct		960, 714	843, 942
KSDE Indirect		16, 911	16,879
Grand Total		977, 625	860, 821
Grand Total for 2 Years = 1, 838, 446			

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

*** APPLICANT'S ORGANIZATION**

Kansas State Department Education

*** PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE**

Prefix: * First Name: Middle Name:

* Last Name: Suffix:

* Title:

*** SIGNATURE:**

*** DATE:**

SUPPLEMENTAL INFORMATION
REQUIRED FOR
DEPARTMENT OF EDUCATION GRANTS

1. Project Director:

Prefix:	* First Name:	Middle Name:	* Last Name:	Suffix:
Dr.	Scott		Smith	

Address:

* Street1:	120 SE 10th Avenue
Street2:	
* City:	Topeka
County:	
* State:	KS: Kansas
* Zip Code:	66612-1182
* Country:	USA: UNITED STATES

* Phone Number (give area code) Fax Number (give area code)

785-296-4351	
--------------	--

Email Address:

--

2. Applicant Experience:

Novice Applicant Yes No Not applicable to this program

3. Human Subjects Research

Are any research activities involving human subjects planned at any time during the proposed project Period?

Yes No

Are ALL the research activities proposed designated to be exempt from the regulations?

Yes Provide Exemption(s) #:

--

No Provide Assurance #, if available:

--

Please attach an explanation Narrative:

1.7pt Narrative_FINAL.pdf

Delete Attachment

View Attachment

University of Kansas Center for Educational Testing and Evaluation (CETE)**NON-EXEMPT 7 POINT RESEARCH NARRATIVE****Accessibility of Technology-Enhanced Assessments Project**1. Human Subjects Involvement and Characteristics

This project will involve about 3,660 students in grades 3, 5, 7, and 10 with blindness, low vision, and motor disabilities and 30 teachers across the participating states. Teachers will participate on panels to provide guidance and feedback to researchers. Students will participate in two research-related capacities:

- Approximately 60 students will participate in cognitive laboratories to help us understand what works best when presenting technology-enhanced assessment items and tasks to students who are blind, have low vision, or experience motor disabilities.
- Approximately 3,600 students will participate in field testing.

2. Sources of Material

There will be four sources of data:

- Students participating in cognitive labs will be observed and videotaped as they respond to technology-enabled accessibility features and person- and computer-delivered accommodations. Identifying information will be collected for scheduling and for informed consent. Students will be paid for their time with gift cards.
- Survey and interview data will be collected from teachers and/or parents who accompany students to the cognitive labs. Identifying information will be collected to match student characteristics and demographic information with cognitive lab performance and access preferences. All identifying information will be stored on a secure server.
- Students participating in the field tests will provide answers to questions on the computer or to their teachers who will indicate their answers on the computer. Students must be tracked by unique student ID numbers provided by each state and all identifying information will be

stored on a secure server. Any files created for the purpose of data analysis will have all identifying information removed.

- Survey data will be collected from teachers of students participating in field testing. These data will be identified by the same code numbers used by states to identify field test data. Any files created for the purpose of data analysis will have all identifying information removed.

3. Recruitment and Informed Consent

Under 45 CFR 46.101 (b) (2), informed consent is not required for “research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects’ responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation.” The Assessment of Technology-Enhanced Accessibility field tests are educational tests. Students will not be identified by name and any linking information will be removed from the dataset before analyses are conducted. Moreover, no questions will be asked that produce any risk to the students.

We will receive informed consent from the parents of all students participating in the cognitive labs and assent from all students participating in cognitive labs. We will explicitly ask parents for consent to use video of them or their children in professional development materials.

4. Potential Risks

The risks associated with this project relate to potential breaches of confidentiality related to student identity, student disability, or scores related to achievement. In 30 years’ work on student assessments for the state of Kansas, no such breach has occurred.

5. Protection Against Risk

All data will be stored in a secure database at the University of Kansas Center for Educational Testing and Evaluation (KU-CETE) which also maintains the highly confidential achievement test scores

for approximately 250,000 students participating in the Kansas Assessment Program each year. Access to the database is protected with strong passwords and encryption and is accessible only on a need to know basis by KU-CETE staff. Any data for analyses performed by project consultants will have had all student identifying information removed.

Some student identities will be known to the project staff who interview them and are working with their teachers or parents. Records which include subject's names or other identifying information, such as video, will be kept in locked file cabinets. All subjects will be assigned numbers, and these code numbers will be used on all data records instead of names. Project staff will be asked to respect teacher and student confidentiality in terms of participation and comments related to performance. Project staff will be asked not to provide student scores or discuss test performance with any student or individual outside of the project. Any notes, forms, video, or protocols will be immediately stored to prevent accidental breaches in confidentiality. All staff members will be asked to abide by a code of confidentiality. No names will be used in conjunction with any reports of the results of this project.

6. Importance of the Knowledge to be Gained

Since this research and development project is fulfilling a critical national need identified by the United States Education Department Office of Special Education Programs, the risks associated with this project appear to be justified for the benefits that can be achieved. The completion of this project promises to provide participating states with tools that will significantly improve the accessibility of assessments for students with vision and motor disabilities, resulting in improved assessment validity and educational planning.

7. Collaborating Sites

Students in this study will be from schools in Kansas, Utah, Wisconsin, West Virginia, Michigan, and Missouri. Other states have expressed an interest and plan on participating in this project, but did not have time to sign the Memoranda of Understanding prior to this submission.

Abstract

The abstract narrative must not exceed one page and should use language that will be understood by a range of audiences. For all projects, include the project title (if applicable), goals, expected outcomes and contributions for research, policy, practice, etc. Include population to be served, as appropriate. For research applications, also include the following:

- Theoretical and conceptual background of the study (i.e., prior research that this investigation builds upon and that provides a compelling rationale for this study)
- Research issues, hypotheses and questions being addressed
- Study design including a brief description of the sample including sample size, methods, principals dependent, independent, and control variables, and the approach to data analysis.

[Note: For a non-electronic submission, include the name and address of your organization and the name, phone number and e-mail address of the contact person for this project.]

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* Attachment:

University of Kansas Center for Educational Testing and Evaluation**Accessibility of Technology-Enhanced Assessments Project Abstract**

The ATEA project will investigate the accessibility of technology-enhanced item and task types for students with vision and/or motor disabilities. These students are among the most difficult to accommodate on computer assessment systems. Historical accommodations include alternate forms, such as Braille or large print paper-and-pencil tests, and alternate means of presentation and response, such as the use of readers, scribes, and assistive technology. Many of these students participate in alternate assessments, which are often individualized and non-standardized. Cognitive load may be higher with accommodations such as tactile graphics, oral presentation, and dictation to a scribe. Physical effort may be greater when reading Braille or operating an eye-gaze or sip-and-puff computer interface. The time required to complete an assessment may be longer and result in greater fatigue. Technology-enabled accessibility features for these students have not yet been tested. The comparability of scores and score inferences with these assessment adaptations has not been evaluated.

These topics will be investigated with the intention of benefiting the five major assessment consortia. Planned technology-enhanced item types will be identified. Teacher review panels representing ATEA states will assist in evaluating the accessibility of items and tasks and developing means to improve accessibility. Cognitive labs will permit individualized examination of technology-enabled accessibility features and accommodations. Large-scale data collection across the ATEA consortium states will result in analyses of item difficulty, differential item functioning, and score comparability.

Project outcomes include a catalog of accessible technology-enhanced item and task types with guidelines for maximum access, a comprehensive description of student characteristics, data on student performance and the comparability of scores, and procedural documentation. The project's National Advisory Board will have experts who are also members of at least one of the major assessment consortia technical advisory committee. Edvantia will conduct external evaluation. Kansas, Utah, Wisconsin, West Virginia, Michigan, and Missouri will participate. Additional states are interested and plan to participate, but did not have time to sign the Memoranda of Understanding for the submission.

Project Narrative File(s)

* Mandatory Project Narrative File Filename:

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File

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Accessibility of Technology-Enhanced Assessments

Currently, five major federally funded assessment consortia (Partnership for Assessment of Readiness for College and Careers [PARCC], SMARTER Balanced Assessment Consortium [SBAC], Dynamic Learning Maps Alternate Assessment System Consortium [DLM], National Center and State Collaborative Partnership [NCSC], and the Assessment Services Supporting ELs through Technology Systems [ASSETS]) are preparing new large-scale assessments for use beginning in 2014-2015. A major impetus for the development of new assessments is the widespread adoption of the Common Core State Standards [Common Core State Standards Initiative, 2012]. These standards dramatically change the way that instructional goals are conceptualized and will certainly impact the means by which progress toward and proficiency on these goals will be measured by America's youth.

A key feature of many of these new assessments will be their use of desktop, laptop, and touch-screen tablet technology for delivery of tests and collection of student responses. The five consortia have all committed to exploring or using technology-enhanced item types to enhance the validity of inferences from test scores. Two of these consortia, DLM and NCSC, are focusing their efforts on students who experience the most significant cognitive disabilities, those who are eligible for participation in alternate assessments based on alternate achievement standards (AA-AAS). These students are a heterogeneous group because of their multitude of different abilities, physical and mental challenges, and varied levels of communication skills. For this reason, one of the major efforts toward producing new AA-AAS will be to develop assessments that realize optimal accessibility for the varied needs of this population. These goals will be fully recognized by DLM and NCSC.

Two of the more difficult accessibility challenges to address are blindness and other visual disabilities that impede access to information presented in visual modalities, such as computer screens, and motor disabilities affecting a student's interaction with technology because of its reliance on physical interfaces such as keyboards and mice. The two consortia developing AA-AAS are expected to be pioneers in developing and producing methods for accurately and validly assessing students with these types of disabilities. Of course, students in the general assessment population also experience these

disabilities. Any methods to design item and task presentation, engagement, and response for AA-AAS students should be adaptable for general assessments as well. The three general assessment consortia will certainly be examining these issues but may not be as focused on these student groups as are the two AA-AAS consortia.

The purpose of the Accessibility of Technology-Enhanced Assessments (ATEA) project is to investigate next-generation computerized assessments to determine whether or not assessment items and tasks expected to be used by students with blindness, low vision, or motor disabilities are actually accessible or if they can be made to be accessible so that inferences made from test scores for these students are comparable to those of all other students. The ATEA project will obtain descriptions and prototypes or samples of the proposed technology-enhanced assessment item and task types under development by the major consortia. Principles of evidence-centered design and universal design used in their preparation will be evaluated, along with the methods intended to provide accessibility, including technology-enabled accessibility features, virtual and physical tools, and person- or technology-delivered accommodations. Item and task types will be evaluated to determine if accessibility for students with vision and/or motor disabilities is likely to be attained through those means. If items or tasks cannot be made accessible, this project will examine whether there are viable and valid alternatives for measurement of the target constructs. Assessment items and tasks for both English language arts and mathematics will be written and prepared for delivery to students with vision and/or motor disabilities. Through individual cognitive labs and large-scale data collection, the ATEA project will assess the usefulness of technology-enabled features and accommodations for students with vision and/or motor disabilities and score comparability with students without disabilities. Within the evaluation of score comparability, issues of time requirements, cognitive load, effort, and fatigue will be studied. These questions will be examined for both person- and technology-delivered accessibility methods. Outcomes will include a catalog of specific accessibility recommendations by task and item type for students with vision and motor disabilities exemplified by released items.

The ATEA project addresses these absolute priorities for the EAG competition:

1. **Absolute Priority 1—Collaboration.** *Collaborate with institutions of higher education, other research institutions, or other organizations to improve the quality, validity, and reliability of State academic assessments.* This project will be based on a collaboration of the participating state education agencies and the University of Kansas Center for Educational Testing and Evaluation (CETE). Most of the participating states are already involved in a highly collaborative project with the University of Kansas—the DLM Alternate Assessment Consortium—and thus there is an established track record for efficient and highly effective collaboration.
2. **Absolute Priority 2—Use of Multiple Measures of Student Academic Achievement.** *Measure student academic achievement using multiple measures of student academic achievement from multiple sources.* This project will evaluate multiple measures of academic achievement for students with disabilities with assessments in English language arts and mathematics.
3. **Absolute Priority 4—Comprehensive Academic Assessment Instruments.** *Evaluate student academic achievement through the development of comprehensive academic assessment instruments, such as performance- and technology-based academic assessments.* This project focuses on accessibility for technology-enhanced comprehensive academic assessments. Results of this project are expected to positively impact the accessibility of all five consortia developing assessments based on the Common Core State Standards.

The project also addresses the following competitive preference priorities:

1. **Competitive Preference Priority 1—Accommodations and Alternate Assessments.** *Applications that can be expected to advance practice significantly in the area of increasing accessibility and validity of assessments for students with disabilities or limited English proficiency, or both, including strategies for test design, administration with accommodations, scoring, and reporting.* This project focuses on accessibility of academic assessment for students with vision and/or motor disabilities who take an AA-AAS or a

general assessment. Topics of test development, universal design principles, accommodations, assistive technology, scoring, and score comparability will be investigated.

2. Competitive Preference Priority 2—Collaborative Efforts Among States.

- a. *Include a minimum of 15 states in the consortium.* Due to time constraints and the lack of a minimum 15 signed MOUs, we do not qualify for the points designated to Competitive Preference Priority 2. However, additional states have expressed an interest and plan to participate in the project; we will continue to recruit.
- b. *Identify a proposed project management partner and provide an assurance that the proposed project management partner is not partnered with any other eligible applicant applying for an award under this competition.* The project management partner will be CETE, a current management partner for the DLM Alternate Assessment Consortium. A Letter of Agreement between the Center for Educational Testing at the University of Kansas and KSDE for this project to the EAG accessibility competition is included in Part 6: Other Attachment Forms.
- c. *Provide a description of the consortium's structure and operation. The description must include:*
 - 1) *The organizational structure of the consortium.* The consortium proposes to implement the same successful management structure as is used in the DLM project. This has the advantage of being a familiar structure for the states that are members of both the DLM consortium and this project. Facilitated by CETE, the consortium will work as a committee of the whole. Each state member will provide two representatives: one who represents accountability assessment and one who represents special education. CETE will present the results of ongoing research and development efforts to the consortium members in a monthly webinar. In addition, a National Advisory Board will

review progress twice a year and provide recommendations to the consortium.

2) *The consortium's method and process for making different types of decisions.*

The consortium will guide the project by consensus when possible and by formal votes if and when no consensus can be formed. In general, any significant or potentially contentious issues will be introduced in one webinar, discussed in a second, and voted on in a third. However, since this is a research and development project that will lead to guidelines and a test development handbook, it is expected there will be few, if any, such issues.

3) *The protocols by which the consortium will operate, including protocols for member States to change roles in the consortium, for member States to leave the consortium, and for new member States to join the consortium. All consortium members will have an equal role, thus there will be no changing of roles. States may join or leave the consortium at any time. Since the most significant product of this project will be test development guidelines and the demands on participating states are small, we do not expect any reason why a state would want to leave. At the end of the project states might simply choose to endorse or not endorse the guidelines and handbook.*

4) *The consortium's plan, including the process and timeline, for setting key policies and definitions for implementing the proposed project, including, for any assessments developed through a project funded by this grant, the common set of standards upon which to base the assessments, a common set of performance-level descriptors, a common set of achievement standards, common assessment administration procedures, common item-release and test-security policies, and a common set of policies and procedures for accommodations and student participation. This project is focused on*

creation of test development guidelines for ensuring the accessibility of technology enhanced item types for students with vision and/or motor disabilities. As such, most of the topics listed above will not apply. However, there will likely be implications for administration procedures and accommodations. It is not intended that this project will lead to a single set of procedures or accommodations used across all five major assessment consortia. Rather it is intended that the results of this project feed into each of those consortia so as they work together on these issues they have a common starting place, and thus the probability of appropriate common procedures is maximized.

5) *The consortium's plan for managing grant funds received under this competition.* The Kansas State Department of Education (KSDE) will be the fiscal agent for this grant. The proposal includes a full time staff member at KSDE who will be responsible for grant management under the direction of the Assistant Director of Assessment, Scott Smith. CETE will invoice KSDE quarterly for work completed.

d. *Provide a Memorandum of Understanding (MOU) executed by each State.* MOU's from each state are included in Part 6. Other Attachment Forms.

3. Competitive Preference Priority 3—Dissemination. *Applications that include an effective plan for dissemination of results.* The project will use a multifaceted approach to dissemination through monthly webinars with the consortium member states; a project website with public and private components to facilitate review among members as well as dissemination of products, information, and technical reports to the public; conference proposals and presentations; and publications.

Need for Investigation of Accessibility for Technology-Enhanced Assessments

Magnitude and severity of the problem. All students, including those with disabilities, are expected to participate in challenging assessments of academic achievement, via either a general assessment or an alternate assessment. Students who are blind, who experience vision disabilities or low vision, or who have motor disabilities make up a small proportion of participants in large-scale testing efforts. Less than 1% of children under 18 are blind or have low vision that is not corrected by eyeglasses (Leonard, 2002). About 1% of students experience physical disabilities, though the proportion of those who have arm and hand limitations that affect computer access has not been reported separately (National Science Foundation, 1996).

Traditionally, assessments have been altered extensively for students who are blind, who have low vision, or who have motor disabilities. An unspoken assumption may be that assessments can be made adequately accessible through assistive technology or the provision of alternate forms such as hard-copy Braille tests. These students may be among the most difficult to accommodate with technology-enhanced assessments, however. The strongly visual nature of computerized assessments introduces barriers for blind students who read Braille or students with low vision who require magnification. Braille paper assessments are routinely used for students who read Braille, and extra time is usually allotted for their completion because Braille may take longer to read than printed text. Braille has also been delivered via refreshable Braille displays, but these are unavailable to some schools and individuals because they are expensive and can be unreliable (American Foundation for the Blind, 2012b; Kamei-Hannan, 2008). Screen size, especially the smaller size of new touch-screen tablets, limits the amount of enlarged text that can be seen without spilling over the edges of the display, which requires greater user memory and navigation capacity, especially if there are large areas of blank space (Kamei-Hannan, 2008). This challenge has been termed the “field navigation problem” (Zwern & Goodrich, 1996). Standard keyboards and mice raise challenges for students with motor disabilities unless they use assistive technology that plugs directly into the computerized assessment system. Older or less sophisticated assistive technology such as that used in many schools (Brodin, 2010) may still require the assistance of a

human facilitator to enable the student to respond to assessment items and tasks. Finally, cost can be a barrier to obtaining access to assistive technology (Uslan, 1992).

Additional demands may be placed on assessment administrators beyond the delivery of accommodations required by students. Responses to paper Braille versions of online assessments may have to be entered by hand by teachers. When assistive technology is used, assessment of students with motor disabilities may need to be accomplished with human intervention for the purposes of delivering test items or obtaining and recording responses. Little work has been done to evaluate how much extra time is required for these accommodations and what the effects of physical and mental effort and associated fatigue are on students. Furthermore, unlike research on common accommodations such as extra time or reading test items aloud, there is a paucity of research on the effects of these accommodations on test scores and score comparability.

These disabilities may comprise a larger proportion of the population of students who take an AA-AAS. However, because AA-AAS are often individualized and non-standardized, there has been no way to quantify the effects of typically used accommodations. With technology-enhanced assessments under development for all students come the means to investigate these issues. Evaluation is required not just for students with these disabilities in the AA-AAS population, though this is a critical area of concern, but also for students across the ability continuum who will benefit from standardized technology-enhanced assessments.

The proposed investigation of technology-supported accessibility for large-scale assessments will inform not only assessment results but also student requirements for ongoing educational access to computerized content and activities. Investigating methods by which these students can interact with cutting edge technology-enhanced assessments will improve the quality of inferences that can be made about performance and inform educational planning. Moreover, matching student needs to new assessment technologies will enhance the identification and development of technology-based instructional supports and adaptations that will advance educational and vocational opportunity. The ultimate result of this study will be a set of guidelines and recommendations for valid accessible

assessments that provide the greatest score comparability and lead to sound inferences about achievement measured with technology-enhanced items and tasks for all students with vision and/or motor disabilities.

Students at risk for educational failure. Students with vision and/or motor disabilities, like other students with disabilities, have lower levels of post-secondary education and employment than do nondisabled learners (American Foundation for the Blind, 2012a; Capella-McDonnall, 2005). Educational failure for students with blindness, low vision, or motor disabilities, however, may not simply be in poor grades or school dropout but may come in the form of limited opportunity that translates into the inability to transition from even a successful school experience to a career. Individuals with blindness are much less likely to interact with computer technology than are sighted people (Arlene R. Gordon Research Institute, 2012). At the same time, vocational opportunities for students with blindness would improve with higher levels of technological sophistication (Armstrong & Murray, 2010). Computer technology is equally vital for students with motor disabilities, but they may not find it sufficiently available in schools due to lack of resources as well as lack of staff technical knowledge and competence (Brodin, 2010).

Students at risk for economic disadvantage. Families with disabled members experience greater economic disadvantage than do families without disabled individuals. Families with disabled members require greater income to experience the same standard of living as comparable families without disabled members (Fujiura & Yamaki, 2000). Conversely, poverty increases the risk for disability (Rosano, Mancini, & Solipaca, 2009). Addressing the technological needs of students with disabilities will improve educational opportunity now, post-secondary vocational opportunity next, and the ability to become employed, productive members of society later on.

Significance

System change and improvement. The proposed investigation will result in empirical knowledge about the requirements for access to technology-enhanced assessments for students with vision and/or motor disabilities. The results of this project will include a set of guidelines and recommendations for valid accessible assessments that provide the greatest score comparability and lead to sound inferences about achievement measured with technology-enhanced items and tasks for these

students. The results will be continually available to the five major assessment consortia through the participation of members of their Technical Advisory Committees on the National Advisory Board of the ATEA project and to member states through the project website. A major purpose of this undertaking is to identify the means to validly and accurately include students with vision and/or motor disabilities in all assessments that are under development by those consortia. These assessments represent a major shift in the application of technology and innovation to educational testing.

This project has the opportunity to influence assessments within the consortium states as well as all five major assessment consortia through dissemination of results to members of their Technical Advisory Committees. The project represents by far the largest and most significant effort to identify assessment access for students with vision and/or motor disabilities. Through individualized cognitive labs, large-scale data collection, and the chance to use powerful methodological procedures on large groups of students with low-incidence disabilities, definitive outcomes regarding the usefulness of assessment procedures, tools, and accommodations as well as the validity of score inferences can be obtained. These are among the students who have historically received the most individualized, and hence non-standardized, accommodations, and they are probably the most difficult students for whom to ensure assessment access and adequacy.

Contribution to theory, knowledge, and practice. The contribution of this project to knowledge about assessing students with vision and/or motor disabilities will be novel and original in that, up to this point, accommodations for these student populations have been individualized and largely non-standardized. While pencil-and-paper Braille tests have been an accepted accommodation for blind students, the effects of newer methods of Braille delivery, such as refreshable Braille displays and embossers used with computer adaptive tests, have not yet been studied. Individualized assistive technology for students with motor disabilities has precluded large-scale research on assessment outcomes. Studies of score comparability for tests accommodated with these methods are sparse and comparability of score inferences has largely been assumed. The effects of the accommodations

themselves on cognitive effort, time, fatigue, and performance are unknown. These issues will be investigated in this project for the first time.

Development and demonstration of promising new strategies. The outcomes of the ATEA project will include specific guidelines for technology-enabled accessibility features, virtual tools, and person-delivered accommodations. Furthermore, when item and task types currently in development cannot be made accessible to these student populations, alternatives will be developed and compared. Current technology-supported access such as is now available through Question and Test Interoperability (QTI2) and Accessible Portable Item Protocol (APIP) standards provides a timely opportunity to investigate the means by which computerized assessments can be made accessible to students with vision and/or motor disabilities, who have traditionally been among the most difficult to accommodate. Finally, beyond access to computerized assessments, the proposed investigation of technology-supported accessibility will also elucidate student requirements for ongoing educational access to computerized content and activities. Learning the means by which these students can interact with cutting edge technology will improve the quality of inferences that can be made about performance and inform educational planning. Matching student needs to new assessment technologies will enhance the identification and development of technology-based instructional supports and adaptations that will advance educational and vocational opportunity.

Project Design

Measurable Goals, Objectives, and Outcomes

Measurable outcomes of this project will include:

- a. A catalog of technology-enhanced assessment item and task types, as they are now under development by the five major assessment consortia, that are accessible to students with blindness, low vision, or motor disabilities. This catalog will include exemplars and non-exemplars in the form of released or sample items.
- b. A catalog of valid accommodations matched to item or task type and recommendations for their application. A key aspect of this outcome is the comparison of human- versus

- technology-delivered accommodations and the ramifications of each method. Preference will be given to technology-delivered accommodations that do not require the intervention of a human test facilitator, though this may not always be possible to attain.
- c. Discussion and explication of alternative methods to measure critical concepts when items already planned for use cannot be made accessible. For example, the learning maps of the DLM Alternate Assessment Consortium are planned to include alternate pathways to required knowledge for students who cannot access the most common pathways.
 - d. Data from small-scale cognitive labs on the responses of students to accommodations and alternate items and tasks.
 - e. Data from large-scale studies of item delivery and score comparability across the consortium states.
 - f. A survey for parents and teachers that will capture detailed information about each student. The survey will be used to identify categories for the differential item functioning (DIF) analysis of large-scale data. Additional, the survey will be used to complete the Student Access Profile that will be used in conjunction with QT12 and APIP technology standards.
 - g. A detailed description of the characteristics of students with vision and/or motor disabilities.
 - h. Procedural documentation for each aspect of the study including the methods by which the accessibility of items and tasks was evaluated, how accommodations were implemented, and how the research was conducted.
 - i. Recommendations for developers of technology-based accommodations such as individualized assistive technologies.
 - j. Dissemination documents including technical reports and white papers, national presentations, and publications. A white paper on the application of universal design principles is anticipated. Two national conferences and two articles submitted for publication to refereed journals are planned. Technical documentation will be freely available on the project website.

Conceptual Framework

Accessible assessments measure the same knowledge and skills that are measured on traditional assessments but without interference from a student's disability. Accessibility must be evaluated empirically, but the goal of accessibility is valid measurement of the intended skills for all students (Russell et al., 2011; Thurlow et al., 2009). Accessible tests use the principles of universal design, available technologies, and accommodations as needed to reach all students (Thurlow et al., 2009).

Evidence-centered design is a methodology for developing assessments in which the student performance that will demonstrate mastery of knowledge or skills is defined before assessment items are written (Mislevy & Haertel, 2006). Assessment items and tasks are prepared according to templates or patterns designed to define the relationship between instructional goals, student characteristics, and desired outcomes. Over and above the promise of evidence-centered design for developing valid assessments for all students, these methods will be crucial for students with disabilities because their anticipated performance may be constrained by a disability condition that limits interaction with test items or tasks and may alter expected outcomes. The first issue with respect to accessibility will be to evaluate the use of evidence-centered design in planned item and task types.

Universal design is a second essential underpinning for accessible tests. According to the Center for Applied Special Technology (CAST, 2011), universal design for learning involves three networks involved in learning: recognition networks for the "what" of learning, strategic networks for the "how" of learning, and affective networks for the "why" of learning. CAST's recommendations for universal design for all learners include providing multiple means of representation, multiple means of action and expression, and multiple means of engagement to access the three learning networks respectively. Representation consists of perception, language and symbol use, and comprehension of instructional materials. Representation encompasses alternate presentations to match the learner's perceptual and receptive communication skills and abilities. Action and expression includes expressive communication, physical action, and executive functioning, which comprise alternate methods of expressing what the learner knows and can do. Engagement refers to maintaining interest, effort, and persistence with learning

tasks along with self-regulation. This learning network is closely involved with motivating and encouraging optimal responses from the learner consistent with the learner's ability to perform. This conceptualization of universal design is equally applicable to assessment.

The National Center on Educational Outcomes (Thompson, Johnstone, & Thurlow, 2002) developed guidelines for universal design for assessment, based on guiding principles from the Center for Universal Design (1997), that include the following seven elements (p. 6):

1. Inclusive assessment population
2. Precisely defined constructs
3. Accessible, non-biased items
4. Amenable to accommodations
5. Simple, clear, and intuitive instructions and procedures
6. Maximum readability and comprehensibility
7. Maximum legibility

As Thompson, Johnstone, and Thurlow (2002) explained, "universally designed assessments are not intended to eliminate individualization, but they may reduce the need for accommodations and various alternative assessments by eliminating access barriers associated with the tests themselves" (p. 5).

Therefore, universal design as a foundational premise does not eliminate the need to make individualized accommodations or adaptations for students who need them. NCEO (2011) has recently addressed the implications of technology-based assessments for accommodations:

Technology-based assessment platforms offer new opportunities and ways for accommodations to be provided to students who need them, but they will not eliminate the need for accommodations. Technology-based assessments can be developed with all students in mind from the beginning (universal design) so that the assessments are accessible to the greatest number of students right from the start. Yet even with the best designed test some students still will require accommodations.

Furthermore, while technology-based assessments offer enhanced opportunities to meet individual needs through built-in options for accessibility, the need for additional accommodations may be created.

Decisions [sic] makers also should be made aware of which accommodations may need to be provided in addition to those embedded in the assessment. . . . Technology-based tests may create a need for new accommodations. For example, students with some physical disabilities that affect coordination may be able to take a paper and pencil test without accommodations, but may need accommodations to navigate a technology-based assessment. Also, some technology-based assessments may require the use of more working memory than paper-based tests. For example, less information may be visible on a screen than on a page in a test booklet. (NCEO, 2011)

Technology-enhanced assessments developed with universal design principles and features cannot be viewed as a panacea for the assessment of students with disabilities. Further effort is needed to identify the supports that will be required for valid inferences about the achievement of students with vision and/or motor disabilities, even with next-generation technology platforms for assessment.

Technology-enabled accessibility and accommodations. One of the exciting new advances in technology is the development of the QTI2 and APIP standards by the IMS Global Learning Consortium (2012; Russell et al., 2011). The procedures and functionality described by these standards are aimed toward achieving interoperability of assessments on different technological systems for the seamless performance of items and tasks and their interface with Student Access Profiles across platforms.

Concepts integral to QTI2 and APIP are default, alternate, and supplemental content (Russell et al., 2011). Default content consists of the test item or task as it has been developed for presentation to students without specific access needs. Alternate content refers to alternate representations of an item or task to meet individual needs, such as presentation of a translated item or alternate forms of graphics or images. Supplemental content is additional content, such as Braille text or audio files that are available in addition to the default content. Under the model of the APIP standards, an item file would contain pointers to alternate content and embedded supplemental content to be accessed upon demand or as triggered by information contained in an individual test taker's Student Access Profile. Assessments

developed using QTI2 and APIP standards are also expected to use universal design principles and procedures in order to minimize the alterations necessary for individualized access. This means that alternate and supplemental content to meet individualized access needs is defined before items and tasks are created, not as a post hoc activity. Furthermore, the order and type of the delivery of item content is specified during item writing. Finally, at the time of item presentation, access tools such as screen magnification, contrast, masking, and highlighting can be made available for student use on demand. However, APIP and QTI2 standards do not currently address innovative item types, though they are anticipated to be flexible as new item types are developed. Therefore, even with QTI2 and APIP, there is much room for technological enhancement and additional accommodation.

Accommodations, including technology-enabled access features, can be categorized as presentation, response, setting, scheduling, and special tools options (American Foundation for the Blind, 2005). Onscreen text, a printed page, and a page of Braille are presentation options while writing by hand, typing on a keyboard, or using a Braille writer are response options (Christensen, Braam, Scullin, & Thurlow, 2011). Students who experience blindness or low vision may use both presentation and response options when they access Braille test booklets or refreshable Braille displays and respond orally to a scribe or use a Braille writer. Students may also require the use of tools, such as screen magnification, an abacus, Braille ruler, and tactile graphing materials. Students with motor disabilities who do not experience vision disabilities frequently rely on response options involving individualized assistive technology matched to their motor skills and age- or grade-level needs, either for producing a response for a scribe or as a direct interaction with a computerized system.

Accommodations can be subdivided into methods by which they are made available to students. Accommodations may be delivered by a person, such as a teacher signing into the hands of a deaf-blind student or providing that student with mathematics manipulatives or special tools such as raised grid graph paper or a Braille ruler and compass. Computer or technology-delivered accessibility tools include magnified onscreen font size, increased contrast, and auditory calming, along with alternate or embedded content as described by the QTI2 and APIP standards above. An individual's assistive technology, such as

an eye-gaze system, switches, or enhanced keyboard, when linked directly to the computer, can function as a technology-delivered response option accommodation. If an individual student's assistive technology system is of lower technological sophistication, it may serve as an interface with a human facilitator who then records the student's response on the technology platform.

Accommodations for students with blindness or low vision. Common standardized testing accommodations for low vision or blind students include Braille, large-print versions of the test, assistive magnifying devices, and teacher scripts for reading aloud (Landau, Russell, & Erin, 2006). While students with vision disabilities are expected to meet the same standards as other students, some of the test may need to be modified in order to be translatable to Braille format. Modifications may include word substitutions, reformatting the layout of the item, and replacing untranslatable items with others of equal weight, content, and difficulty (Allman, 2006). Tactile graphics are raised images that can be deciphered by the Braille reader in order to transmit the same information a sighted reader would get from an image (Hasty, n.d.). While some images such as photographs are not generally effective, many diagrams and figures can be successfully included in an assessment (Hasty, n.d.). For students with low vision who require magnification, standard large print size is 18 point font (Allman, 2006). Images must have a high degree of contrast so they are more easily interpreted by students with low vision (Allman, 2006).

However, with the increasing use of computerized testing platforms comes a new wave of technology-enhanced accommodated tests. A 2008 study by Kamei-Hannan investigated the accessibility of the widely used, computer adaptive MAP test developed and distributed by the Northwest Evaluation Association. In this study, low vision participants were offered screen magnification software as a test accommodation. The results revealed that increased magnification levels increased item completion time. This finding is supported by the most recent National Center on Educational Outcomes report on the effects of test accommodations (Cormier, Altman, Shyyan, & Thurlow, 2010). Also, because such a small amount of text is shown on the screen at a time when the magnification level is high, the study participants needed to have strong visual efficiency and hand-eye coordination skills to navigate the text. Blind participants in this study accessed the assessment with refreshable Braille displays. Refreshable

Braille displays translate on-screen text to the tactile Braille format one line at a time using moving pins (Abbott, 2005). The study revealed limitations of the refreshable Braille software due to the original HTML coding of the test items. Many of the items were unanswerable because of untranslatable HTML elements such as long scroll bars, images, and underlined words (Kamei-Hannan, 2008). Another limitation of the refreshable Braille displays is their cost. Each unit costs between \$3,500 and \$15,000 depending on its complexity and number of characters it can display at once (American Foundation for the Blind, 2012b). According to the Oregon Department of Education website (2012), the state of Oregon has crossed these barriers of refreshable Braille displays and currently offers real-time Braille accommodations for their adaptive state-wide achievement tests. The items are printed as students work through the test using refreshable Braille displays in conjunction with Braille embosser. If the item requires Nemeth code or tactile graphics, it is automatically sent to the Braille embosser. If not, it is displayed on the refreshable Braille delivery system (Oregon Department of Education, 2012).

Oral reading of test directions and other allowable portions of the test by a person, audio cassette, CD, or a computer text reader are common ways of increasing test accessibility for students with visual disabilities. This method can be employed in an effort to reduce test-taking time for blind or visually disabled students (Allman, 2006). However, issues with the mode of delivery are encountered when the construct being tested can no longer be credibly measured with a reader, for example, reading comprehension or silent reading skills.

Other than the reading accommodations mentioned above, technology advancements have brought new accessibility solutions for students with vision disabilities through listening. In 2002, researchers Hansen, Lee, and Forer at Educational Testing Service (ETS) examined the effectiveness of a self-voicing version of the Test of English as a Foreign Language (TOEFL) for test takers with visual disabilities. A self-voicing test has the audio embedded in the test delivery as opposed to using a peripheral text-to-speech program. Along with the built-in audio for item text, the test platform had audio descriptions of images and navigation cues. To navigate and respond to the items, the subjects used

simple keystrokes on a keyboard¹. The benefits of this self-voicing technology-enhanced test included increased independence, standardization of delivery, and privacy for the test taker. Most of the study's participants indicated that they would "highly recommend" this type of accommodation over a human reader. One concern that came out of this study was the quality of the electronic voice. Some words were deemed difficult to understand, which is especially problematic for the population taking the TOEFL (Hansen et al., 2002).

Another interactive listening solution is the Talking Tactile Tablet. In 2006, results of a study conducted by Landau, Russell, and Erin indicated the usefulness of the Talking Tactile Tablet as a test accommodation for students with vision disabilities. The tablet is a separate device that allows the user to interact with the computer display of standardized test items and is especially useful for items with complex graphics. Students use their hands to navigate the test and they can cue audio voice recordings to hear about text, features, and graphics in the items. Students can replay the voice recordings as many times as needed. While the study did not find that this tool significantly affected test scores for students who were blind or had low vision, the researchers suggested that its benefits to the intended population included increased speed of test completion, increased independence during testing, and increased standardization of test delivery (Landau et al., 2006).

Three common test-taking tools for students with visual disabilities are physical manipulatives, a talking calculator, and an abacus. Physical manipulatives such as blocks, money, and geometric shapes may convert some information that is visually represented on the test to accessible physical representations (Allman, 2006). A talking calculator is a tool designed specifically for low vision and blind students. It articulates everything that is punched into it to ensure accuracy and also reads all output (Learning, Sight & Sound Made Easier [LS&S], 2011). Simple talking calculators are affordable and are available for purchase at around \$12 to \$25 per unit (LS&S, 2011). On items that do not permit

¹ There are many available keyboard modifications for low vision or blind students, including large print or tactile Braille stickers for the keys.

calculators, blind students can use an abacus as a substitute for paper and pencil calculations (Allman, 2006).

Accommodations for students with motor disabilities. Accommodations for students with motor disabilities generally involve manipulating the means of student response rather than the presentation of the test. The Minnesota Department of Education (2009) suggested the following response accommodations for students with motor disabilities: “Express response to a scribe through speech, pointing or by using an assistive communication device [such as a mouth stick or head wand (Thompson, Thurlow, & Moore, 2003)], voice-activated computers, type on or speak to word processor, speak into tape recorder, or use thick pencil or pencil grip” (Minnesota Department of Education, 2009, p. 37). Thompson et al. (2003) suggested individualizing the setting of computerized test taking if the response input method could be distracting to other students. Beyond the information presented in this paragraph, research that details appropriate assessment accommodations and their effects for students with motor disabilities could not be identified. While the field of assistive technology is highly developed, evaluation of its use for assessment at a level above that of the individual is nonexistent.

Score comparability of accommodated assessments. According to the New York State Education Department (2006), the purpose of test accommodations is to make assessments accessible to students with disabilities. It is not intended to modify the tested content or give an advantage to any one group of students (New York State Education Department, 2006). To ensure that the accommodations are achieving their purpose, it is important to understand their effects on student scores. Ideally, an appropriate test accommodation will raise the score of a qualifying student with disabilities while having no effect on the scores of students without disabilities. This phenomenon is what Sireci and colleagues (Sireci, Scarpati, & Li, 2005) called the *interaction hypothesis* in their analysis of 150 research studies on the effects of test accommodations. They discovered that the majority of the studies reported score gains due to test accommodations for all students but with significantly greater gains for students with disabilities. This finding is consistent with Fuchs and Fuchs’s (2001) concept of differential boost. The authors argued that the finding that scores for all students tended to improve does not imply that test

accommodations are unfair but perhaps that current testing conditions are too strict for all students. More specifically, Sireci and colleagues (Sireci et al., 2005) identified differential boosts for the extended time and oral presentation accommodations. The authors found that receiving oral presentation for the math section of the tests (whether from a person, a computer, or an audio device) significantly improved the scores for students with disabilities, but this accommodation had no effect on scores in other subject areas (Sireci et al., 2005). Due to the great diversity in students with disabilities and the types of accommodations they receive, there is limited scholarly research dedicated to generalizing the effects of test accommodations.

Need for more research and development of accessible assessments. While instructional technology has boomed in the classroom, technology-enhanced assessments have progressed more slowly (Bechard et al., 2010). While many states offer computerized large-scale, standardized assessments, their forms are parallel to their paper-and-pencil counterparts in presentation and item type. In 2010, Bechard and colleagues published a research agenda for technology-enabled assessments as a result of their *Invitational Research Symposium on Technology-Enabled and Universally Designed Assessments*. The agenda highlights the need for development of technologically advanced, interactive assessments, and draws attention to the importance of validity research, especially for students with disabilities (Bechard et al., 2010).

This project will address accessibility requirements for vision and/or motor disabilities through both person- and technology-delivered methods. As recognized by the NCEO (2011), technology-enabled access features may not be sufficient for full access for students with vision and/or motor disabilities. Technology-enabled accessibility enhancements such as those designed for AIP-compliant systems and accommodations options currently in use will be considered in this investigation. As the variety of assistive technology methods for students with motor disabilities is vast and constantly changing, a catalog of those individualized methods is beyond the scope of this proposal. However, any methods in use by students in the consortium member states will be considered as part of this project. Because the

population of students using assistive technology will be sizeable, a good representation of various methods will be obtained through the ATEA project's large-scale data collection.

Scope of the Accessibility of Technology-Enhanced Assessments Project

The proposed project will result in a clearer understanding of the types of technology-enhanced assessments and tasks that are and are not accessible for students with blindness, low vision, or motor disabilities. When items or tasks are accessible or can be made accessible, this project will investigate score comparability through large-scale data collection across the consortium member states using students with and without disabilities and assessment items and tasks with and without technology-enabled accessibility features and accommodations. Accommodations delivered by human test facilitators and the technology platform will be studied. Evaluation of the meaning of scores will include analysis of cognitive load for accommodated items, time required to respond, and the effects of effort and fatigue on score performance. When assessments cannot be made directly accessible, alternate methods for construct measurement will be proposed and tested. In addition, detailed information about the characteristics of these students will be obtained via an online survey in order to evaluate the intersection of disability, assessment accessibility, and performance. This information will be crucial for conducting DIF analyses for score comparability.

The scope of the questions intended to be investigated include:

- a. What types of technology-enhanced test items or tasks in English language arts and mathematics are proposed or currently under development by the five major assessment consortia?
- b. What is the role of evidence-centered design? More specifically, how have evidence-centered design procedures been used to define the desired responses of students with vision and/or motor disabilities?
- c. To what extent are principles of universal design being used? Specifically, how are these principles operationalized for students with vision and/or motor disabilities? How has

- accessibility been planned for these student groups? Are any anticipated accommodations consistent with universally designed tests and items?
- d. Which items or tasks are expected to be accessible without alteration or accommodation to students who are blind or have low vision and to students with motor disabilities?
 - e. Are there constructs, items, or tasks that are not accessible to these students? If so, can they be made accessible by an intermediate technology that already exists? What are the shortcomings of these technologies that may affect accessibility?
 - f. For constructs, items, or tasks that are not accessible to these students, what would be required to make them accessible? Are alternative methods planned to assess the same or equivalent constructs?
 - g. How are questions of test score comparability and reporting being anticipated or resolved?
 - h. What are the specific characteristics of these students and how do those characteristics interact with assessment accessibility to produce performance outcomes?

Research to address these questions will first use cognitive labs with individual students to assess the accessibility of item types with existing technologies and planned accommodations. Next, the project will use the Kansas Interactive Testing Engine developed by CETE for large-scale data collection across the consortium member states. Specific research goals include:

- a. Verify that proposed test items or tasks that are expected to be accessible to students with blindness/low vision and/or motor disabilities are indeed accessible and determine the parameters by which they can be validly used, including the time to complete tasks, any necessary materials or interfaces, and the requisite levels of cognitive difficulty and effort. This line of research includes the use of existing technologies that are expected to provide accessibility, such as refreshable Braille displays, Braille embossers, touch screen tablets, and individualized assistive technologies.
- b. Verify what types of items or tasks cannot reasonably be made accessible for these students and what ramifications this has for test development and delivery and score comparability.

- Are there alternative methods to test the same constructs that will hold up to psychometric scrutiny?
- c. For test items or tasks for which there is no existing technology or proposed alternative methods for assessment, investigate means that might be developed to provide accessibility. Accessibility may involve technology-enhanced methods for using the same or similar test items or tasks, additional person-delivered accommodations or special tools, or it may mean alternative ways to measure the same constructs.
 - d. Determine the extent to which scores are comparable for students with motor and/or vision disabilities and students without disabilities using non-accommodated items deemed to be accessible and items and tasks presented with person- and technology-delivered access features and accommodations to both groups.
 - e. Compile a detailed picture of students with vision and/or motor disabilities, including disability characteristics, instructional accommodation needs, accessibility requirements for assessment, and performance outcomes.

Methodology

Three sets of data analyses will be performed: (1) sample description, (2) assessment description, (3) test level analysis of the accommodation interaction, (4) and DIF regarding accommodations and item accessibility features.

The sample will be described by providing frequency distributions of demographic characteristics and score distributions. This outcome, combined with parent/teacher survey data, will provide a comprehensive description of the academic needs and achievement of students with vision and/or motor disabilities.

Assessments will be described by presenting classical and item response statistics as well as coefficient alpha, alpha-based overall standard errors of measurement, and item response theory-based conditional standard errors of measurement.

Accommodation interaction exists when, as desired, an accommodation leads to a score difference for students who require an accommodation but does not change the scores of students not requiring an accommodation (Sireci et al., 2005). Accommodation interactions will be assessed using a two-way (accommodation status versus disability status) ANOVA on test scores.

DIF will be conducted for all items using logistic regression (Swaminathan & Rogers, 1990; Cho, Lee, & Kingston, in press). First total score will be entered into the regression, then disability type, an interaction term (to account for non-uniform DIF), and accommodation usage. Incremental Nagelkerke correlations will be used as a measure of effect size. Effect sizes will be Fisher-z transformed and correlated by item type and accessibility-related item features to differentiate those item types and features that are and are not accessible to students with motor and/or visual disabilities.

Dissemination Plan

The dissemination plan will be ongoing and will have the following components:

1. Results will be disseminated first within the consortium member states during the monthly webinars.
2. A grant-specific website will be created to share results. We will approach leaders of important related initiatives and organizations and request that they provide links to the project website from their websites.
 - a. The project website will have a public and private component. Access to the private component will be provided to consortium member states, members of the project National Advisory Board, and to the five major assessment consortia.
 - b. The private component will include work in progress and facilitate review and communication among participants.
 - c. The public component will share interim and final products including technical reports, guidelines, and a final handbook. Interested members of the public will be able to sign up to receive email updates.

3. Throughout the two years of the project, presentation proposals will be submitted to appropriate conferences, including but not limited to the Council for Exceptional Children, American Educational Research Association, National Conference on Student Assessment, and National Council on Measurement in Education.

Management Plan

This section will describe the adequacy of the management plan to achieve the objectives of the proposed project on time and within budgetary constraints, including responsibilities, roles, timelines, and milestones.

The Accessibility of Technology-Enhanced Assessments Process

Step 1. The project team will contact and communicate with each of the five major assessment consortia to obtain information about their technology-enhanced item and task types, planned technology-enabled accessibility features, and anticipated accommodation for students with vision and/or motor disabilities. Existing documentation will be reviewed. The application of evidence-centered design with respect to students with disabilities and universal design principles for all item types by each of the consortia will be obtained and reviewed. The project website will be developed. The survey of student disability information, academic achievement, accessibility needs, and use of assistive technology will be prepared.

Step 2. Project team members with one or more areas of expertise including special education, English language arts and mathematics curricula, and test development will conduct a review of item and task types, technology-enabled accessibility features, and accommodations. This review will produce an analysis of the anticipated accessibility for each item type with its associated technology-enabled accessibility features and with or without person- and computer-delivered accommodations.

Step 3. Using existing literature and feedback from experts, the project team will select or design technology-enabled features and accommodations to increase the accessibility of technology-enhanced items for the target students. For example, if Accessible Portable Item Protocol (APIP) tagging is incorporated into the delivery platform, some features to enhance accessibility will be available via the

computer platform and linked to individual student profiles. If item types do not appear to be accessible for students with vision and/or motor disabilities, technology-enhanced features that would make them accessible will be investigated. If item types do not appear to be amenable to technology-enhanced features, person-delivered accommodations and special tools that would permit accessibility will be evaluated. Alternate methods to assess the constructs will be explored and additional assessment item or task types will be produced.

Items for cognitive labs will be written collaboratively by curriculum and special education experts, following the standard item writing procedures and review processes at CETE, in order to conduct cognitive labs. The desired pool of items will be ten English language arts and ten mathematics items for each grade band of elementary, middle, and high school. Additional items for students with significant cognitive disabilities will be drawn from those prepared by Dynamic Learning Maps Alternate Assessment System Consortium (DLM) item writers. An interview protocol will be developed for students and their parents or teachers to guide the cognitive labs. Steps 2 and 3 will culminate in presentation to and solicitation of feedback from the National Advisory Board prior to the initiation of cognitive labs.

Step 4. Students will participate individually in cognitive labs to test accessibility assumptions and options resulting from steps 2 and 3 and with guidance from the National Advisory Board. Cognitive labs will take place in schools and at facilities at the University of Kansas during the spring of the first year of the project. In cognitive labs, individual students will be videotaped interacting with the test delivery platform, computer-delivered accessibility features and accommodations, and any additional person-delivered accommodations or special tools that have been identified as potentially necessary to optimize accessibility. Students will be accompanied by a parent or teacher for assistance in the cognitive labs and to provide additional feedback on the student's typical use of technology and necessary supports for assessment. Parents or teachers will complete detailed questionnaires about each student's disability, academic achievement, and accessibility needs for instruction and assessment. Students will receive gift cards for their participation and any transportation costs will be reimbursed.

Cognitive labs are planned for approximately 60 students, with 20 students each in elementary, middle, and high school age groups. Of each group of 20 students in a grade band, ten will experience blindness or low vision and ten will have motor disabilities. Students with intellectual disabilities will be included. Cognitive lab sessions are anticipated to require 60 to 90 minutes in order to provide the opportunity for each student to respond to ten English language arts and ten mathematics items appropriate for their grade bands. While item content will be age-appropriate and representative of the Common Core State Standards, the purpose of the cognitive labs is not to test items but to evaluate the efficacy of accessibility features and tools. Therefore, item content is not expected to be demanding or inclusive of grade-level standards. For students with significant cognitive disabilities who participate in an AA-AAS, alternate items with grade-appropriate content but reduced cognitive difficulty will be available. A variety of technology-enabled accessibility features, virtual and physical tools, and other accommodations will be tested. Items and tasks may be delivered with and without some accessibility options for the purposes of contrasting student engagement and response. For students who use individualized assistive technology, the interface of that technology with planned item and task types will be evaluated.

Results of the cognitive labs will be discussed with teacher panels from five of the participating states. Educators will be chosen based on their experience with students with visual and motor disabilities. Sessions will be scheduled for a half-day at the subset of the consortium member states that volunteer to host these meetings. Scheduling these three-hour meetings in the afternoon minimizes the time the participants will be out of the classroom. This approach has been used successfully as part of the DLM Alternate Assessment project.

Step 5. Based on outcome data from the cognitive labs and the educator review of those data as described in step 4, the project team will refine plans for technology-enabled accessibility features and accommodations, develop new accommodations, and revise decisions about which technology-enhanced item types can be accommodated. Items and tasks will be prepared for large-scale testing using CETE's Kansas Interactive Testing Engine. Items will be written and reviewed by special educators and

curriculum experts following CETE's standard item-writing procedures. These items will include technology-enhanced accessibility features such as those available through APIP tagging, plus accommodated and non-accommodated versions delivered via computer or human interface, with the goal of relying on technology-delivered accessibility features and accommodations to the greatest extent possible. These item and task types may also include person-delivered accommodations such as physical manipulatives and tools if these will be required for valid test delivery and score inferences.

Step 6. During the first half of the second year, large-scale data collection will occur throughout the consortium member states. Targeted students with disabilities will include those with vision, motor, and both types of disabilities. Students who participate in an AA-AAS will be included as well as students who take general assessments. Additional student data such as IEP and disability status, typical use of supports such as instructional and assessment accommodations and tools, along with previous large-scale assessment scores, will be obtained via online surveys. Assessments will take place in both English language arts and math. Both accommodated and non-accommodated items will be presented to students without disabilities as well as students with disabilities, when feasible, for comparison purposes. Project staff will assist states with student participation and data collection.

Field test assessments will include both English language arts and mathematics items for each grade level aligned with the Common Core State Standards. At least ten items in each of English language arts and mathematics will be prepared for delivery at each grade to evaluate the range of technology-enabled accessibility features, virtual onscreen tools, embedded and alternate content according to QT12 and APIP standards, and person-delivered accommodations or special tools required to assess the constructs.

Students will be proportionally sampled from the consortium member states with a participation goal of at least 1200 students with blindness or low vision and an additional 1200 students with motor disabilities, representing both the AA-AAS and general assessment populations. The same number of control students (1200 total) will be included in order to compare items delivered with and without

accessibility features and accommodations. States will solicit and identify students and teachers for participation.

For grades 3, 5, 7, and 10, 300 students with blindness or low vision will be solicited at each grade level plus 300 students with motor disabilities and 300 control students, as shown in Table 1. When divided into subgroups, these sample sizes provide a power of .88 to detect an effect as small as a .2 standard deviation difference in performance outcomes and a power of .98 to detect a difference of .25 SD (Lenth, 2006-9). Given the variety of vision and motor conditions that affect students with these low-incidence exceptionalities, these numbers will comprise a substantial cross-section of assessment and accessibility needs within each assessed grade. Furthermore, detailed information about each student will be collected, providing a comprehensive picture of their characteristics.

Table 1. Sampling Plan for Large-Scale Data Collection

	Blindness or Low Vision	Motor Disabilities	Control Students	Total Students
Per grade 3, 5, 7, and 10	300	300	300	900
Total for 4 grades	1,200	1,200	1,200	3,600

Step 7. Data analysis will occur according to the procedures outlined in the Methodology section.

Step 8. Preparation of reports and dissemination materials will take place during and following the data analysis phase according to the Dissemination Plan. Dissemination will be ongoing through the National Advisory Board and made public via the project website, national conferences, and journal publications.

Project Timeline

Table 2 shows the anticipated timeline for the project based on the eight steps outlined in the Process section. For this two-year project, communication with the five major assessment consortia will begin upon receipt of funding approval in fall 2012. During this phase, comprehensive data on planned

technology-enhanced assessment items and tasks, application of evidence-centered design and universal design principles and procedures, and intended accessibility features and accommodations will be gathered. From these data, cognitive labs will be designed for implementation using CETE's Kansas Interactive Testing Engine from February through April 2013. Cognitive labs will take place during the spring of 2013 at Kansas schools and at facilities at the University of Kansas. Cognitive labs will include videotaping of students interacting with sample test items that represent planned innovative technology-enhanced item types. A teacher or parent facilitator will be present to answer questions and evaluate the practicability of items, tasks, and accommodations as delivered to students.

During the second year, large-scale data collection will occur from September to December 2013. At the close of data collection, analysis of data and preparation of papers and reports will continue until August 2014. Dissemination of results will be made public through the project website.

During both the first and second years, project staff will submit proposals and attend national conferences to disseminate preliminary and intermediate results. Communication with the partner states will occur monthly throughout the planning and data collection process. Partner states and national advisors will be briefed on the contents of reports for assistance and feedback before reports are made public. The National Advisory Board will provide guidance for all project activities.

The National Advisory Board will meet four times during the two-year project. The first meeting will focus on expert, external review of initial findings and plans regarding accessibility and proposed accommodations for the cognitive labs. The second meeting will take place following the cognitive labs for interpretation of outcomes and plans for maximizing accessibility of all item and task types during large-scale data collection. The third meeting during the fall of the second year will be for the purpose of evaluating the plans for analysis of large-scale data and to provide assistance with technical issues or difficulties. The final meeting, during the spring of the second year, will provide technical assistance with large-scale data and dissemination of results.

Table 2. Accessibility of Technology-Enhanced Assessments Project Timeline

Year One	2012				2013							
Step	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug
1												
2												
3												
4												
5												
8												
Teacher Panels												
Nat'l Adv Panel												
Year Two	2013				2014							
	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug
6												
7												
8												
Nat'l Adv Panel												

Project Personnel

Project organization. Project personnel will consist of representatives from the consortium member states, CETE, and nationally recognized consultants. Collaboration between KSDE, CETE as the project management partner, and the additional consortium member states is the key feature of the proposed project. The project will be administered by the KSDE project administrator and managed at CETE, led by the principal investigator, Dr. Julia Shaftel. Additional staff will include a half-time project assistant at CETE. CETE’s sophisticated technology department will support the development of technology-enhanced assessment items and tasks for cognitive labs and large-scale data collection using CETE’s Kansas Interactive Testing Engine. CETE curricular experts will assist with item and task development, and the psychometric staff will support data analysis.

Key Principal Investigator

Julia Shaftel, Ph.D., is a Research Associate and Special Education Coordinator at CETE and a lecturer in School Psychology in the Department of Psychology and Research in Education at the

University of Kansas. With graduate degrees in special education and school psychology, Dr. Shaftel has extensive field experience with a range of exceptionalities as well as large-scale assessment skills in managing and delivering accommodated assessments. Dr. Shaftel manages all aspects of the Kansas Assessment Program for students with disabilities, including test development and evaluation. Dr. Shaftel will serve as the Principal Investigator on this project and will oversee the assessment design, data collection, and data analysis. She will have day-to-day responsibilities for the project's operation, including supervision of other project staff. She will monitor the performance of staff to ensure that: (a) priority tasks are identified and addressed, (b) timelines are adhered to, (c) close communications exist among all project staff and participants, and (d) all activities are carried out according to the proposed research plan.

Key Project Personnel

Amanda Ferster, Ph.D., is a psychometrician at CETE with extensive experience in assessment research and development. Her previous experiences include conducting psychometric analyses for the Georgia state-wide AA-MAS; managing and reporting the high-stakes Gwinnet Gateway Assessment program; developing assessment reporting programs, instructional publications, and training modules for local educational agencies; and extracting, analyzing, and submitting educational data to the Pennsylvania State System of Higher Education, Pennsylvania Department of Education, and the National Center for Education Statistics. Dr. Ferster will coordinate all analyses of item and test data resulting from the cognitive labs and large-scale field testing, including item analyses, differential item functioning, and studies of score comparability.

A **Project Coordinator** will coordinate the day-to-day tasks of the project with the Project Director. He/she will be the primary liaison between the Kansas State Department of Education and CETE. The Project Coordinator will have primary responsibility for soliciting participants for cognitive labs and for field testing the survey of student characteristics prior to large-scale data collection. He/she will manage processes related to obtaining informed consent from cognitive lab participants. This person will also coordinate the planning, user-testing, and development of the web-based data collection and

reporting interfaces. The Project Coordinator will be responsible for managing the funding of CETE activities for the ATEA project and will ensure that the project is on track with regard to all activities and expenditures.

Key Project Consultant

Kimberly Good, Ph.D., a Senior Research and Evaluation Specialist with Edvantia, will serve as the evaluation director for the project. Dr. Good has worked in the field of evaluation for 17 years. She has vast experience including currently serving as the director for the evaluation of two Enhanced Assessment Grants and a General Supervision Enhancement Grant. She will use her expertise in research and development to ensure that ongoing work for this project remains on track and that results of each task support the overall project goals as well as assure that the summative evaluation is coordinated and complements the formative evaluation.

Item Development Staff

Lauren Adams, M.S., is the English Language Arts (ELA) Test Development Coordinator at CETE. She coordinates the development and implementation of the ELA test items for formative, interim, and summative assessments for the Kansas Assessment Program. She collaborates with KSDE and Kansas educators to develop assessment materials that are aligned to the standards and that reflect current teaching practices in the state. She will be responsible for training and managing the ELA test development staff and reviewing their work in year one to ensure quality.

Alicia Stoltenberg, M.S., is the Mathematics Test Development Coordinator at CETE. She coordinates the development and implementation of mathematics test items for formative, interim, and summative assessments for the Kansas Assessment Program. She collaborates with KSDE and Kansas educators to develop assessment materials which target the Common Core State Standards for Mathematics and reflect current teaching practices in the state. She will be responsible for training and managing the math test development staff and reviewing their work in year one to ensure quality.

Advisory Board

National Advisory Board. The National Advisory Board will consist of one member from each of the Technical Advisory Committees (TACs) of the five major assessment consortia. It is intended that this approach facilitate the dissemination of results between this program and the five major assessment consortia. Table 3 details the membership of the National Advisory Board.

Table 3. National Advisory Board members

Name	Expertise	Relationship to Other Assessment Consortia
Jamal Abedi	Language assessment, measurement	ASSETS and SBAC
Huynh Huynh	Psychometrics, assessment of special populations	PARCC
Jim Pellegrino	Cognitive psychology, measurement	DLM, NCSC, PARCC, and SBAC
Martha Thurlow	Special education, assessment	SBAC
James Ysseldyke	Special education, assessment	DLM

Note: ASSETS = Assessment Services Supporting ELs through Technology Systems; SBAC = SMARTER Balanced Assessment Consortium; PARCC = Partnership for Assessment of Readiness for College and Careers; DLM = Dynamic Learning Maps Alternate Assessment System Consortium; NCSC = National Center and State Collaborative Partnership

Resources

University of Kansas Center for Educational Testing and Evaluation

Organizational Capacity. CETE was authorized by the Kansas Board of Regents in 1983 to function as a research and evaluation unit under the Office of the Vice Chancellor for Research, Graduate Studies, and Public Service at the University of Kansas. CETE has 102 staff including faculty, Ph.D. research associates, M.S. research assistants, doctoral students, and others. CETE is divided into six groups: Technology Development, Computer Science, General Assessment, Alternate Assessment, Communications & Editing, and Administration. The groups contain staff with expertise in psychometrics, curriculum and instruction, test development, editing, web design, software development, computer science, and event planning. CETE has an annual budget of approximately \$10,000,000 derived primarily from external grants.

For 30 years has provided assessment services for KSDE. Current Kansas assessment services are for formative, interim, and summative assessments in reading, writing, mathematics, science, and history & government. Approximately 35,000 students are tested at each grade annually, with over 99.7 percent tested online. As a result of this work, CETE is experienced in handling confidential student and educator data. Using a secure data center with redundant power supplies, servers, routers, and load balancers, they have extensive experience hosting massive, data intensive web applications.

Along with test development and analysis activities, the State commissions CETE to plan and conduct both basic and applied research and evaluation investigations into a variety of assessment issues such as consequential and impact validation, test bias, identifying performance standards and associated cutscores, equating, evaluation of trends, and the impact of testing on schooling, public perception, teaching practices, instructional design and learning outcomes.

CETE is the lead organization in a five-year federal initiative called the DLM Alternate Assessment System Consortium. CETE, along with 13 consortium member states, will design and develop a learning maps based assessment system to support teachers in improving the learning of students with the most significant cognitive disabilities.

CETE is also the lead organization for a consortium currently funded by three states to develop career pathways assessments. This innovative program will include multiple-choice and technology-enhanced items and field experiences aimed at guiding and certifying students in their career development.

CETE's office is located in Joseph R. Pearson Hall, a 105,000-square-foot facility that also houses the four academic departments of the School of Education, including the Department of Psychology and Research in Education. The building contains fully equipped statistics and instructional technology labs, a microcomputer lab, a library and media resource center, a telecommunications and videoconferencing classroom, offices, conference rooms, and research suites.

CETE maintains the necessary infrastructure to effectively support the scope of this research initiative, including all of the necessary personnel and equipment for scanning, faxing, copying, word

processing, as well as statistical and psychometric analyses. Researchers also have access to the many resources available through the University of Kansas at large, including libraries and conference facilities.

Evaluation Plan

Evaluator Capabilities. Edvantia, Inc., with offices in Charleston, West Virginia, and Nashville, Tennessee, will be responsible for conducting the evaluation of the Accessibility of Technology-Enhanced Assessments Grant. During the course of its 46 years working in more than 20 states, Edvantia has developed knowledge, tools, and professional services—grounded in theory, rigorous research, and practical experience—and has become a trusted education resource. Edvantia’s portfolio of work is divided into two overarching business streams: (1) research and evaluation and (2) technical assistance and professional development. Dr. Kimberly Good, a senior research and evaluation specialist with Edvantia, will serve as the evaluation director for the project. Dr. Good has worked in the field of evaluation for 17 years. Her vita details her experiences and areas of expertise which currently include serving as the director for the evaluations of two Enhanced Assessment Grants and a General Supervision Enhancement Grant.

Evaluation Purposes. The evaluation will provide formative data for decision-making and refinements to the project as needed and summative data to document achievement of project goals. To achieve the goal of providing a research-based, use-focused evaluation, the evaluation will encompass five major tasks: (1) gather information about project activities that help improve the program; (2) examine fidelity of implementation to the proposed project design; (3) determine whether the goals of the project were achieved; (4) assess the effectiveness of the collaborative that includes multiple state education agencies (SEAs), higher education institutions, and other partners; and (5) provide guidance about effective strategies that could be replicated or sustained in similar type projects. Audiences for the evaluation will include project staff and the U.S. Department of Education. Additionally, the evaluators will be responsible for compiling data for the four performance measures required for the Enhanced Assessment Grants as a part of the Government Performance and Results Act of 1993.

Data Collection Methods and Analyses. Across the evaluation, a variety of data collection methods will be used, including interviews and surveys, as well as document and artifact review (e.g., meeting agendas, minutes, outputs such as technology-enhanced assessment items and task types catalog, description of valid accommodations). Project, partner, and SEA staff will be interviewed at the end of Year 1 and again near the conclusion of the project to ascertain goal attainment, identify successes and challenges, and articulate strategies for replication. Ongoing document and artifact review will verify the implementation of the project. An online survey will be used to help assess the effectiveness of the collaborative. The responses to this survey will be analyzed using standard quantitative and qualitative data analysis procedures. Qualitative data will be analyzed by theme. Emerging themes will be identified and data will be reviewed for repeating categories. Themes will then be tabulated to provide a general quantitative analysis of the most salient and prevalent issues. Descriptive statistics (e.g., frequencies, means, standard deviations) will be examined for survey data.

Monitoring Progress and Reporting. Edvantia will produce an interim report at the end of Year 1 and a summative report at the conclusion of the two-year project. All evaluation procedures and processes undertaken at Edvantia adhere to industry standards for high-quality research and ethical conduct, e.g., the *Guiding Principles for Evaluators* (American Evaluation Association, 2005) and the *Program Evaluation Standards* (Joint Committee on Standards for Educational Evaluation, 2010). Further, all evaluation plans and protocols will be submitted to Edvantia's Institutional Review Board to ensure the protection of human subjects. Edvantia evaluators are committed to ongoing, informal communication about evaluation activities and findings. To this end, Dr. Good will participate on the National Advisory Board, the project's formative evaluation committee. Data collected through the course of the project will be analyzed and summarized in a timely manner and shared with project staff. Evaluators will also assist project staff in using evaluation findings to make programmatic changes by including clear and actionable recommendations in each summary of findings and in the evaluation reports.

Other Attachment File(s)

* Mandatory Other Attachment Filename:

To add more "Other Attachment" attachments, please use the attachment buttons below.

References

- Abbott, D. (2005). Reasonable adjustments: The practicalities. *Occupational Health Review*, 115, 26–28.
Retrieved from http://enricosmog.com/sites/default/files/OHR%20115%20p26-28.indd_.pdf
- Allman, C. (2006). *Position paper: Accommodations for testing students with visual impairments*.
American Printing House for the Blind, Inc. Retrieved from <http://www.aph.org/tests/accomodations.html>
- American Evaluation Association (AEA). (2005). *Guiding principles for evaluators*. Retrieved from
<http://www.eval.org/Publications/GuidingPrinciplesPrintable.asp>.
- American Foundation for the Blind. (2005). *Building assessment initiatives for schools: An accommodations guide for parents and students with visual impairments*. New York, NY: Author. Retrieved from <http://www.afb.org/section.aspx?SectionID=58&TopicID=264&DocumentID=2762>
- American Foundation for the Blind. (2012a). *Interpreting Bureau of Labor Statistics employment data*. New York, NY: Author. Retrieved from <http://www.afb.org/section.aspx?SectionID=15&SubTopicID=177>
- American Foundation for the Blind. (2012b). *Refreshable Braille displays*. New York, NY: Author. Retrieved from <http://www.afb.org/ProdBrowseCatResults.asp?CatID=43>
- Arlene R. Gordon Research Institute. (2012). *Computer use and internet access*. New York, NY: Author. Retrieved from <http://www.lighthouse.org/research/statistics-on-vision-impairment/computer-use-internet-access/>
- Armstrong, H. L., & Murray, I. D. (2010). Adapting advanced information technology network training for adults with visual impairments. *Journal of Visual Impairment & Blindness*, 104, 504–509.
- Bechard, S., Sheinker, J., Abell, R., Barton, K., Burling, K., Camacho, C., . . . Tucker, B. (2010). Measuring cognition of students with disabilities using technology-enabled assessments: Recommendations for a national research agenda. *Journal of Technology, Learning, and Assessment*, 10(4).

- Brodin, J. (2010). Can ICT give children with disabilities equal opportunities in school? *Improving Schools, 13*, 99–112. doi: 10.1177/1365480209353483
- Capella-McDonnall, M. E. (2005). Predictors of competitive employment for blind and visually impaired consumers of vocational rehabilitation services. *Journal of Visual Impairment & Blindness, 99*, 303–315. Retrieved from <http://www.eric.ed.gov/PDFS/EJ687986.pdf>
- Center for Applied Special Technology (2011). *Universal Design for Learning Guidelines version 2.0*. Wakefield, MA: Author. Retrieved from <http://www.cast.org/udl/index.html>
- Center for Universal Design. (1997). *Principles of universal design*. Raleigh, NC: North Carolina State University. Retrieved from http://www.ncsu.edu/ncsu/design/cud/about_ud/udprinciplestext.htm
- Cho, H. J., Lee, J., and Kingston, N. M. (in press). Examining the effectiveness of test accommodation using DIF and a mixture IRT model. *Applied Measurement in Education*.
- Christensen, L. L., Braam, M., Scullin, S., & Thurlow, M. L. (2011). *2009 state policies on assessment participation and accommodations for students with disabilities* (Synthesis Report 83). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from <http://www.cehd.umn.edu/NCEO/onlinepubs/Synthesis83/default.htm>
- Common Core State Standards Initiative. (2012). Retrieved from <http://www.corestandards.org/>
- Cormier, D. C., Altman, J. R., Shyyan, V., & Thurlow, M. L. (2010). *A summary of the research on the effects of test accommodations: 2007-2008* (Technical Report 56). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from <http://www.cehd.umn.edu/NCEO/onlinepubs/Tech56/default.htm>
- Fuchs, L. S., & Fuchs, D. (2001). Helping teachers formulate sound test accommodation decisions for students with learning disabilities. *Learning Disabilities Research & Practice, 16*, 174–181.
- Fujiura, G. T., & Yamaki, K. (2000). Trends in demography of childhood poverty and disability. *Exceptional Children, 66*, 187–199.
- Hansen, E. G., Lee, M. J., & Forer, D. C. (2002). A 'self-voicing' test for individuals with visual impairments. *Journal of Visual Impairment & Blindness, 96*(4), 273.

Hasty, L. (n.d.). *Teaching tactile graphics* [Webcast]. Retrieved from [http://support.perkins.org/site/PageServer?pagename=Webcasts Teaching Tactile Graphics](http://support.perkins.org/site/PageServer?pagename=Webcasts_Teaching_Tactile_Graphics)

IMS Global Learning Consortium. (2012). *Accessible portable item protocol*. Retrieved from <http://www.imsglobal.org/apip/index.html>

Joint Committee on Standards for Educational Evaluation. (2010). *The program evaluation standards* (3rd ed). Thousand Oaks, CA: Sage.

Kamei-Hannan, C. (2008). Examining the accessibility of a computerized adapted test using assistive technology. *Journal of Visual Impairment & Blindness*, 102(5), 261–271.

Landau, S., Russell, M., & Erin, J. N. (2006). The use of the Talking Tactile Tablet as a testing accommodation. *RE:View: Rehabilitation and Education for Blindness and Visual Impairment*, 38(1), 7–21.

Learning, Sight & Sound Made Easier. (2011). *Talking calculators*. Retrieved May 21, 2012, from <http://www.lssproducts.com/category/talking-calculators>

Lenth, R. V. (2006-9). *Java Applets for Power and Sample Size* [Computer software]. Retrieved from <http://www.stat.uiowa.edu/~rlenth/Power>.

Leonard, R. (2002). *Statistics on vision impairment: A resource manual* (5th ed). New York, NY: Arlene R. Gordon Research Institute of Lighthouse International. Retrieved from <http://www.gesta.org/estudos/statistics0402.pdf>

Minnesota Department of Education. (2009). *Minnesota manual of accommodations for students with disabilities in instruction and assessment*. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from <http://www.cehd.umn.edu/nceo/OnlinePubs/MNmanuals/MNmanual.pdf>

Mislevy, R. J., & Haertel, G. D. (2006). Implications of evidence-centered design for educational testing. *Educational Measurement: Issues and Practice*, 25, 6–20. Retrieved from <http://www.em2007.mpg.de/files/MislevyHaertel.pdf>

- National Center on Educational Outcomes. (2011). *Don't forget accommodations! Five questions to ask when moving to technology-based assessments* (NCEO Brief #1). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from <http://www.cehd.umn.edu/NCEO/onlinepubs/briefs/brief01/default.htm>
- National Science Foundation. (1996). *Women, minorities, and persons with disabilities in science and engineering* (NSF 96-311). Arlington, VA: Author. Retrieved from <http://www.nsf.gov/statistics/nsf96311/2student.htm>
- New York State Education Department. (2006). *Test access & accommodations for students with disabilities*. Retrieved from <http://www.p12.nysed.gov/specialed/publications/policy/testaccess/guidance.htm>
- Oregon Department of Education. (2012). *Online test administration*. Retrieved from <http://www.ode.state.or.us/search/page/?id=3370>
- Rosano, A., Mancini, F., & Solipaca, A. (2009). Poverty in people with disabilities: Indicators from the capability approach. *Social Indicators Research*, 94, 75–82.
- Russell, M., Mattson, D., Higgins, J., Hoffmann, T., Bebell, D., & Alcaya, C. (2011). *A primer to the Accessible Portable Item Profile (APIP) standards*. Minnesota Department of Education. Retrieved from <http://apipstandard.org/archive/papers/APIP%20Primer%20-%20Final.pdf>
- Sireci, S. G., Scarpati, S. E., & Li, S. (2005). Test accommodations for students with disabilities: An analysis of the interaction hypothesis. *Review of Educational Research*, 4(75), 457–490.
- Swaminathan, H., & Rogers, H. J. (1990). Detecting differential item functioning using logistic regression procedures. *Journal of Educational Measurement*, 27, 361–370.
- Thompson, S. J., Johnstone, C. J., & Thurlow, M. L. (2002). *Universal design applied to large scale assessments* (Synthesis Report 44). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from <http://education.umn.edu/NCEO/OnlinePubs/Synthesis44.html>

- Thompson, S., Thurlow, M., & Moore, M. (2003). *Using computer-based tests with students with disabilities* (Policy Directions No. 15). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from <http://education.umn.edu/NCEO/OnlinePubs/Policy15.htm>
- Thurlow, M. L., Laitusis, C. C., Dillon, D. R., Cook, L. L., Moen, R. E., Abedi, J., & O'Brien, D. G. (2009). *Accessibility principles for reading assessments*. Minneapolis, MN: National Accessible Reading Assessment Projects. Retrieved from <http://www.narap.info/publications/reports/NARAPprinciples.pdf>
- Uslan, M. M. (1992). Barriers to acquiring assistive technology: Cost and lack of information. *Journal of Visual Impairment & Blindness*, 86, 402–407.
- Zwern, A. L., & Goodrich, G. L. (1996). *Virtual computer monitor for visually-impaired users*. Proceedings of the 1st European Conference on Disability, Virtual Reality, and Associated Technologies, Maidenhead, UK. Retrieved from http://www.icdvrat.reading.ac.uk/1996/papers/1996_03.pdf

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University of Kansas, Doctor of Philosophy, School Psychology, 1999
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University of Arizona, Master of Education, Special Education, 1979
University of Arizona, Bachelor of Arts with High Distinction, Asian Studies, 1973

HONORS AND AWARDS

American Psychological Association International Travel Grant, 2006
Nationally Certified School Psychologist, NASP, 2005
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Research Associate and Special Education Coordinator, Center for Educational Testing and Evaluation, University of Kansas, August 1999 to January 2005; July 2009 to present
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Lecturer, Consortium of Universities for International Studies, Italy, May to June 2007, January to June 2008, May to June 2009
Special education teacher (8 years)

PUBLICATIONS

Refereed Journals

Shaftel, J. & Shaftel, T. L. Evaluation of student success in study abroad. Manuscript submitted for publication.

Shaftel, J. & Rutt, B. T. (2011). Characteristics of students who take an alternate assessment based on modified achievement standards (AA-MAS). *Journal of Disability Policy Studies*, Online First, November 7, 2011. doi: 10.1177/1044207311424909

- Shaftel, J. & Shaftel, T. L. (2010). Measuring intercultural attitudes of undergraduates who study abroad: Scale development and validity. *International Psychology Bulletin*, *14*, 12-15.
- Schon, J., Shaftel, J., & Markham, P. (2008). Contemporary issues in the assessment of culturally and linguistically diverse learners. *Journal of Applied School Psychology*, *24*, 163-189.
- Shaftel, J., & Shaftel, T. L. (2007). Educational assessment and the AACSB. *Issues in Accounting Education*, *22*, 215-232.
- Shaftel, J., Belton-Kocher, E., Glasnapp, D. R. & Poggio, J. P. (2006). The impact of test item characteristics on the performance of English language learners and students with disabilities on large-scale mathematics assessments. *Educational Assessment*, *11*, 105-126.
- Shaftel, J., Pass, L. & Schnabel, S. (2005). Math games for adolescents. *TEACHING Exceptional Children*, *37*(3), 25-30.
- Shaftel, J. & Shaftel, T. L. (2005). The influence of effective teaching in accounting on student attitudes, behavior and performance. *Issues in Accounting Education*, *20*. 231-246.
- Shaftel, J., Yang, X., Glasnapp, D. & Poggio, J. (2005) Improving assessment validity for students with disabilities in large-scale assessment programs. *Educational Assessment* *10*, 197-215.
- Yang, X., Shaftel, J., Glasnapp, D. & Poggio, J. (2005). Qualitative or quantitative differences? Latent class analysis of mathematical ability for special education students. *Journal of Special Education*, *38*, 194-207.

Large-Scale Assessments and Technical Reports

- Coffman, D., Rutt, B. T., & Shaftel, J. (2011). *Qualitative analysis of Kansas Alternate Assessment data folio comments*. Lawrence, KS: University of Kansas, Center for Educational Testing and Evaluation.
- Shaftel, J. & Nash, B. (2011). *Kansas Alternate Assessment alignment study: Links for Academic Learning*. Lawrence, KS: University of Kansas, Center for Educational Testing and Evaluation.
- Shaftel, J. (2009). *Kansas test accommodation participation rates and review of research*. Lawrence, KS: University of Kansas, Center for Educational Testing and Evaluation.
- Poggio, J. P., Shaftel, J. & Glasnapp, D. R. (2000 – 2005). *Kansas Alternate Assessments in Reading, Mathematics, Science and Social Studies for Ages 10, 13 and 16*. Topeka: Kansas State Department of Education.
- Poggio, J. P., Shaftel, J. & Glasnapp, D. R. (2000 – 2005). *Kansas Modified Assessments in Reading, Mathematics, Science and Social Studies* (12 forms). Topeka: Kansas State Department of Education.
- Poggio, J. P., Shaftel, J. & Glasnapp, D. R. (2000 – 2005). *Kansas Plain English Assessment in Mathematics for Limited English Proficient Students* (3 grade level forms). Topeka: Kansas State Department of Education.

Shaftel, J., Belton-Kocher, E., Glasnapp, D. R., & Poggio, J. P. (2003). *The differential impact of accommodations in statewide assessment: Research summary*. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Available:
<http://education.umn.edu/NCEO/TopicAreas/Accommodations/Kansas.htm>

Other Publications

Shaftel, J. (2010). Accountability. In C. S. Clauss-Ehlers (Ed.). *Encyclopedia of Cross-Cultural School Psychology*. New York: Springer.

Shaftel, J. (2010). American Psychological Association. In C. S. Clauss-Ehlers (Ed.). *Encyclopedia of Cross-Cultural School Psychology*. New York: Springer.

Shaftel, J. (2010). Outcomes-Based Education. In C. S. Clauss-Ehlers (Ed.). *Encyclopedia of Cross-Cultural School Psychology*. New York: Springer.

Shaftel, J. (2010). Students with Disabilities. In C. S. Clauss-Ehlers (Ed.). *Encyclopedia of Cross-Cultural School Psychology*. New York: Springer.

Shaftel, J. (2010). Study Skills. In C. S. Clauss-Ehlers (Ed.). *Encyclopedia of Cross-Cultural School Psychology*. New York: Springer.

Shaftel, J. (2009). IQ. In B. A. Kerr (Ed.). *Encyclopedia of Giftedness, Creativity and Talent*. Newbury Park, CA: Sage.

Shaftel, J. (2009). Wechsler Preschool and Primary Scale of Intelligence. In B. A. Kerr (Ed.). *Encyclopedia of Giftedness, Creativity and Talent*. Newbury Park, CA: Sage.

Shaftel, J. (2007). Book review of Thompson, R. A., (2006), *Nurturing Future Generations*, Routledge, NASP Resources. Available:
http://www.nasponline.org/resources/bookreviews/br_nurturing.aspx

Shaftel, J. & Shaftel, T. (2007, February). International Education and Personality Variables: Cross-Cultural Competence of Undergraduates. *Psychology International, Newsletter of the APA Office of International Affairs*, 18(1), 8-9. Available: <http://www.apa.org/international/pi-collaborate.html>

Shaftel, J. (2005, September). Book review of Moran, D. J. & Malott, R. W., (2004), *Evidence-based educational methods*, Academic Press, NASP Communiqué, 33(9), 45.

Shaftel, J. (2005). Posttraumatic stress disorder. In S. W. Lee, P. A. Lowe, & E. Robinson (Eds.). *Encyclopedia of School Psychology*. Thousand Oaks, CA: Sage.

Shaftel, J. (2005). Special education. In S. W. Lee, P. A. Lowe, & E. Robinson (Eds.). *Encyclopedia of School Psychology*. Thousand Oaks, CA: Sage.

Shaftel, J. (2005). Statewide tests. In S. W. Lee, P. A. Lowe, & E. Robinson (Eds.). *Encyclopedia of School Psychology*. Thousand Oaks, CA: Sage.

NATIONAL AND INTERNATIONAL PRESENTATIONS

- Shaftel, J. & Nash, B. (2012, April). *Effects of the number of response categories and verbal anchoring on rating scales*. Roundtable to be presented at the annual conference of the American Educational Research Association, Vancouver, BC.
- Shaftel, J. & Shaftel, T. L. (2011, November). *Evaluation of study abroad outcomes*. Roundtable presented at the annual conference of the American Evaluation Association, Anaheim, CA.
- Shaftel, J. & Shaftel, T. L. (2011, August). *Assessment of student success in study abroad*. Poster presented at the annual conference of the American Psychological Association, Washington, D.C.
- Shaftel, J. (2010, November). *One state's experience implementing Links for Academic Learning*. Paper presented at the annual conference of the American Evaluation Association, San Antonio, TX.
- Shaftel, J. & Shaftel, T. L. (2010, August). *Development of a scale for measuring student intercultural attitudes*. Paper presented at the annual conference of the International Council of Psychologists, Chicago, IL.
- Lee, S. W., Shaftel, J., Neaderhiser, J., & Schuttler, J. (2010, April). *Measurement of whole-class behavior: A validity study*. Poster presented at the annual meeting of the American Educational Research Association, Denver, CO.
- Lee, S. W., Shaftel, J., Neaderhiser, J., & Schuttler, J. (2009, November). *The analysis of the Classroom Behavior Observation Tool: Triangulating on disruptive classroom behavior in the evaluation process*. Paper presented at the annual meeting of the American Evaluation Association, Orlando, FL.
- Shaftel, J. (2009, August). *Development and validation of instruments to assess the behavior and assets of students at the classroom level*. Poster presented at the annual meeting of the American Psychological Association, Toronto, Canada.
- Shaftel, J. (2009, August). *Development of a scale for measuring intercultural attitudes*. Poster presented at the annual meeting of the American Psychological Association, Toronto, Canada.
- Bennett, E., Shaftel, J., Lee, S.W., & Schmitt, V. (2008, February). *The effects of teacher coaching on early literacy outcomes*. Poster presented at the annual meeting of the National Association of School Psychologists, New Orleans, LA.
- Oeth, J., Niileksela, C., Bennett, E., Shaftel, J., & Eagle, J. (2008, February). *Assessing undergraduate psychology and education majors' knowledge of school psychology*. Poster presented at the annual meeting of the National Association of School Psychologists, New Orleans, LA.
- Shaftel, J. & Shaftel, T. L. (2007, August). *Cross-cultural competence of undergraduates who study internationally*. Poster presented at the annual meeting of the American Psychological Association, San Francisco, CA.

- Lee, S. W. & Shaftel, J. (2007, March). *Measuring students' problem behaviors and assets at the classroom level*. Paper presented at the annual meeting of the National Association of School Psychologists, New York, NY.
- Lee, S. W., Shaftel, J., & Raad, J. (2006, November). *Evaluating the Problem Behaviors and Assets of Students at the Classroom Level*. Poster presented at the annual meeting of the American Evaluation Association, Portland, OR.
- Shaftel, J. & Shaftel, T. L. (2006, July). *Developing intercultural competence through international study*. Paper presented at the 5th Global Conference on Business and Economics, Cambridge, UK.
- Lee, S. W. & Shaftel, J. (2006, March). *The Classroom Behavior and Asset Scale for Teachers*. Poster presented at the annual meeting of the National Association of School Psychologists, Anaheim, CA.
- Shaftel, J. (2005, December 6). *Empowering Our Children* [radio broadcast]. Overland Park, KS: Union Broadcasting.
- Lee, S. W. & Shaftel, J. (2005, March). *Validity of the Classroom Behavior and Asset Scale for Teachers*. Paper presented at the annual meeting of the National Association of School Psychologists, Atlanta, GA.
- Shaftel, J., Shaftel, T. L. & Ahluwalia, R. (2004, July). *Developing intercultural competence through international study*. Poster presented at the annual meeting of the American Psychological Association, Honolulu, HI.
- Lee, S. W. & Shaftel, J. (2004, July). *The Classroom Behavior and Asset Scale – Teachers*. Poster presented at the annual meeting of the American Psychological Association, Honolulu, HI.
- Shaftel, J. & Belton-Kocher, E. (2004, April) *The impact of linguistic complexity and mathematics characteristics on student performance on a large scale mathematics assessment*. Poster presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Yang, X. & Shaftel, J. (2003, April). *Qualitative or quantitative differences: Latent class analysis of mathematical ability for special education students*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Poggio, J., Glasnapp, D. & Shaftel, J. (2003, April). *Impact and characteristics of linguistic modifications to assessments for ELL students*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Shaftel, J., Shaftel, T. L. & Ahluwalia, R. (2003, April). *International educational experience and intercultural competence, foreign language study and career plans*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Shaftel, J. & Belton-Kocher, E. (2003, April). *Effects of a calculator accommodation on general education students: Analysis of item and test score differences*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

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(b)(6)

Educational History

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Professional Experience

**2009-2012 Research Professional III, Georgia Center for Assessment,
University of Georgia, Athens, GA**

Conducted psychometric analyses for the Georgia state-wide AA-MAS—the GA CRCT-M (i.e., calibration, equating, differential item functioning, and classical item analyses); recommended assessment development procedures to client (i.e., established sampling methodology, psychometric operational form guidelines, and equating plans); managed the reporting of the high-stakes Gwinnett Gateway Assessment program; served as an advisor to project coordinators and content specialists during form development; generated user-interface programs to facilitate assessment activities (i.e., rater scanning, form development, and cut score impact projections); and presented the technical aspects of the CRCT-M and the Gateway Assessment Program to their respective Technical Advisory Committees.

**2006-2009 Assessment Specialist, Assessment Research & Development,
Georgia Department of Education, Atlanta, GA**

Replicated service providers' psychometric analyses and reporting programs for quality assurance (i.e., pre-equating, scaling tables, and data management routines); served as a resource during assessment development activities (i.e., provided support to team during item/data review, standard setting, and vertical articulation); collaborated with service-providers on scan, scoring, and reporting procedures; produced user-interface analysis programs for local staff; generated electronic aggregations and performance briefs; and conducted assessment research as requested by state leadership.

**2004-2006 School Improvement Specialist, School Improvement,
Georgia Department of Education, Atlanta, GA**

Developed assessment reporting programs, instructional publications, and training modules for local educational agencies (e.g., 20,000 copies of the Data Utilization Guide were distributed to schools with over 50 on-site training sessions); collaborated with team to develop formative assessment and agency evaluation guides; analyzed assessment data/educational indicators to prioritize the level of support offered to local agencies; and assisted with program evaluation (i.e., evaluation of School Reform Models, Leadership Facilitators, and Performance on School Standards).

**2002-2004 Research, Evaluation & Testing Specialist, Testing Division,
Georgia Department of Education, Atlanta, GA**

Aggregated student-level assessment data to disseminate electronic results to local systems; assisted with program evaluation (i.e., evaluation of Charter Schools and SWD Inclusion Practices), served as a resource during data reviews, and provided data utilization training to Regional Education Service Agencies.

**1999-2002 Statistical Analyst II, University Planning, Institutional
Research, & Continuous Improvement,
Edinboro University of Pennsylvania, Edinboro, PA**

Extracted, analyzed, and submitted University data requested by the Pennsylvania State System of Higher Education, Pennsylvania Department of Education, and the National Center for Education Statistics; served as a resource to campus representatives conducting research through design, implementation, and analysis; and evaluated Enrollment, Management, and Retention initiatives (i.e., Living and Learning Communities, Staff to Student Mentor Program, and First-year At-risk Remediation Program).

Academic Teaching Experience

Spring, 2010 Graduate Teaching Assistant for Structural Equation Modeling

Graded homework assignments, created an on-line instructional module, and held office-hours for students.

Fall, 2009 Graduate Teaching Assistant for Analysis of Variance

Generated homework assignments, planned and served as the instructor for five laboratory sections of the course, and tutored students on an individual basis.

Spring, 2009 Graduate Teaching Assistant for Structural Equation Modeling

Graded homework assignments and held office-hours for students.

Internships & Relevant Student Positions

- Spring, 2009** **Graduate Intern, Georgia Center for Assessment,**
University of Georgia, Athens, GA
- 1997-1999** **Graduate Research Assistant, Institutional Research,**
Edinboro University of PA, Edinboro, PA
- 1998** **School Psychology Practicum,**
General McClane School District, Edinboro, PA
- 1993-1995** **Psychological Statistics Tutor & Peer Academic Tutor,**
Office of Students with Disabilities, Edinboro, PA

Publications

Bandalos, D.L., Davis, S., **Ferster, A.E.**, & Samuelson, K. (2011). Validation of high stakes testing in accountability systems. In K. Geissinger and J. Boivard, (Eds.), *Contemporary Issues in High Stakes Testing*. American Psychological Association.

Select Presentations

- Ferster, A.E.** (September, 2010). Evaluating the efficacy of item modifications under the Rasch model, mixed-Rasch, and invariance procedures. In-progress research presented at the 8th Annual Society of Multivariate Experimental Psychology Graduate Student Preconference in Atlanta, GA.
- Ferster, A.E.** & Kim, S.-H. (July, 2010). Compatibility of item parameter estimates. Poster presented at the 75th Annual International Meeting of the Psychometric Society in Athens, GA.
- Kim, S.-H. & **Ferster, A.E.** (June, 2010). Use of academic assessment results to improve student academic achievement: Balanced assessment system. Paper presented at the KEDI-KAERA Educational Policy Joint Symposium in Seoul, Korea.
- Ferster, A.E.** (March, 2007). Dissemination & utilization of student level assessment files in Georgia. National Center for Education Statistics (NCES) Management Information Systems Conference, Atlanta, GA.
- Vahlsing, J. & **Ferster, A.E.** (November, 2006). Got data? Georgia's single statewide accountability system. Georgia Educational Technology Conference, Atlanta, GA.
- Ferster, A.E.** (May, 2006). Creating a balanced assessment system, Georgia Regional Service Agency Annual Conference. St. Simons, GA.
- Ferster, A.E.** & Calhoun, L. (August, 2005). The 2005-2006 Data Utilization Guide: A resource for Georgia educators. Georgia Association of Educational Leaders, Jekyll Island, GA.

Select Training Sessions

- Ferster, A.E.** (June, 2008). Item writing guidelines. Forsyth Counselor Assessment Kick-off, Cumming, GA.
- Bandalos, D.L. & **Ferster, A.E.** (April, 2007). Teaching educational measurement. National Council on Measurement in Education, Chicago, IL.
- Ferster, A. E.** & Vahlsing, J. (November, 2006). Analyzing data with macros: Programs within the 2006-2007 Georgia Data Utilization Guide. Georgia Educational Technology Conference, Atlanta, GA.
- Calhoun, L., **Ferster, A.E.**, Fincher, M., & Komatsu, L. (September, 2005). Assessment literacy & constructing formative assessments via the On-line Assessment System (OAS). Training module presented to Regional Education Service Agency Staff. Macon, GA.
- Ferster, A.E.**, & Calhoun, L. (Spring, 2003). Managing assessment data. Georgia Department of Education Desire2Learn online professional development course presented to local system test coordinators.
- Calhoun, L., & **Ferster, A.E.**, (Fall, 2002). Writing within the content areas. Georgia Department of Education Desire2Learn online professional development course presented to local educators.
- Ferster, A.E.** (August-September, 2002). Interpretation of aggregate and student level state assessment reports. Training presented to new local test coordinators at the Annual Test Coordinator's Regional Workshop(s).

Technical Documents

- Georgia Department of Education. (2011). The Criterion Referenced Competency Tests—Modified (CRCT-M) Operational Technical Report. Athens, GA: Georgia Center for Assessment, University of Georgia.
[Chapter 4--Operational Analysis: Calibration, Scaling, and Equating and Chapter 7—Reliability & Validity]
- Georgia Department of Education. (2011). The Georgia CRCT-M Modified Angoff Standard Setting Technical Report. Athens, GA: Georgia Center for Assessment, University of Georgia.
[All sections depicting analyses of participant ratings, projected impact, and results of the event]
- Georgia Department of Education. (2010). Georgia Kindergarten Inventory of Developing Skills validity study in support of the argument: GKIDS provides educators with information about the level of instructional support needed by students entering first grade. Athens, GA: Georgia Center for Assessment, University of Georgia.

Gwinnett County Public Schools. (2010). Gwinnett Gateway annual technical report. Athens, GA: Georgia Center for Assessment, University of Georgia.

Georgia Department of Education. (2009). Five-year proposal for investigating the consequential validity of Georgia's Assessment System. Atlanta, GA: Georgia Department of Education.

Georgia Department of Education. (2006). The 2006-2007 Data Utilization Guide: A resource guide for Georgia Educators. Atlanta, GA: Georgia Department of Education.

Georgia Department of Education. (2005). The 2005-2006 Data Utilization Guide: A resource guide for Georgia Educators. Atlanta, GA: Georgia Department of Education.

Edinboro University of Pennsylvania. (2001). Edinboro University's 2000-2001 Fact Book. Edinboro, PA: Edinboro University of Pennsylvania.

Edinboro University of Pennsylvania. (2000). Edinboro University's 1999-2000 Fact Book. Edinboro, PA: Edinboro University of Pennsylvania.

Grant Activity

2000 Ferster, A.E.: Factors that impact student retention. Pennsylvania State System of Higher Education Performance and Outcome Plan Grant. \$10,000.

Service & Outreach Activities

Professional Affiliations

American Educational Research Association (AERA)
Association for Institutional Research (AIR)
National Council for Measurement in Education (NCME)

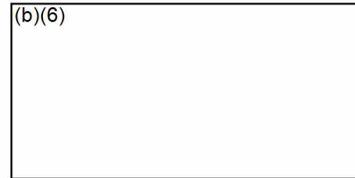
2009-2012	NCME Standards & Test Use Committee: Graduate Student Representative
2010	Psychometric Society: 75 th Annual Meeting Local Organizing Committee
2008	Teacher Evaluation (CLASS KEYS) Advisory Council
2005 & 2008	Development Committee for Georgia Leadership Institute for School Improvement Data Module
2005-2007	Teaching Leader, Georgia Leadership Institute for School Improvement
2006	Task Force on Disproportionality within SWD (Students classified with a disability)
2003-2004	Developed/delivered data management professional learning sessions for GaDOE employees
2003	Assessment Dissemination Task Force
1999-2002	Sorority Advisor, Alpha Sigma Alpha, Edinboro University
2001	Strategic Study Group, Evaluation of the Graduate Assistantship Award Process, Edinboro University
1998	Treasurer, School Psychology Organization
1998	Student Representative, School Psychology Program Review

Kimberly Good, Ph.D.

Work

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Charleston, WV 25325
kim.good@edvantia.org
304.347.0449

Home



Education

Northwestern University, Evanston, IL 2011: Institute of Education Sciences' Summer Institute on Cluster Randomized Trials, led by Dr. Lawrence Hedges and Dr. Mark Lipsey

Northwestern University, Evanston, IL, 2007: Institute for Policy Research at Northwestern University and The Spencer Foundation's Quasi-Experimental Design and Analysis Workshop, led by Dr. Thomas Cook and Dr. William Shadish

Western Michigan University, Kalamazoo, MI, 1997: Ph.D. (educational leadership). Research focus—evaluation, measurement and research design. Dissertation—Factors Affecting Responses in Electronic Mail Surveys.

University of South Dakota, Vermillion, SD, 1993: M.A. (educational psychology). Research focus—statistics and research design.

University of Northern Iowa, Cedar Falls, IA, 1990: B.A. (science education).

Professional Experience

2011- Present Senior Research and Evaluation Specialist, Edvantia, Charleston, WV

2007–2010 Research and Evaluation Specialist II, Edvantia, Charleston, WV

2003–2007 Research and Evaluation Specialist I, Edvantia, Charleston, WV

2001–2002 Director, Sponsored and Academic Program Support and Evaluation, Saginaw Valley State University, University Center, MI

1996–2001 Evaluation Associate, North Central Regional Educational Laboratory, Naperville, IL.

1994–1996 Research Associate, The Evaluation Center, Western Michigan University, Kalamazoo, MI.

1993–1994 Teacher, Belvidere Community School District, Belvidere, IL.

- 1992–1993 Research Assistant, Office of the Dean, School of Education, University of South Dakota, Vermillion, SD.
- 1991–1992 Graduate Assistant for InTEC (Center for Interactive Technology in Education and Corporations), University of South Dakota, Vermillion.
- 1990–1991 Teacher, Lyons-Decatur Community School District, Lyons, NE.

Consulting

- 2001–2003 Metiri Group, Los Angeles, CA
- 2001– 2003 North Central Regional Educational Laboratory, Naperville, IL
- 2001– 2003 Appalachia Educational Laboratory, Charleston, WV
- 2001 Oklahoma Technical Assistance Center, Cushing, OK
- 2001 The Evaluation Center, Western Michigan University, Kalamazoo, MI
- 1995 Loy Norrix High School, Kalamazoo, MI.
- 1994 Plainwell Community School District, Plainwell, MI.

Internships/Fellowships

- 2002 American Association of State Colleges and Universities (AASCU), Washington, D.C.
- 1995 - 1996 International Youth Foundation (IYF), Battle Creek, MI.
- 1995 The Center for Research on Educational Accountability and Teaching and Teacher Evaluation (CREATE), Kalamazoo, MI.
- 1995 MRC Industries, Kalamazoo, MI.

Area of Expertise: Program Evaluation

Dr. Kimberly Good is involved in several external evaluation contracts at Edvantia and is director of evaluation for the Appalachia Regional Comprehensive Center at Edvantia and the Florida and the Islands Regional Comprehensive Center (FLICC). In these roles she oversees and manages design and implementation of evaluation plans for state and regional projects and attends to federal reporting requirements. Currently Dr. Good is also the evaluation project director for three assessment initiatives funded through the U.S. Department of Education. She has 17 years of experience in conducting educational evaluations. Dr. Good is versed in both qualitative and quantitative

evaluation methods. She favors a multi-method, participatory approach to evaluation. Prior to her employment with Edvantia, she was an independent program evaluator specializing in K-12 educational program evaluation and has served as a consultant for several firms. Other positions she has held include director of sponsored and academic program support and evaluation at Saginaw Valley State University, evaluation associate at Learning Point Associates (formerly the North Central Regional Educational Laboratory), and evaluator for the North Central Eisenhower Mathematics and Science Education Consortium (NCEMSC) in Naperville, Illinois. While with Learning Point Associates, Dr. Good assisted in the evaluation of the Milwaukee Public School District Innovative Schools Program; a qualitative evaluation of a class size reduction initiative in Hammond City Schools (Indiana); a formative and summative evaluation of the Waukegan (Illinois) Technology Innovation Challenge Grant; and an effectiveness study of the Iowa intermediate unit system. Dr. Good has been a classroom science teacher at both the junior and senior high levels.

Selected Publications

- Good, K., Bradley, K., Cowley, K., Donahue, T., Finch, N. & Sturges, K. (2011). *Appalachia Regional Comprehensive Center year 6 evaluation report*. Charleston, WV: Edvantia, Inc.
- Good, K., Cowley, K. & Finch, N. (2010). *Appalachia Regional Comprehensive Center year 5 evaluation report*. Charleston, WV: Edvantia, Inc.
- Cowley, K. & Good, K. (2010). *Using evaluation to refine and focus technical assistance informational brief*. Charleston, WV: Edvantia, Inc.
- Good, K., Harsh, S., & Bumgardner, S. *Capacity building monograph: 2005-2010 ARCC initiatives*. Charleston, WV: Edvantia, Inc.
- Good, K., Bradley, K., D'Brot, J. Cowley, K. & Finch, N. (2009). *Appalachia Regional Comprehensive Center year 4 evaluation report*. Charleston, WV: Edvantia, Inc.
- Good, K., Bradley, K., Cowley, K., Finch, N. & Hixson, N. (2008). *Appalachia Regional Comprehensive Center year 3 evaluation report*. Charleston, WV: Edvantia, Inc.
- Good, K., Bradley, K., Cowley, K., Finch, N. & Hixson, N. (2007). *Appalachia Regional Comprehensive Center year 2 evaluation report*. Charleston, WV: Edvantia, Inc.
- Howley, C.W., Good, K., Bradley, K., & Finch, N. (2006). *Appalachia Regional Comprehensive Center year 1 evaluation report*. Charleston, WV: Edvantia, Inc.
- Good, K., Bickel, R., & Howley, C. (2006). *Saxon elementary math program effectiveness study final report*. Charleston, WV: Edvantia.

- Bradley, K., Deck, A., Good, K., Hicks, B., & Runyan, J. (2005). *Appalachia Eisenhower Consortium for mathematics and science education intensive sites year 4 report*. Charleston, WV: AEL, Inc.
- Good, K., Sheinker, J., & Hambrick, K. (2005). *Review and assessment of recent research literature on large-scale assessment*.
- Good, K. (2004). *Comparison of Kentucky rural systemic initiative school districts and twenty matching Kentucky school districts on student academic and nonacademic performance*. Kalamazoo, MI: The Evaluation Center.
- Good, K. (2004). *West Virginia statewide study of teaching and learning in mathematics and science*. Charleston, WV: AEL, Inc.
- Good, K. & Hambrick, K. (2003). *Graphic organizers: A review of scientifically based research*. Charleston, WV: AEL, Inc.
- Good, K., Im, J., & Butler, A. (2004). *Larson's intermediate math: A study of fourth-grade and fifth-grade performance in two Kansas schools*. Charleston, WV: AEL, Inc.
- Vandersall, K. & Good, K. (2003). *The Ohio SchoolNet Telecommunity evaluation, Year 6*. Los Angeles, CA: Metiri Group.
- Vandersall, K., Cambre, M., Good, K., Lewis, M., Martin, C., & Sexton, C. (2001). *The Ohio SchoolNet Telecommunity Evaluation, Year 5*. Los Angeles, CA: Metiri Group.
- Hawkes, M. and Good, K. (2000). Evaluating professional development outcomes of a telecollaborative technology curriculum. *The rural educator*, 21(3), 5-11.
- Good, K. (2000). *Hammond class size reduction evaluation report*. Oak Brook, IL: NCREL.
- Good, K. & Youngren, B. (2000). *Problem solving and critical thinking in mathematics in the School City of Hammond evaluation report*. Oak Brook, IL: NCREL.
- Good, K. & Stephens, R. (1999). *AEA system evaluation report*. Oak Brook, IL: NCREL.
- Hawkes, M., Cambre, M., Lewis, M., & Good, K. (1998). *The Ohio SchoolNet Telecommunity evaluation year two technical report*. Oak Brook, IL: NCREL.
- Chesswas, R., Good, K., & Chandler, M. (1997). *New Iowa Schools Development Corporation final evaluation report year 4 1996-97*. Oak Brook, IL: NCREL.
- Hawkes, M., Good, K. & Quinn, B. (1997). *Milwaukee public school district innovative schools program evaluation study 1996-97 update*. Oak Brook, IL: NCREL.

Dodson, S. & Good, K. (1995). *Evaluation findings for Kellogg youth development seminars*. Kalamazoo, MI: The Evaluation Center.

Nyirenda, S. & Good, K. (1995). *Improving evaluation practices in schools institute evaluation report*. Kalamazoo, MI: The Evaluation Center.

Selected Presentations

Cowley, K.S., Good, K., Finch, N. (2011). *The Best Laid Plans... Often Go Astray: Conducting a Mixed-methods Evaluation of a Changing Project*. Paper to be presented at the American Evaluation Association Annual Meeting, November 2011, Anaheim, CA.

Cowley, K.S., Good, K., Harsh, S. (2011). *Benchmarking Capacity Building Through Levels of Use*. Paper to be presented at the American Evaluation Association Annual Meeting, November 2011, Anaheim, CA.

Bradley, K.L., D'Brot, J., Cowley, K.S., Good, K., Finch, N., & Hixson, N. (2008). *CC3: Lessons Learned From the Evaluation of Three Comprehensive Centers*. Paper presented at the American Evaluation Association Annual Meeting, November 2008, Denver, CO.

Good, K., Boehm, D., & Hedberg, M. (2002). *Negotiating Shifting Terrain: Solving Three Common Problems in Assessment*. Presentation at the American Association of Higher Education Assessment Conference, June 2002, Boston, MA,

Nowakowski, J., Fielder, R., & Good, K. (1998). *More Than Just the Spirit: Looking Inside a Successful Seven-State Partnership of ESAs*. Panel presentation at the American Association of Educational Service Agencies, December 1998, Phoenix, AZ,

Good, K., Chandler, M. & Chesswas, R. (1998). *Using Data To Drive and Inform Decisionmaking: Evaluating the New Iowa Schools Development Corporation*. Paper presented at the American Evaluation Association Annual Meeting, November 1998, Chicago, IL.

Good, K. (1998). *Using Evaluation for Continuous Quality Improvement.* Paper presented at the American Evaluation Association Annual Meeting, November 1998, Chicago, IL.

Good, K. (1997). *The Waukegan, IL Technology and Learning Collaborative Evaluation – Thinking About How to Measure the Effectiveness of a Challenge Grant Project in Reaching its Goals*. Paper presented at The Technology Innovation Challenge Grant Program Fall Conference, October 1997, Washington, D.C.

Good, K. (1994). *Making Causal Claims in Program Evaluation*. Presentation at The Evaluation Center Brown Bag Seminar, October 1994, Kalamazoo, MI.

University of Kansas

Center for Educational Testing and Evaluation

Organizational Capacity Description

The **Center for Educational Testing and Evaluation (CETE)** was authorized by the Kansas Board of Regents in 1983 to function as a research and evaluation unit under the Office of the Vice Chancellor for Research, Graduate Studies, and Public Service at the University of Kansas. CETE has 102 staff including faculty, Ph.D. research associates, M.S. research assistants, doctoral students, and others. CETE is divided into six groups: Technology Development, Computer Science, General Assessment, Alternate Assessment, Communications & Editing, and Administration. The groups contain staff with expertise in psychometrics, curriculum and instruction, test development, editing, web design, software development, computer science, and event planning. CETE has an annual budget of approximately \$10,000,000 derived primarily from external grants.

For 30 years, CETE has provided assessment services for the Kansas Department of Education. Current Kansas assessment services are for formative, interim, and summative assessments in reading, writing, mathematics, science, and history & government. Approximately 35,000 students are tested at each grade annually, with over 99.7 percent tested online. As a result of this work, CETE is experienced in handling confidential student and educator data. Using a secure data center with redundant power supplies, servers, routers, and load balancers, they have extensive experience hosting massive, data intensive web applications.

Along with test development and analysis activities, the State commissions CETE to plan and conduct both basic and applied research and evaluation investigations into a variety of assessment issues such as consequential and impact validation, test bias, identifying performance standards and associated cutscores, equating, evaluation of trends, and the impact of testing on schooling, public perception, teaching practices, instructional design and learning outcomes.

CETE is the lead organization in a five-year federal initiative called the Dynamic Learning Maps Alternate Assessment System Consortium. CETE, along with 13 consortium member states, will design

and develop a learning maps based assessment system to support teachers in improving the learning of students with the most significant cognitive disabilities.

CETE is also the lead organization for a consortium currently funded by three states to develop career pathways assessments. This innovative program will include multiple-choice and technology-enhanced items and field experiences aimed at guiding and certifying students in their career development.

CETE's office is located in Joseph R. Pearson Hall, a 105,000-square-foot facility that also houses the four academic departments of the School of Education, including the Department of Psychology and Research in Education. The building contains fully equipped statistics and instructional technology labs, a microcomputer lab, a library and media resource center, a telecommunications and videoconferencing classroom, offices, conference rooms, and research suites.

CETE maintains the necessary infrastructure to effectively support the scope of this research initiative, including all of the necessary personnel and equipment for scanning, faxing, copying, word processing, as well as statistical and psychometric analyses. Researchers also have access to the many resources available through the University of Kansas at large, including libraries and conference facilities.

**Interstate Agreement between Kansas and
Participating Consortium States**

**Enhanced Assessment Grants Program, CFDA 84.368A-2
The Accessibility of Technology-Enhanced Assessments**

The State of Kansas and the consortium states ("States") hereby consent and agree to the following:

I. Purpose

The States (listed below) are entering into this Agreement to determine how to ensure the accessibility of technology enhanced items for use in common core alternate and general assessments.

II. Lead State Duties

The State of Kansas is the Lead State in this consortium and as such will file the grant application and act as fiscal agent as provided in paragraph IV.

III. State Obligations

All States certify and attest that they agree to follow all applicable rules, laws, and policies as required under the assurances made upon applying for the Enhanced Assessment Grant, CFDA 84.368A-2.

The States agree to carry out all activities as they are described in the grant application

IV. Funds Accountability

The States agree to utilize funds in accordance with Federal regulations applicable under the grant. No state shall be required to contribute funds to another participant state and each state is solely responsible for its financial obligations under the grant.

Each agency shall maintain fiscal records necessary for full accountability, follow generally accepted accounting principles, and account for all receipts and disbursements of funds transferred or expended pursuant to this Agreement.

The State of Kansas shall act as fiscal agent on the grant and disburse funds based on the terms of the grant and invoices received from the participating States. Should funding for the grant be reduced, Kansas will prorate reimbursements to the participating States. No funds will be dispersed to a state without a written invoice from the State.

Payment shall be made within a reasonable time after requests for payment and supporting documentation have been received by Kansas.

At the end of the grant period, the States must ensure that each has submitted all documentation of expenses to Kansas as the fiscal agent.

V. Sufficient Funding

The States understand and agree that because the Lead State is a governmental entity, this MOU shall in no way bind or obligate the State of Kansas beyond the terms of the Grant Award appropriation of funds by the United States Department of Education. Kansas reserves the right to

terminate the MOU, in whole or in part, if the U. S. Department of Education does not appropriate sufficient funds as may be required for Kansas to continue payment of funds to the participating states, or if the U. S. Department of Education requires Kansas to return funds to the federal government. Kansas may also terminate this MOU if the executive branch of the U. S. Department of Education mandates any cuts in or holdbacks of funding. Kansas may terminate under this provision by providing the States with 30 days written notice of termination.

VI. No Authority to Bind Other States

One State under this Agreement shall have no authority to enter into contracts or agreements on behalf of the other States. All contracts or agreements shall be entered on behalf of the executing State or executed by all participating States. No third party or other State entity may rely on this MOU. Any failure of the participating States to follow any or all of the terms of the MOU or Grant, or any future amendment or modification of the Grant, shall not establish any liability of the individual States to any third party or other entity.

VII. Limitations

This MOU does not create or give the participating States any powers that they would otherwise not have. Rather, this MOU is only to provide for the exercise of existing powers so as to achieve a more efficient operation of government. For this reason, this MOU sets forth the understanding of the States in achieving a common purpose, and is not intended to provide a basis for legal action upon breach of any of its provisions.

VIII. Period of Performance

The period of performance of this agreement shall be a period of twenty-four (24) months, and shall commence upon date of award.

IX. Copyright

Copyright to all materials developed for this project will be property of the Kansas University Center for Research. All state and territory departments of education will have a nontransferable right to non-commercial use of any product or deliverable resulting from this project.

X. Termination

Any party to this agreement may, without cause, terminate this agreement by notifying the others in writing at least 30 calendar days prior to intended date of terminate.

In the event that federal or state laws are amended or judicially interpreted so as to render the fulfillment of the agreement unnecessary or impractical as a result of such amendments or judicial interpretation, all parties to this agreement shall be discharged from further obligations under its terms, except of the completion of work commenced

prior to the date of termination and the equitable settlement of compensation due for such work.

XI. Amendment

This agreement shall not be altered, changed or amended except by an instrument in writing executed by the parties hereto.

XII. Scope of Agreement

This agreement incorporates all the agreements, covenants, and understandings between the parties of this agreement concerning the subject matter hereof. No prior agreement or understanding, verbal or otherwise, of parties or their agents shall be valid or enforceable unless embodied in this agreement.

XII. Dispute Resolution

Any disputes arising out of work performed and/or products or services delivered under this agreement will be subject to the laws of the State of Kansas and the United States.

XIV. Authority

In signing this Agreement on behalf of my state, I certify that:

1. I am authorized to do so;
2. This Agreement does not conflict with any applicable law or regulation to which my state is subject;
3. This document may be executed in counterparts.

State of Kansas

Consortium State 1

State name

Michigan

Authorized agent

Authorized agent

(b)(6)

(Joseph Martineau)

Date

Date

6-17-2012

**Interstate Agreement between Kansas and
Participating Consortium States**

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At the end of the grant period, the States must ensure that each has submitted all documentation of expenses to Kansas as the fiscal agent.



V. Sufficient Funding

The States understand and agree that because the Lead State is a governmental entity, this MOU shall in no way bind or obligate the State of Kansas beyond the terms of the Grant Award appropriation of funds by the United States Department of Education. Kansas reserves the right to terminate the MOU, in whole or in part, if the U. S. Department of Education does not appropriate sufficient funds as may be required for Kansas to continue payment of funds to the participating states, or if the U. S. Department of Education requires Kansas to return funds to the federal government. Kansas may also terminate this MOU if the executive branch of the U. S. Department of Education mandates any cuts in or holdbacks of funding. Kansas may terminate under this provision by providing the States with 30 days written notice of termination.

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- 2. This Agreement does not conflict with any applicable law or regulation to which my state is subject;
- 3. This document may be executed in counterparts.

State of Kansas

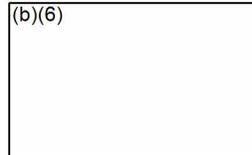
Consortium State 1

State name *West Virginia*

Authorized agent

Authorized agent

(b)(6)



Date

Date *June 8, 2012*

Assurance Regarding Management Partner

Directions: In the box below identify the proposed project “management partner”. Check the box to provide the assurance.

Consortium’s proposed project “management partner”:

Check the box:



The applicant assures that the proposed project management partner is not partnered with other eligible applicants.

[Optional: Enter additional information]

NOTE: You must upload any narrative sections and all other attachments to your application, including the Assurance Regarding “Management Partner,” as files in a .PDF (Portable Document) format only. You must print, complete, and save in .PDF format the Assurance Regarding “Management Partner,” for your application before uploading this attachment to your application.



**The Center
for Educational Testing
& Evaluation**

June 11, 2012

Dr. Diane M. DeBacker
Kansas Commissioner of Education
Kansas State Department of Education
120 SE 10th Avenue
Topeka, KS 66612-1182

Dear Dr. DeBacker,

The Center for Educational Testing and Evaluation (CETE) at the University of Kansas is excited to be a management partner in the Kansas State Department of Education's proposal to the U.S. Department of Education's Enhanced Assessment Grants Program – EAG Accessibility Competition (CFDA 84.368A-2), *Accessibility of Technology – Enhanced Assessments*. Members of our organization responsible for accessibility and assessment services have been actively involved in the preparation and review of this proposal. We strongly support the funding of this application.

We are excited to partner with KSDE, as we have worked together frequently on other projects of this scale and magnitude and have experienced strong management, superb professionalism, excellent technical abilities, and a thorough understanding of the needs of educators and learners. We are confident that we can work together to meet that the goals of this project.

Per the requirements of the Enhanced Assessment Grant, we hereby assure you that we are not the management partner for any other Enhanced Assessment Grant proposal that is being submitted under this competition. Thank you for including CETE as management partner in this important initiative.

Sincerely,

(b)(6)

Dr. Julia Shaftel, Ph.D., NCSP
Special Education Coordinator
Center for Educational Testing and Evaluation

CHARLESTON OFFICE
Post Office Box 1348
Charleston, WV 25325
304.347.0400
800.624.9120
304.347.0487 (f)

June 5, 2012

SHIPPING ADDRESS:
United Center, Suite 500
500 Virginia Street East
Charleston, WV 25301

Julia Shaftel, Ph.D.
Center for Educational Testing and Evaluation
Joseph R. Pearson Hall
1122 W. Campus Rd., Room 735
Lawrence, KS 66045

NASHVILLE OFFICE
One Vantage Way, Suite C-200
Nashville, TN 37228
615.565.0101
800.624.9120
615.565.0112 (f)

Dear Dr. Shaftel,

Edvantia, Inc. is pleased to support the University of Kansas Center for Educational Testing and Evaluation's proposal for an Enhanced Assessment Grant (EAG), *Accessibility of Technology-Enhanced Assessments*. As evidence of our support, we are committed to serving as the external program evaluator for the work. In that role, we will provide the project staff with formative data for decision-making and making refinements to the project as needed and summative data to document achievement of project goals.

Our commitment to the work is stated in the workscope provided to you for inclusion in the EAG Accessibility Competition proposal. Submission of this letter demonstrates our commitment to the proposed work. We understand that the University of Kansas Center for Research, Inc. will be submitting a proposal to the United States Department of Education, Office of Elementary and Secondary Education, Student Achievement and School Accountability Programs and that our subcontract proposal to the Center will be included as part of the Center's submission.

Thank you for including Edvantia as a vendor partner in this important initiative.

Sincerely,

(b)(6)

Doris Redfield, Ph.D.
President & CEO



National Center and State Collaborative

June 10, 2012

Dr. Diane M. DeBacker
Kansas Commissioner of Education
Kansas State Department of Education
120 SE 10th Avenue
Topeka, KS 66612-1182

Dear Dr. DeBacker,

I am writing this letter as the project Director for the National Center and State Collaborative, the partner project to the Dynamic Learning Maps project in the development of a new generation of alternate assessments for students with the most significant cognitive disabilities. Given the short timeline of this competition, our entire consortium of 19 states, five Tier II partner states, and our five partner organizations have not had a chance to review and formally endorse, but I am personally confident that this proposed project will enhance our collective work. Thus, please accept this letter as an endorsement in principle of the Kansas State Department of Education (KSDE) in its application for the Enhanced Assessment Grant – EAG Accessibility Competition (CFDA 84.368A-2), *Accessibility of Technology-Enhanced Assessments*. I believe that this project would enhance the quality of assessment instruments and systems used by States for measuring the achievement of all students. This project is consistent with our efforts to enhance assessments nationally through the Race-to-the-Top initiative.

Further, I am happy to support the role of the Center for Educational Testing and Evaluation (CETE) at the University of Kansas on this project. CETE offers strong management, superb professionalism, excellent technical abilities, and thorough understanding of the needs of educators and learners. I will be sharing the project information with our Management Team during our June 21, 2012 meeting, and we look forward to continued partnerships.

Sincerely,

(b)(6)

Rachel F. Quenemoen, Project Director
National Center and State Collaborative



Kansas State Department of Education

785-296-3201
785-296-7933 (fax)

120 SE 10th Avenue • Topeka, KS 66612-1182 • 785-296-6338 (TTY) • www.ksde.org

June 6, 2012

Julia Shaftel, PhD
Center for Educational Testing and Evaluation
Joseph R. Pearson Hall
1122 W. Campus Rd., Room 735
Lawrence, KS 66045

Dear Dr. Shaftel,

The Kansas state department of education is excited to support and participate as a member of the Kansas State Department of Education (KSDE) consortium in application for the Enhanced Assessment Grant – EAG Accessibility Competition (CFDA 84.368A-2), *Accessibility of Technology-Enhanced Assessments*. Members of our departments responsible for Special Education and Accessibility services strongly support KSDE and the funding of this application to enhance the quality of assessment instruments and systems used by States for measuring the achievement of all students.

Additionally, we are excited to partner with the Center for Educational Testing and Evaluation (CETE) at the University of Kansas on this project. CETE offers strong management, superb professionalism, excellent technical abilities, and thorough understanding of the needs of educators and learners. CETE's proven ability to initiate and complete projects of this magnitude gives us complete confidence that the project's goals will be met.

Kansas understands that copyright to any accessibility or accommodation guidelines or other supporting documents developed for this project will be held by the University of Kansas Center for Research, but that all state departments of education and common assessment consortia acting on behalf of state departments of education will have license in perpetuity to use these materials.

To further support KSDE as designated applicant, Kansas will actively participate in the governance of this grant in order to develop consensus around the final accessibility and accommodation guidelines and other materials produced under this grant. Kansas will use or support the use of the test accessibility and accommodation guidelines and approaches generated by this research. Kansas will work with local education agencies to identify and encourage student participation in data collection necessary for the success of this project.

Sincerely,

(b)(6)

Dr. Diane DeBacker
Kansas Commissioner of Education

June 11, 2012

Dr. Julia Shaftel, Ph.D.
Center for Educational Testing and Evaluation
Joseph R. Pearson Hall
1122 W. Campus Road, Room 735
Lawrence, KS 66045

Dear Dr. Shaftel:

The Missouri Department of Elementary and Secondary Education is excited to support and participate as a member of the Kansas State Department of Education (KSDE) consortium in application for the Enhanced Assessment Grant – EAG Accessibility Competition (CFDA 84.368A-2), *Accessibility of Technology-Enhanced Assessments*. Members of the Office of Special Education and the Office of College and Career Readiness who are responsible for Special Education and Accessibility services strongly support KSDE and the funding of this application to enhance the quality of assessment instruments and systems used by states for measuring the achievement of all students.

Additionally, we are excited to partner with the Center for Educational Testing and Evaluation (CETE) at the University of Kansas on this project. CETE offers strong management, superb professionalism, excellent technical abilities, and thorough understanding of the needs of educators and learners. CETE's proven ability to initiate and complete projects of this magnitude gives us complete confidence that the project's goals will be met.

Missouri understands that copyright to any accessibility or accommodation guidelines or other supporting documents developed for this project will be held by the University of Kansas Center for Research, but that all state departments of education and common assessment consortia acting on behalf of state departments of education will have license in perpetuity to use these materials.

To further support KSDE as designated applicant, Missouri will actively participate in the governance of this grant in order to develop consensus around the final accessibility and accommodation guidelines and other materials produced under this grant. Missouri will use or support the use of the test accessibility and accommodation guidelines and approaches generated by this research. Missouri will work with local education agencies to identify and encourage student participation in data collection necessary for the success of this project.

Sincerely,

(b)(6) (b)(6)

Sharon Hoge, Ph.D.
Assistant Commissioner
Office of College and Career Readiness

June 5, 2012

Julia Shaftel, PhD
Center for Educational Testing and Evaluation
Joseph R. Pearson Hall
1122 W. Campus Rd., Room 735
Lawrence, KS 66045

Dear Dr. Shaftel,

The Utah State Office of Education is excited to support and participate as a member of the Kansas State Department of Education (KSDE) consortium in application for the Enhanced Assessment Grant – EAG Accessibility Competition (CFDA 84.368A-2), *Accessibility of Technology-Enhanced Assessments*. Members of our departments responsible for Special Education and Accessibility services strongly support KSDE and the funding of this application to enhance the quality of assessment instruments and systems used by States for measuring the achievement of all students.

Additionally, we are excited to partner with the Center for Educational Testing and Evaluation (CETE) at the University of Kansas on this project. CETE offers strong management, superb professionalism, excellent technical abilities, and thorough understanding of the needs of educators and learners. CETE's proven ability to initiate and complete projects of this magnitude gives us complete confidence that the project's goals will be met.

Utah understands that copyright to any accessibility or accommodation guidelines or other supporting documents developed for this project will be held by the University of Kansas Center for Research, but that all state departments of education and common assessment consortia acting on behalf of state departments of education will have license in perpetuity to use these materials.

To further support KSDE as designated applicant, Utah will actively participate in the governance of this grant in order to develop consensus around the final accessibility and accommodation guidelines and other materials produced under this grant. Utah will use or support the use of the test accessibility and accommodation guidelines and approaches generated by this research. Utah will work with local education agencies to identify and encourage student participation in data collection necessary for the success of this project.

Sincerely,

(b)(6)

(b)(6)

(b)(6)

Judy W. Park, Ed.D.
Associate Superintendent of Student Services and Federal Program



Tony Evers, PhD, State Superintendent

June 7, 2012

Julia Shaftel, PhD
Center for Educational Testing and Evaluation
Joseph R. Pearson Hall
1122 W. Campus Rd., Room 735
Lawrence, KS 66045

Dear Dr. Shaftel,

The Wisconsin Department of Public Instruction is excited to support and participate as a member of the Kansas State Department of Education (KSDE) consortium in application for the Enhanced Assessment Grant – EAG Accessibility Competition (CFDA 84.368A-2), *Accessibility of Technology-Enhanced Assessments*. Members of our departments responsible for Special Education and Accessibility services strongly support KSDE and the funding of this application to enhance the quality of assessment instruments and systems used by States for measuring the achievement of all students.

Additionally, we are excited to partner with the Center for Educational Testing and Evaluation (CETE) at the University of Kansas on this project. CETE offers strong management, superb professionalism, excellent technical abilities, and thorough understanding of the needs of educators and learners. CETE's proven ability to initiate and complete projects of this magnitude gives us complete confidence that the project's goals will be met.

Wisconsin understands that copyright to any accessibility or accommodation guidelines or other supporting documents developed for this project will be held by the University of Kansas Center for Research, but that all state departments of education and common assessment consortia acting on behalf of state departments of education will have license in perpetuity to use these materials.

To further support KSDE as designated applicant, Wisconsin will actively participate in the governance of this grant in order to develop consensus around the final accessibility and accommodation guidelines and other materials produced under this grant. Wisconsin will use or support the use of the test accessibility and accommodation guidelines and approaches generated by this research. Wisconsin will work with local education agencies to identify and encourage student participation in data collection necessary for the success of this project.

Sincerely,

(b)(6)

(b)(6)

Stephanie Petska
Director of Special Education
Division for Learning Support

June 5, 2012

Julia Shaftel, PhD
Center for Educational Testing and Evaluation
Joseph R. Pearson Hall
1122 W. Campus Rd., Room 735
Lawrence, KS 66045

Dear Dr. Shaftel,

The West Virginia state department of education is excited to support and participate as a member of the Kansas State Department of Education (KSDE) consortium in application for the Enhanced Assessment Grant – EAG Accessibility Competition (CFDA 84.368A-2), *Accessibility of Technology-Enhanced Assessments*. Members of our departments responsible for Special Education and Accessibility services strongly support KSDE and the funding of this application to enhance the quality of assessment instruments and systems used by States for measuring the achievement of all students.

Additionally, we are excited to partner with the Center for Educational Testing and Evaluation (CETE) at the University of Kansas on this project. CETE offers strong management, superb professionalism, excellent technical abilities, and thorough understanding of the needs of educators and learners. CETE's proven ability to initiate and complete projects of this magnitude gives us complete confidence that the project's goals will be met.

West Virginia understands that copyright to any accessibility or accommodation guidelines or other supporting documents developed for this project will be held by the University of Kansas Center for Research, but that all state departments of education and common assessment consortia acting on behalf of state departments of education will have license in perpetuity to use these materials.

To further support KSDE as designated applicant, West Virginia will actively participate in the governance of this grant in order to develop consensus around the final accessibility and accommodation guidelines and other materials produced under this grant. West Virginia will use or support the use of the test accessibility and accommodation guidelines and approaches generated by this research. West Virginia will work with local education agencies to identify and encourage student participation in data collection necessary for the success of this project.

Sincerely,

(b)(6)

Juan D' Brot
Office of Assessment and Accountability
West Virginia Department of Education

GLOBAL

Assessment Technology

PR/Award # S368A120001

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Budget Narrative File(s)

* **Mandatory Budget Narrative Filename:**

To add more Budget Narrative attachments, please use the attachment buttons below.

KSDE PERSONNEL	FTE	SALARY YR1	SALARY YR2
<p>Project Coordinator will coordinate the day-to-day tasks of the project with the Project Director. He/she will be the primary liaison between the Kansas State Department of Education and CETE. The Project Coordinator will have primary responsibility for soliciting participants for cognitive labs and for field testing the survey of student characteristics prior to large-scale data collection. He/she will manage processes related to obtaining informed consent from cognitive lab participants. This person will also coordinate the planning, user-testing, and development of the web-based data collection and reporting interfaces. The Project Coordinator will be responsible for managing the funding of CETE activities for the ATEA project and will ensure that the project is on track with regard to all activities and expenditures.</p>	1.0	\$56,118	\$56, 118
<p>FRINGE BENEFITS Fringe benefits are calculated as a percentage of (1) KPERS, (2) Social Security, (3) Unemployment Insurance, (4) Sick/Annual Leave, and (4) Worker’s Compensation multiplied by the salary. Added to that is the “flat rate” of Health Insurance.</p>		<p>YR 1 0.1037 0.0765 0.0028 0.0062 0.00526 \$10,233</p>	<p>YR2 0.1134 0.0765 0.0028 0.0062 0.00526 \$11,000</p>
	Total Fringe	21, 146	22,457

TRAVEL		YR1 x 2 Conferences	YR2 x 2 Conferencess
<p>Purpose of Travel Travel will be provided for three general purposes: Conferences</p>	<p>Airfare (\$500) Lodging(\$250) Perdiem ((\$64) Mileage</p>	<p>Airfare: (\$1000) Lodging (\$1500) Perdiem (\$512)</p>	<p>Airfare: (\$1000) Lodging (\$1500) Perdiem (\$512)</p>

	Registration (\$450)	Registration(\$900)	Registration(\$900)
Cognitive labs, and	Lodging (\$100)	200	
	Perdiem (\$64)	256	
	Mileage (.55)	44	
Teacher panels	Airfare (\$500)	1000	1500
	Lodging (\$150)	300	450
	Perdiem (\$64)	256	384
Total Travel		5,968	6,246
SUPPLIES			
Office: Includes consumable office supplies and other necessary consumable expenditures, consistent with the needs and scope of this specific project: \$500 each year		500	500
Computers: One laptop is needed for the Programmer Consultant to use		1,800	
	TOTAL	2,300	500

Contractual		Year 1	Year 2
The University of Kansas, Center for Educational Evaluation and Testing		875, 182	758,621
Total Direct		960, 714	843, 942
KSDE Indirect		16, 911	16,879
Grand Total		977, 625	860, 821
Grand Total for 2 Years = 1, 838, 446			

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

OMB Number: 1894-0008
Expiration Date: 02/28/2011

Name of Institution/Organization

Kansas State Department Education

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

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

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	56,118.00	56,118.00				112,236.00
2. Fringe Benefits	21,146.00	22,457.00				43,603.00
3. Travel	5,968.00	6,246.00				12,214.00
4. Equipment	1,800.00	0.00				1,800.00
5. Supplies	500.00	500.00				1,000.00
6. Contractual	875,182.00	758,621.00				1,633,803.00
7. Construction						
8. Other						
9. Total Direct Costs (lines 1-8)	960,714.00	843,942.00				1,804,656.00
10. Indirect Costs*	16,911.00	16,879.00				33,790.00
11. Training Stipends						
12. Total Costs (lines 9-11)	977,625.00	860,821.00				1,838,446.00

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

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

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

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

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

Approving Federal agency: ED Other (please specify):

The Indirect Cost Rate is %.

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

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

Name of Institution/Organization Kansas State Department Education	Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.	
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**SECTION B - BUDGET SUMMARY
NON-FEDERAL FUNDS**

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

SECTION C - BUDGET NARRATIVE (see instructions)