

University of Wisconsin-Madison  
 Wisconsin Center for Education Research (WCER)  
 AGREEMENT  
 (value added analysis/reporting)

This Agreement is made and entered into by and between the Madison Metropolitan School District, 545 W. Dayton Street, Madison, WI 53703 (hereinafter referred to as the District) and the Board of Regents of the University of Wisconsin System, c/o Wisconsin Center for Education Research, 1025 W. Johnson St., Room 796, Madison WI 53706 (hereinafter referred to as "the Provider"), a consultant hired to develop a value added analysis and reporting system.

WHEREAS, the District desires to develop a value-added system; and

WHEREAS, the Provider has agreed to perform certain work necessary for such system as is more fully described in the documents entitled "Tasks for the Madison Value-Added Project" and "Developing a Value-Added System with the Madison Metropolitan School District", attached hereto as appendix A and incorporated herein by this reference;

NOW, THEREFORE, in consideration of the above premises and the mutual covenants of the parties hereinafter set forth, the District and the Provider agree as follows:

**1. Term**

The term of this Agreement shall be from 12/1/2007 to 6/30/2008 unless otherwise provided for by modification to this Agreement. Continuation beyond this term is subject to mutual agreement by the parties, memorialized by letter agreement.

**2. Technical Direction**

The responsibility for technical direction by the District of this project shall rest with *Kurt Kiefer, Chief Information Officer*. Any change to the scope of work described herein or in Appendix A attached hereto must be approved in writing by Kurt Kiefer.

**3. Key Personnel/Competency**

The following Provider personnel is /are (the) person(s) considered to be essential to the work performed hereunder:

*Yue Hu*

The Provider agrees to provide the services described herein in a professional and competent manner, and shall commence, carry on and complete its obligation under this Agreement with all deliberate speed and in an economical and efficient manner in accordance with the Agreement and all applicable law. In the event a Key Person is unable or unwilling to continue the Project, Provider shall notify District in writing and may propose in writing, and individual to replace the Key Person, and replacement of a Key Person must be approved in writing by Kurt Kiefer.

**4. Background Checks**

A criminal background check may be required for persons providing services under this contract, including staff and volunteers, who have direct student contact, at the option of District. District may conduct the background check at cost for Provider, or . Provider may perform its own check through Wisconsin Department of Justice, Crime Information Bureau (CIB). District shall be sole arbiter of whether there is anything in a background check that would render a person unfit to work with District students.

**5. Compensation and Audit**

The District shall pay the Provider a total amount not to exceed \$68,026. The District shall pay the Provider upon receipt of an itemized billing statement from the Provider, reviewed by Kurt Kiefer. Billing statements shall be submitted to Ruth Schultz, *MMSD, Accounting Supervisor, 545 West Dayton Street, Madison, WI, 53703* and include a PO number, Provider's Social Security or Tax Identification number and complete mailing address. The District shall not pay in advance for any services. It is preferred by District that billing statements be submitted on a monthly basis, or at least quarterly, in 2 equal installments. A final billing statement must be submitted to District within 30 days of June 30, 2008 for payment, and failure to do so may result in delay of, reduction of, or denial of payment, unless District and Provider agree otherwise in writing.

Provider shall maintain adequate records, in accordance with generally accepted accounting practices, to clearly and easily identify expenses, nature of expenses and relatedness to this Agreement, and shall make such records available for audit as required for Federal, State or Local governmental units. Records shall be retained for a period of at least three (3) years from the date of submission of final report/billing statement except for

records related to an audit initiated prior to the expiration date, which shall be retained until such audit findings are resolved.

**6. Indemnity, Insurance, Defense of suits**

Provider shall at all times during the term of this Agreement indemnify, hold harmless and defend the District against any and all liability, loss, damages, or expenses which District may sustain/incur or be required to pay by reason of acts or omissions of the Provider acting under the terms of this Agreement, to the extent allowed by the laws of Wisconsin.

University of Wisconsin, as an agent of the State of Wisconsin is self-insured for liability insurance coverage, and agrees pursuant to Wes. Stats. sec. 895.46 to provide such protection arising out of negligence or malpractice on the part of Provider for legal defense and payment of judgments entered against officers, employees and agents acting within the scope of employment or agency.

In the event a court action or administrative proceeding is brought against District, its officers, agents, or employees, for Provider's acts or failure to act as required by the contract, District shall tender its defense of such claim or action to the Provider and it shall be the duty of Provider to defend such claim or action without cost or expense to District, its officers, agents, or employees.

**7. Confidentiality**

The Provider acknowledges that student data is protected by both federal and state law and regulations including, but not limited to Wis. Stats. sec 118.125; 20 USC sec 1232(g); and 24 CFR sec. 99.1 *et. seq.*, Provider agrees to protect and maintain the confidentiality of pupil records or any other confidential matter that the District maintains, as required by state and federal law and regulations. If District determines that Provider has disclosed student record information in violation of state or federal law, without prejudice to any other rights or remedies the District may have, District shall be entitled to immediately terminate this and any other agreement between the parties without further liability. Furthermore, in the event of such disclosure, District may bar Provider from future District contracts for varying periods up to and including permanent debarment.

Appendix B to this Agreement, attached hereto and incorporated by reference herein includes material conditions of this Agreement concerning the confidentiality of data for purposes of the project covered by this Agreement.

As a condition of receipt of funds under this Agreement, Provider shall submit to MMSD's Chief Information Officer for approval a written Plan for preventing others from viewing and using any MMSD-provided data, and said plan shall describe, at a minimum, Provider's plan for (1) Information Technology (IT) Asset Identification and equipment inventories, (2) Provider's IT and computer security policies and procedures, (3) use of anti-virus and security update software, (4) physical handling and storage of data, (5) transportation of data, (6) backups of data, (7) ensuring the physical security of IT resources, (8) periodic vulnerability scanning, (9) a firewall policy, and (10) ongoing training surrounding data security issues of persons who are authorized representatives of the Provider, who are participating in the services called for under this Agreement and who have a need for access to MMSD-provided data in order to complete the agreed-upon analysis and study of the data. Provider shall implement said Plan with respect to all work that is part of project covered by this Agreement.

**8. Ownership of information/non-disclosure.**

Except as otherwise provided herein, all information, reports or any derivatives thereof, whether created by District or Provider, that are related to services covered herein remains the property of District and no license or other rights to such information is granted or implied hereby. Provider shall not disclose, publish, or disseminate any information not a matter of public record, that is received by reason of this agreement, nor shall Provider disclose, publish or disseminate any information developed for District under this agreement.

Within ten (10) business days of receipt of District's written or oral request, Contractor will return all document, records, and copies thereof it obtained during the development of the work covered by this agreement.

Notwithstanding the forgoing, Provider may publish the results of any research done pursuant hereto, so long as publication is in compliance with federal and state law (*see, eg, Wis. Stats. sec 118.125; 20 USC sec. 1232g(b); 34 CFR sec 99.1 et seq.*). Provider shall provide to District's Chief Information Officer a courtesy copy of each proposed presentation at local, regional or national conferences and manuscript submission for publication when same contain results of research done pursuant to this agreement.

**9. Certification Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Assurance regarding OMB Circular A-133**

By signing this Provider agreement, the Provider certifies relative to:

Lobbying:

a) No Federally appropriated funds have been paid or will be paid, by or on behalf of the Provider 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 the awarding of any Federal contract, making of Federal grant, making of Federal loan, entering into any cooperative agreement or extension, continuation, renewal, amendment, or modification of a Federal contract, grant, loan or cooperative agreement.

b) If any fund other than Federally appropriated funds have been paid or will be paid to any person for influencing or intending 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 Provider shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying" to the District.

c) The Provider 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.

*The foregoing is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of certification regarding Lobbying is a prerequisite for making or entering into the agreement, imposed by section 1352, title 31, U.S. Code. Failure 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.*

Debarment, Suspension and Other Responsibility Matters:

Neither Provider nor its principals are presently debarred, suspended, or proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal department or agency. Change in debarred or suspended status of Provider during the life of this agreement shall be reported immediately to the District.

OMB Circular A-133 Assurance:

Provider complies with A-133 and will notify District of completion of required audits and of any adverse findings which impact this Provider agreement

**10. Termination**

(a) District may terminate the agreement for any reason upon 30 days written notice, given by personal delivery, or certified or registered mail, to Provider at the addresses listed above. In the event of such termination, Provider shall reduce its activities hereunder, as mutually agreed to, upon receipt of said notice, and termination, compensation shall be prorated and/or limited to documented costs incurred through the date of termination.

(b) If Provider fails to fulfill its obligations under the Agreement in a timely or proper manner, or violates any of its provisions, District shall have the right to terminate by giving ten (10) days written notice before the effective date of termination of the contract, specifying the alleged violation, and the effective date of termination. The Agreement shall not be terminated if, upon receipt of notice, Provider promptly cures the alleged violation. In the event of such termination District shall be liable only for services rendered through the date of termination, and not for uncompleted work or for any materials or services purchased or paid for by Provider for use in completing the Agreement.

(c) Provider may, at its option, terminate this Agreement upon the failure of District to pay any amount which may become due hereunder for a period of sixty (60) days following submission of billing and supporting documentation. Upon termination Provider shall be paid the compensation due for all services rendered through the date of termination.

**11. Independent Contractor**

Provider agrees that it is an independent contractor and not an employee, partner or joint venturer or agent of the District for purposes of the services rendered herein, and this agreement does not establish any direct contractual relationship between District and agents/employees of Provider. Provider has the sole obligation to provide for and pay any contribution or taxes required by federal, state or local authorities imposed on or measured by income, and shall not file any complaint, charge, or claim with any local, state or federal agency or court in which Provider claims to be or have been an employee of District during the period of time covered by the Agreement.

**12. Non-Discrimination**

Parties agree not to discriminate on bases prohibited by federal, state, or local laws, ordinances or regulations, including but not limited to applicable Titles of the Civil Rights Act of 1964, and Section 504 of the Rehabilitation Act of 1973, as amended. This prohibition includes, but is not limited to employment, promotions, demotions and transfers, recruitment, advertising, lay-off or termination; pay/compensation, and training.

**13. Conflict of Interest**

Provider has, or shall develop written policies establishing standards and procedures to ensure that the design, conduct and reporting of activities herein shall not be biased by a conflicting interest of persons responsible hereunder.

**14. Entirety of Agreement/Severability**

The entire agreement of the parties is contained herein and this Agreement supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. If any term or provision of the Agreement should be declared invalid by a court of competent jurisdiction or by operation of law, the remaining terms and provisions of this Agreement shall be interpreted as if such invalid terms or covenants were not contained herein.

**15. Applicable Law/Venue**

This Agreement shall be governed by the laws of the state of Wisconsin, and any suit, action or proceeding with respect hereto must be brought in the Courts of the State of Wisconsin, county of Dane.

**16. Notices**

Notices to District provided for in this Contract shall be sufficient if sent by Certified or Registered mail, postage prepaid, or hand-delivered, addressed to the signatory on this agreement, or to his designee. Notices to Provider shall be hand-delivered or sent Certified or Registered mail, postage prepaid, to

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**13. Authority**

By signing below, the person hereby represents that he/she has the authority to sign this Agreement and bind the Provider to adhere to its terms.

UNIVERSITY OF WISCONSIN-MADISON

MADISON METROPOLITAN SCHOOL  
DISTRICT BOARD OF EDUCATION

by \_\_\_\_\_  
Provider Date:

by \_\_\_\_\_  
Steve Hartley, Secretary Date:

Provider's Fed tax ID \_\_\_\_\_

per Kurt Klefer - 12/07jlw

District budget account \_\_\_\_\_

## APPENDIX A

### Tasks for the Madison Value-Added Project

The focus of this project is to develop a value-added system for the Madison Metropolitan School District and produce value-added reports using assessment data from November 2005 to November 2007. Since the data from the November 2007 assessment will not be available until March 2008, WCER will first develop a value-added system based on two years of state assessment data (November 2005 and November 2006). After the 2007 data becomes available (about March 1 2008), WCER will extend the value-added system so that it incorporates all three years of data. Below, we list the tasks for this project and a project timeline.

Task 1. Specify features of MMSD value-added model

Task 2. Develop value-added model using 2005 and 2006 assessment data

Task 3. Produce value-added reports using 2005 and 2006 assessment data

Task 4. Develop value-added model using 2005, 2006, and 2007 assessment

Task 5. Produce value-added reports using 2005-2007 assessment data

### Project Timeline for the Madison Value-Added Project

December 1, 2007	Project launch meeting. Project objectives, tasks, deliverables, and timeline reviewed. Options for specification of value-added model(s) discussed. Procedures for transferring data to WCER established. Data transferred to WCER as soon as possible in December.
February 1, 2008	Data set for estimation of value-added model assembled. Tables of descriptive statistics prepared. Features of value-added model (or models) specified.
March 1, 2008	Data for November 2007 assessment transferred to WCER.
April 1, 2008	Value-added model using 2005 and 2006 assessment data
May 1, 2008	Reports of value-added indicators based on 2005 to 2006 data produced and presented to MMSD for review.
June 1, 2008	Value-added model using 2005 to 2007 assessment data
June 30, 2008	Reports of value-added indicators based on 2005 to 2007 data produced and presented to MMSD for review.

10/11/07

## Developing a Value-Added System with the Madison Metropolitan School District

Robert H. Meyer, Director  
Yue Hu, Project Lead  
Michael Christian, Project Adviser  
Value-Added Research Center  
Wisconsin Center for Education Research  
University of Wisconsin-Madison

Value added has emerged over the past several years as a conceptually appropriate and practical method for evaluating the productivity of districts, schools, and classrooms with respect to growth in student achievement. Value-added analysis isolates the effects of educational inputs not only by statistically “controlling” for students’ prior achievement, but also by controlling for variables outside the control of schools related to *growth* in student achievement. The objective of a value-added statistical analysis is to make it possible to compare differences between schools (and other educational inputs) in achievement growth for similar groups of students so that the pure contribution of the schools to student achievement can be identified. In other words, value-added analysis facilitates so-called “apples and apples” comparisons across schools rather than “apples and oranges” comparisons. In contrast, comparisons across schools (or over time) based on traditional educational indicators such as average attainment or proficiency rates (as required by the No Child Left Behind (NCLB) Act are known to provide misleading information on differences or changes in educational productivity. A second important feature of value-added analysis is that it measures the degree to which achievement growth differs among students with different demographic characteristics, such as income, parental education, and race. These measures can be used to track the success of schools and policies in eliminating gaps in student achievement associated with demographic factors.

Value added can be measured and reported at different levels of the educational system – district, school, grade, and classroom – depending on a district’s needs. District-level value-added indicators make it possible to assess whether district policies and initiatives designed to improve student achievement have actually accomplished that objective. School-level value-added indicators provide similar information to schools. Value added can also be used as an evaluation tool; that is, to address the question of what a school or district can do to raise value-added performance? At the district level, district leaders or school boards may want to know if pilot interventions worked or not before rolling the interventions out district-wide. In this case, the value-added framework can be expanded to function as a diagnostic tool to improve performance or to guide the implementation of interventions. This requires building a system for collecting and storing information on school inputs so that the efficacy of these inputs can be evaluated.

The Wisconsin Center for Education Research (WCER) has worked with the Milwaukee Public Schools to produce school and grade-level value added indicators for the past six years and has similarly worked with other states and districts, including Chicago, Dallas, and Minneapolis. Since WCER and MPS developed their first prototype value-added system almost a

decade ago, the MPS value-added system has become an important component of the MPS accountability system alongside the conventional proficiency achievement measures. (See, for example, the attached value-added report from the MPS District and School Report Card.) WCER and MPS have also expanded the system to make it even more policy-relevant, by using value-added methods to evaluate key MPS policies and programs. For instance, WCER used (or plans to use) value-added data to conduct evaluations of :

- The MPS Literacy Coach Program
- MPS Reading Reform Strategies
- Direct Instruction
- Professional Development

In order to build a value-added system it is necessary to have at least two years of data on student test scores for consecutive grades. As of the 2006-2007 school year, MMSD meets this requirement for grades 3-8 in the subjects of mathematics and reading. It is also necessary to have information on students' demographic characteristics such as gender, race, age, disability status or special education, English proficiency level, and family income (typically measured by student participation in free or reduced-price lunch). Additional family information such as parent education level is also useful.

**AGREEMENT SETTING FORTH CONDITIONS ON THE SHARING OF  
MMSD DATA BETWEEN THE MMSD  
AND THE WISCONSIN CENTER FOR EDUCATION RESEARCH  
FOR PURPOSES OF CONDUCTING "VALUE ADDED MODEL" RESEARCH**

WHEREAS the Madison Metropolitan School District (hereinafter, "MMSD") has expressed interest in engaging the Wisconsin Center for Education Research at the University of Wisconsin-Madison (hereinafter, "WCER"), 1025 W. Johnson St., Room 796, Madison, WI, in a contractual venture under which WCER will serve as an independent-contractor Consultant in connection with the research and development of a "value-added" analysis and reporting system; and

WHEREAS, prior to the execution of any contract that defines the rights and obligations of the MMSD and WCER for purposes of any potential fee-based "value-added" Consulting arrangement, there exists a need for preliminary work on the "value-added" analysis and reporting system; and

WHEREAS the MMSD and the WCER intend to execute a separate, comprehensive agreement that will address detailed data sharing, data analysis and data reporting protocols for purposes of the value-added research and/or other studies to be completed by WCER at the request of the MMSD; and

WHEREAS prior to the execution of comprehensive data-handling protocols, MMSD has shared or will share certain MMSD records with WCER for purposes of conducting MMSD-requested "value-added system" research and development; said shared MMSD records being hereinafter referred to as the "MMSD Data"; and

WHEREAS the MMSD and WCER mutually agree that the MMSD Data remains at all times the property of MMSD, and that no license or other rights to the MMSD Data is implied by the sharing of the data for the limited purpose of conducting the agreed-upon research; and

WHEREAS the MMSD and WCER agree to attempt to minimize the extent to which the MMSD Data will include individually-identifiable records within the meaning of FERPA and/or Wisconsin Statute § 118.125 by, for example, excluding student name, student address, and student telephone number from the shared data set; and

WHEREAS the MMSD and WCER recognize that it is possible that certain records within the MMSD Data, alone or in combination, may be construed as individually-identifiable student records or as records that are otherwise protected from disclosure under state and/or federal law; and

WHEREAS, for the limited purpose of conducting the agreed-upon "value-added system" study/research, the MMSD has deemed WCER and the individuals who are authorized representatives of WCER participating in the research process to be school officials having legitimate educational interest (to wit, conducting MMSD-requested research for the purpose of improving instruction) in the records contained in the MMSD Data; and

WHEREAS the MMSD and WCER intend to complete all analysis and study of the MMSD Data in compliance with state and federal laws governing the privacy and disclosure of education records and pupil records (including, but not limited to, FERPA and Wisconsin Statute § 118.125);



APPENDIX B (Value Added System Agreement with WCER)

NOW, THEREFORE, by affixing the signature of an authorized Agent of the WCER to this document, and as a condition of any potential future engagement as an independent-contractor Consultant by the MMSD in connection with research on a "value-added" analysis and reporting system, WCER hereby agrees to the following regarding WCER's receipt, storage, handling, study and reporting of the MMSD Data:

1. WCER's receipt, storage, handling, analysis and reporting of the MMSD Data shall be conducted in a manner that does not permit the personal identification of parents or students by individuals other than (1) MMSD officials; and (2) individuals who are authorized representatives of WCER who are participating in the research process and who have a need for access to the data in order to complete the agreed-upon analysis and study of the data;
2. WCER's receipt, storage, handling, analysis and reporting of the MMSD Data and other records received from the MMSD shall, at all times, protect and maintain the confidentiality of records to the extent required by state or federal laws or regulations or by MMSD School Board policies (copies of said Board policies are attached hereto and incorporated by reference herein);
3. Any and all records within or derived from the MMSD Data shall, at the option of the MMSD, either (1) be returned to MMSD; or (2) destroyed when no longer needed for the purposes for which the study was conducted and when no longer required to be maintained as a public record pursuant to Wisconsin law;
4. WCER shall never re-disclose to any third-party individual, organization or entity any individually-identifiable records from the MMSD Data that are protected from disclosure under FERPA and/or Wisconsin Statute § 118.125;
5. Except as otherwise expressly authorized in writing by the MMSD, WCER shall not (1) re-disclose to any third-party individual, organization or entity any record(s) from within, or derived from, the MMSD Data; or (2) re-use the MMSD Data for any further research, study or other purpose that is not for and directly on behalf of the MMSD; and
6. WCER agrees to cooperate in producing any records relating to the agreed-upon "value-added system" research which may be subject to a request for access and/or subject to disclosure under the Wisconsin Public Records Law.

**For the Wisconsin Center for Education Research:**

By signing below, the person hereby represents that he/she has the authority to sign this Agreement and to bind the Wisconsin Center for Education Research to its terms:

Name	Title	Date

**For the MMSD:**

Name	Title	Date

**AGREEMENT TO CONDUCT ENGINEERING EDUCATION RESEARCH AS PART OF THE  
"AWAKEN" PROJECT AND TO SET FORTH CONDITIONS ON THE SHARING OF DATA  
BETWEEN THE MMSD AND THE WISCONSIN CENTER FOR EDUCATION RESEARCH**

WHEREAS the Madison Metropolitan School District (hereinafter, "MMSD") wishes to partner with the Wisconsin Center for Education Research at the University of Wisconsin-Madison (hereinafter, "WCER"), 1025 W. Johnson St., Room 796, Madison, WI, to research and study teaching practices, counseling practices, and academic outcomes in high schools to better understand the role of classroom experiences in the preparation for students' future studies and careers in engineering (hereinafter, "Engineering Education Research"); and

WHEREAS, the WCER has proposed an "Agreement for Releasing Data and Conducting Research for AWAKEN Project in Madison Metropolitan School District" (hereinafter "WCER AWAKEN Project Agreement") for purposes of conducting the Engineering Education Research; and

WHEREAS the scope of the proposed Engineering Education Research as defined in the WCER AWAKEN Project Agreement calls for MMSD to share with WCER various data and information collected and/or maintained by the MMSD (hereinafter, MMSD data); and

WHEREAS the MMSD and WCER intend to complete all analysis and study of the MMSD Data in compliance with state and federal laws governing the privacy and disclosure of education records and pupil records (including, but not limited to, FERPA and Wisconsin Statute § 118.125); and

WHEREAS the MMSD and WCER agree to attempt to minimize the extent to which the MMSD Data will include any records that are individually-identifiable student or pupil records within the meaning of FERPA and/or Wisconsin Statute § 118.125 by, for example, excluding student name, student address, and student telephone number from the shared data set; and

WHEREAS the MMSD and WCER recognize that it is possible that certain records within the MMSD Data, alone or in combination, may be construed as individually-identifiable student records or as records that are otherwise protected from disclosure under state and/or federal law; and

WHEREAS, for the limited purpose of conducting the agreed-upon Engineering Education Research on behalf of the MMSD, the MMSD has deemed WCER and the individuals who are authorized representatives of WCER participating in the research process to be school officials having a legitimate educational interest (to wit, conducting MMSD-requested research for the purpose of improving instruction) in the records contained in the MMSD Data;

NOW, THEREFORE, by affixing the signature of an authorized Agent of each of the parties to this Agreement, WCER and MMSD hereby agree to conduct the "Engineering Education Research," and the parties further agree to the following (1) terms and conditions regarding WCER's receipt, storage, handling, study and reporting of the MMSD Data; and (2) other terms and conditions that shall be applicable to the Engineering Education Research:

1. In the event of a conflict between this Agreement and the WCER AWAKEN Project Agreement, which is attached hereto as Appendix A, the terms and conditions of this Agreement shall control.
2. The MMSD Data remains at all times the property of MMSD, and no license or other rights to the MMSD Data is implied by the sharing of the data for the limited purpose of conducting the agreed-upon research.
3. MMSD's obligations under this Agreement and under the WCER AWAKEN Project Agreement consist of a commitment to provide in-kind services, and no monetary transfer of MMSD funds to WCER is contemplated by the parties.
4. In conducting the Engineering Education Research, and in addition to the obligations defined in this Agreement, WCER shall implement the "Plan for preventing others from viewing and using the data" that is defined in Section 11 and its Sub-Sections of the WCER AWAKEN Project Agreement.
5. WCER's receipt, storage, handling, analysis and reporting of the MMSD Data and other components of the Engineering Education Research shall be conducted in a manner that does not permit the personal identification of any MMSD employee, students, or parents of students by individuals other than (1) MMSD employees/officials who have a legitimate educational interest in the information; and (2) individuals who are authorized representatives of WCER who are participating in the research process and who have a need for access to the data in order to complete the agreed-upon analysis and study of the data.
6. WCER's receipt, storage, handling, analysis and reporting of the MMSD Data and other records received from the MMSD shall, at all times, protect and maintain the confidentiality of records to the extent required by state or federal laws or regulations or by MMSD School Board policies (copies of said Board policies are attached hereto and incorporated by reference herein).
7. Any and all records within or derived from the MMSD Data shall, at the option of the MMSD, either (1) be returned to MMSD; or (2) destroyed when no longer needed for the purposes for which the study was conducted and when no longer required to be maintained as a public record pursuant to Wisconsin law.
8. WCER shall never re-disclose to any third-party individual, organization or entity any individually-identifiable records from the MMSD Data that are protected from disclosure under FERPA and/or Wisconsin Statute § 118.125.
9. Except as otherwise expressly authorized in writing by the MMSD, WCER shall not (1) publish or re-disclose to any third-party individual, organization or entity any record(s) from within, or derived from, the MMSD Data (including the release of research papers or findings); or (2) re-use or re-purpose the MMSD Data for any further research, study or other purpose that is not for and directly on behalf of the MMSD. This provision replaces and supersedes any language to the contrary in the WCER AWAKEN Project Agreement, including but not limited to, the last sentence of Section 10 of the WCER AWAKEN Project Agreement.
10. MMSD reserves the right, at its sole discretion, to limit or eliminate the extent to which the Engineering Education Research involves the collection, within the MMSD, of data through surveys, in-school observations, or any other means. For example, MMSD may

limit the time and place of surveys or observations, limit the content of surveys, require individualized consent for surveys or observations, and/or decide that a particular data-collection method/instrument proposed by WCER will not be used at all.

11. The MMSD and WCER agree that the data populations, timelines (i.e., years) and types of data identified in Section 2, Section 3 and Section 4 of the WCER AWAKEN Project Agreement represent an initial catalogue of MMSD data that may be used as part of the Engineering Education Research. However, MMSD reserves the right to define and potentially limit the specific data that may be released to WCER for purposes of conducting the Engineering Education Research, and MMSD does not warrant or represent that all data populations, timelines (i.e., years) and types of data identified in Section 2, Section 3 and Section 4 of the WCER AWAKEN Project Agreement (1) exist, or (2) will be released to WCER as part of the Engineering Education Research.
12. WCER agrees to cooperate in producing any records relating to the agreed-upon Engineering Education Research which may be subject to a request for access and/or subject to disclosure under the Wisconsin Public Records Law.
13. Both parties agree to participate in this Engineering Education Research partnership in good faith and with the intent of reaching findings that will help to improve instruction in engineering education. However, either party reserves the right to withdraw from this Agreement and/or the WCER AWAKEN Project Agreement at any time without any penalty whatsoever.

**For the Wisconsin Center for Education Research:**

By signing below, the person hereby represents that he/she has the authority to sign this Agreement and to bind the Wisconsin Center for Education Research to its terms:

\_\_\_\_\_  
Name Title Date

**For the MMSD:**

By signing below, the person hereby represents that he/she has the authority to sign this Agreement and to bind the Madison Metropolitan School District to its terms:

\_\_\_\_\_  
Name Title Date



**Agreement for Releasing Data and Conducting Research for  
AWAKEN Project in Madison Metropolitan School District**

The Aligning Educational Experiences with Ways of Knowing Engineering (AWAKEN) Project (NSF grant #EEC-0648267) aims to contribute to the long-term goal of fostering a larger, more diverse and more able pool of engineers in the United States. We propose to do so by looking at engineering education as a system or continuous developmental experience from secondary education through professional practice.

In collaboration with the Madison Metropolitan School District (MMSD), AWAKEN researchers from the Wisconsin Center for Educational Research (WCER) will study and report on science, mathematics, and Career and Technical Education (specifically *Project Lead The Way*) curricula in the district.

It has been acknowledged by \_\_\_\_\_ (please print) of MMSD that the district agrees to this research and has received the *Application and Agreement to Release Data to Wisconsin Center for Education Research for AWAKEN Study*, which includes a description of intended AWAKEN studies in the district for 2007-2010.

\_\_\_\_\_  
Kurt Kiefer  
MMSD Chief Information Officer  
Madison Metropolitan School District  
545 West Dayton Street  
Madison WI 53703-1995

Date

12/20/08  
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Madison Metropolitan School District

Application and Agreement to Release  
Data to Wisconsin Center for Education Research for AWAKEN Study

December 18, 2007

*This application and agreement are for the MMSD-AWAKEN application in 2007. Types of data are presented on pages three and four of this document. Courtesy copies of subsequent analyses and reporting will be provided to the district. This application and agreement are to cover the period from December 18, 2007 through December 17, 2008. The application and agreement will be renewed annually until the completion of the project, June 30, 2010.*

1. *Purpose for data analysis and reporting.*

AWAKEN is a collaboration between faculty of the College of Engineering (CoE) and the School of Education (SoE) at the University of Wisconsin-Madison, which contribute to the dynamic and multidisciplinary perspectives on the questions of interest. Team members are from the departments of Engineering Professional Development (EPD), Educational Leadership and Policy Analysis (ELPA), Educational Psychology, Curriculum & Instruction, and the Technical Communication Program (TC). These two groups meet together at least monthly to discuss research designs and findings.

The Aligning Educational Experiences with Ways of Knowing Engineering (AWAKEN) Project (NSF grant #EEC-0648267) aims to contribute to the long-term goal of fostering a larger, more diverse and more able pool of engineers in the United States. We propose to do so by looking at engineering education as a system or continuous developmental experience from secondary education through professional practice.

The overarching hypothesis for this project is that for many students and teachers the current educational system is poorly aligned with engineering practice. That is, experiences in high school and college give students, teachers and guidance counselors an inaccurate and incomplete picture of what it means to be an engineer, and of the skills and knowledge students need to develop to become one. For example, the mathematics and science courses in high school and college that are prerequisites for an engineering major are often disconnected from the issues and concerns that matter to practicing engineers, such as design, implementation, testing, and re-design. Many inventive and innovative students with engineering skills and interests who do not exhibit high levels of academic performance in these gateway classes, may be discouraged or prevented from entering the field of engineering as a result.

Potential engineering talent is lost at all stages as students move from high school to college and into professional practice. We hypothesize that aligning the engineering education pathways with the skills, knowledge, values, and ways of thinking of practicing engineers will lead to a broader and more diverse engineering workforce. The project as a whole proposes to study (1) the **engineering practice** to identify the skills, knowledge, values, and ways of thinking of effective engineers; and (2) **teaching and counseling practices in high schools** to better understand the role of mathematics, science, and Career and Technical Education; CTE) classroom experiences in the preparation for futures studies and careers engineering.

To pursue these aims, we will empirically investigate several inter-related areas:

- Comparative analyses of the structure and content of academic (traditional math and science) and pre-engineering curricula at the high school level.
- The beliefs and expectations about engineering preparation held by high school teachers of the academic math and science classes and those views held by high school teachers in the pre-engineering programs in Madison area institutions.
- Classroom observations of learning and instruction in high school math and science classes and in pre-engineering (*Project Lead the Way*) classes in Madison.
- Surveys and interviews to investigate the beliefs and expectations about engineering preparation held by high school guidance counselors and teachers in Wisconsin who have and have not attended *Project Lead the Way* trainings.

We also intend to explore a number of questions regarding high school students' demographic information, course-enrollment patterns, achievement, engagement, school climate and behavioral data, college placement scores (e.g., ACT, SAT), post-secondary outcome data; and data on teachers' demographic, climate, and professional preparation, professional development, and appointments. In addition, data on course taking will allow us to examine whether students of historically under-represented populations in engineering and other technical fields have equal access to the high-level courses, and whether four-year graduation targets limit involvement with technical education programs like *PLTW* of college-bound students.

### *Expected Outcomes*

*Curricula.* In academic math and science curricula we expect to see activities focused on the formal laws prior to their application. In *PLTW* curricula, we expect to see a focus on engineering skills and mastery of technical/procedural tools that contribute to and make (advance) science. Explicit integration of the skills, ethics, and practical knowledge of CTE and the formal laws of Academic science, is expected to be rare in both *PLTW* and academic curricula, and done primarily for motivation rather than conceptual development when it does appear

*Teacher Beliefs and Expectations.* Consistent with the *Expert Blind Spot Hypothesis*, we predict *academic* instructors will position engineering as out of reach to students who have not first shown a high degree of performance with the formal laws and

representations used in mathematics and science. Academic teachers will tend to view course performance in mathematics and science in higher regard, and as a gateway to accessing engineering (which is seen as an area of applied science). In contrast, we expect instructors of the *PLTW* courses will be less inclined toward this view, with a vision of engineering as a set of team-based design–test–build practices, where an understanding of science and mathematical abstractions can emerge from these practices. We also expect to see little evidence of explicit integration of formal knowledge and foundational laws that commonly organize the academic courses, with the design and practical knowledge commonly used to structure pre-engineering education, although this is arguably the ideal preparation for future studies and careers in engineering.

*Classroom Observations.* We expect *PLTW* students will learn much of their math and science through application and design. We also predict that so-called *signature pedagogies* of pre-engineering will include the “Design studio” approach and project-based facilitation (moving among groups). In contrast, *signature pedagogies* of math and science courses will include proof, demonstrations, and review of homework exercises. Teachers will see the *signature pedagogies* as bound to the content (or discipline), and will rarely publicly reflect on uses or transitions of *signature pedagogies* to the students. Student affinity toward/away from a discipline may be tied more strongly to the *signature pedagogies* than to the differences in content, and this could serve as the topic of a future set of studies that addresses students’ beliefs and expectations.

*Guidance Counselor Beliefs and Expectations.* From our surveys, we expect to find that the *Expert Blind Spot* view normally found among content experts (scientists and mathematicians) to “spill over” to the non-expert guidance counselors. This will result in counselors advising students with high math and science grades toward engineering, despite actual engineering-specific preparation. In contrast, students in pre-engineering courses may not be encouraged to pursue engineering programs at college if they are perceived as “academically” unprepared because of their grades in math and sciences courses or the specific math and science curriculum tracks they follow.

## 2. *Population for which the data are requested.*

We are requesting existing data for the entire student and teacher population of the school district, including:

- Students in grades 9–12
- LEP (Limited English Proficient) Students (grades 9–12)
- Special Education Students (grades 9–12)
- Students enrolled in *Project Lead The Way* courses
- Teachers in grades 9–12



3. *Years for which the data are requested.*

We are requesting data for the 2005-2006, 2006-2007, and, in subsequent years, 2007-2008, 2008-2009, and 2009-2010 school years.

4. *Type of data requested with specific items listed.*

**Except when noted, we request individual-level record data.** The specific items listed below represent the current data types we need in order to accomplish currently planned data analyses. We will request updates of each of these data items, as they become available in the future. The following organizational schema is used here for the purpose of communicating the types of data being requested. *We encourage each district to transmit data using file formats that are convenient and consistent with district information systems and databases. For example, if student demographic data, student enrollment data and teacher appointment data are stored in single data table, then district staff should send a single table rather than three separate tables. SCALE staff will reorganize data tables as needed.*

- a. **Student Demographic Data:** Demographic data including key NCLB demographic variables.
- b. **Student Achievement Data:** Data from state test results (e.g., WKCE, TerraNova), local district assessments (e.g., PMA), and other relevant tests such as PSAT, SAT, ACT scores.
- c. **Student Enrollment Data:** Data about student enrollment in math, science and *Project Lead The Way* courses.
- d. **Student Post-Graduation Outcomes Data:** Data about student enrollment in post-secondary institutions.
- e. **Teacher Demographic and Background Data:** Data about teacher training, demographics, certification, and content focus.
- f. **Teacher Appointment Data:** Data about teacher training, demographics, certification, and content focus.
- g. **Teacher Professional Development Data:** Data about professional development received by teachers during the current school year.
- h. **School Information Data:** Data about schools locations and AYP status.
- i. **Climate Survey Data:** Data about student, teacher, and parent survey.
- j. **Student Engagement Data:** Data about student engagement.

k. **Student Career Interest Data:** Data about student career interests collected in middle school.

A detailed representation of the requested data follows.

5. *Reasons for requesting the specific data items.*

The specific data items listed above are instrumental to analyzing the relationship between student course selection achievement, engagement, and post-secondary outcomes that will inform our investigation of how students are prepared for, and how they see themselves as prepared for future studies and careers in engineering.

6. *A description of how the data will be used and analyzed.*

In the indicator system, the most important categories of indicators are district student achievement, student participation, student opportunity to learn, student disposition to learn, teacher capacity, and school capacity. The classroom-level indicators of types of courses are to determine whether courses affect student achievement. Our goal is also to monitor the change in these categories over the duration of *Project Lead The Way* course. In order to establish a baseline, we would like to have available data in these six categories for up to two previous school years— 2006-2007, 2005-2006. For subsequent analyses, we would like to request data for the following school years—2007-2008, 2008-2009, and 2009-2010.

**Baseline Data.** Multiple years of baseline data are desirable to establish both yearly status on specific indicators and growth or change in the specific indicators over time. We will conduct a time series analysis over the base-line years and an analysis during *Project Lead The Way* years to determine whether *Project Lead The Way* is associated with change in status and change in slope. These analyses will report data for the district over time for mathematics, science, (if available). The main purpose for reporting district-level data is to show improved performance over time in mathematics and science. Ideally, we would prefer that the same assessment type be administered from 1999 through 2007. However, this is probably unrealistic. We can do an adequate analysis if two or more forms of assessments have been used over time. We are also interested in analyzing the value added to student performance over time. This analysis requires that we have data on the same students in successive years.

**Student and Teacher Data.** We would like the set of data on student achievement to be provided by individual student identification numbers (IDs), school enrolled in, mathematics and science courses (secondary and middle schools) taken, and mathematics and science teacher. This will give us the opportunity to aggregate the data by school and by teacher. Although AWAKEN is directed toward classroom change, being able to track students by teacher will give us the best opportunity to report data sensitive to *Project Lead The Way* activities. One analysis we would like to perform is on student ACT scores of teachers who have implemented SCALE *Project Lead The Way* in contrast with a comparable set of students and their teachers who have had no *Project Lead The Way*

involvement. For this to have any meaning, we would like to have a student achievement history for these teachers. Be assured that we are not interested in student names or teacher names, this information will be used only to link students and teachers with *Project Lead The Way* courses. Data sets will be redacted of identifying information prior to analyses.

**Counselor Practices.** An important principle of *AWAKEN* is to examine counselors' practices. Thus, we are interested in being able to report data by counselors in relationship to the degree to which counselor practices are aligned with the principles and goals of *AWAKEN*. We will need to have some information on school practices and on how teachers and counselors interact around student learning. To characterize schools in this way will most likely require collecting data from schools through questionnaires or site visits. To relate school practices to student learning, then, will require our having achievement data disaggregated by school over multiple years.

Another important factor we would like to monitor is whether the achievement gap among White students, African Americans, Hispanics, and other groups is narrowing. We are most interested in tracking this over time at the district level. This will require the analysis of student achievement scores by ethnicity/race. We will in all likelihood analyze these data by considering raw differences in achievement scores and using regression models, including a value-added approach.

**Achievement Gap.** We are interested in obtaining information on what mathematics, science, and *Project Lead The Way* courses have been taken and whether the course-taking and completion patterns change over time. Other variables would be related to students' disposition to pursue mathematics, science, and careers in technical fields, including enrollment in advanced placement courses, participation in and scores on college entrance examinations, and enrollment in mathematics courses in post-secondary education. *AWAKEN*'s purpose is for students to gain deeper knowledge of engineering. As a consequence of this deepened understanding, students should be interested in pursuing additional mathematics, science, and pre-engineering courses and at a higher level than would otherwise be the case.

We hope that our analyses of district data will complement the analyses already performed by the districts while simultaneously meeting the reporting requirements of *AWAKEN*. We are very interested in working collaboratively with districts to produce useful, and helpful, analyses both to the districts and to *AWAKEN*. We are aware that each district has different data and databases. We are required by our procedures to protect the confidentiality and privacy of students and teachers. It is our plan to work with the contact person in each district to ease the transfer of data. If filling our request requires the additional time of personnel, then we are willing to pay for any such costs incurred.

7. *A description of how the data will be presented and reported.*

For the moment, project principals agree that no findings will be released without the consent of the district and that this agreement will remain in effect until it is modified by a subsequent agreement defining mutual rights in greater detail.

The National Science Foundation requires us to submit annual reports on our research. District personnel will be given opportunities to review and comment on all reports using district data before they are published and submitted to the funding agencies.

The primary purpose of AWAKEN is to contribute to the long-term goal of fostering a larger, more diverse and more able pool of engineers in the United States. Our primary objective for data analysis is to establish the degree to which *Project Lead The Way* curriculum and teacher and counselor practices enhance student interest in engineering.

8. *Estimated amount of time the data are needed for analysis.*

We will need to retain the data for the duration of AWAKEN through 2010. We will need to keep baseline data and other data released to us this year, as well as all updated data received in the upcoming years in order to conduct longitudinal analysis.

9. *Desired medium of release for the data gathered.*

This technical issue will vary based on the district's technical capacity. In the past, we have used email, ftp, and 9-track tape to exchange data. Locally created CD-ROMs are becoming more common. Chris Thorn, Director of Technical Services at WCER (608-263-2709, cathorn@wisc.edu) will oversee the transfer of data between a district and WCER and is prepared to assist districts with whatever technical process is necessary to transfer data successfully from district to WCER.

10. *Other research activities that may develop following receipt and review of the data.*

Since the AWAKEN project's research and technical assistance are largely a response to district and school needs, the exact nature and extent of follow-up activities and the uses of the data will evolve as the project becomes better able to meet the needs of the district. Thus, we anticipate doing follow-ups in order to document changes in school curricula and professional development programs, or that address findings that may signal areas of improvement for pre-engineering preparation as revealed by the data. We will discuss all subsequent activities and use of data with district personnel.

11. *A plan for preventing others from viewing and using the data that addresses the following issues:*

- a. Information Technology Asset Identification.

We uniquely identify each piece of equipment with physical asset numbers and maintain a database of its type and model, the user to whom it was allocated, and its operating system. We also update equipment inventories as users log in to track the software installed, whether the unit requires security patches, and who logged on to that unit most recently. This allows us to identify machines at risk for attack based on the presence or absence of security updates.

In addition to computer hardware, we also maintain a database to track all network hardware. This allows us to track down any failed device or compromised system and either repair it or isolate from the rest of the network. Our network topology map displays the departmental network hardware, e.g., hubs, switches, etc., and how the departmental network connects to the UW networking backbone. We monitor this network in real time for outages. Network technicians are notified of outages by pager. We also maintain spares for all key hardware to minimize downtime from equipment failure.

b. IT security policies and procedures.

We have an overarching security policy for the UW School of Education that explicitly outlines the rights and responsibilities of users and makes clear the need for increased levels of security for research and administrative data. Users are also required to sign a copy of the university's IT Appropriate Use Policy as part of the procedure to create a network account. As part of our user-level security policy, we require that users create and use complex passwords (at least eight characters, no part of their names, mixed case, and including at least one number or punctuation mark). All passwords must be changed every 120 days and the systems do not allow passwords to be reused.

At the technical level, IT administrators have crafted auditing and access policies for users and devices in different organizational units within the School of Education. These policies are based on best practices for the various operating systems (as identified by a third-party security organization such as SANS or CIAC).

The Wisconsin Center for Education Research places additional restrictions on users in that we require users of our networked systems to employ a secure operating system that requires logon and provides file-level security. We currently support Windows 2000, Windows XP, OS X, and Linux.

c. Computer security.

WCER runs a Windows XP network for file and print access. We implement local security and strong passwords. We also run password-cracking software against our network to identify any poor security practices. All servers are configured on the basis of the U.S. Navy's Secure NT computing environment guidelines. We also follow NCES data security practices and create mapping tables for translating

between sensitive identifiers (student or staff IDs, social security numbers, etc.) and internally created identifiers. The sensitive data is kept in encrypted tables and is only accessible to database administrators.

d. Use of Anti-virus and Security Update software.

We require that all systems attached to our network use anti-virus software and that they subscribe to appropriate auto-update services for critical security patches (depending on operating system). Scans are done periodically on all operating systems for which anti-virus software exists. We also remotely monitor the status of virus definitions on client machines to make sure that the update function is working.

e. Physical handling and storage of data.

All backups are performed by system operators and are only accessible to data processing personnel in a physically secure environment. All original and backup tapes are kept in a locked, fireproof safe. Only the three operators certified to operate the backup system have access to this safe. Access to files is controlled on a file-by-file basis. No users have edit or delete rights for original data. No non-project personnel are allowed to view confidential data. All name and address data are viewable only by the project data administrator (Chris Thorn). All other analysis is performed with the student ID as the only individual identifier. The administrator will handle any questions of student misidentification.

f. Transportation of data.

We normally only transport data in encrypted Zip archives on either tape or CD-ROM disk. Network file transmission is performed between secure ftp or secure socket link (SSL) http sites.

g. Backups of data

All WCER servers are backed up nightly—both file and database servers. We strongly discourage staff members from storing data on personal desktops or laptops. These systems do not have the same level of physical security or environmental protection that our server room provides. We provide online storage areas that are open to all users, private to particular project members, and private to the individual users. Laptop users who are on extended travel are encouraged to purchase external firewire, or USB disks as an interim backup system until they return and transfer data to networked storage. We also train users to back up local data on writeable CD-ROM disks. (As an aside, we also provide users with a secure method for destroying CDs containing sensitive data.)

We use Tivoli Storage Manager as our enterprise backup system. The default policy keeps the last 10 versions of every file on the system. We also keep any deleted file for 90 days after it was deleted. Our archive policy captures a snapshot of all files and databases on the last day of every month. In order to improve restore times, we cache the last terabyte of backup on disk to speed restores of recently deleted or overwritten files. We keep a copy of all backup tapes in our online tape library to insure that all files will be readily retrievable. The original backup tapes are transferred on a daily basis to a 4-hour fire safe in a different area of the facility. Backups are tested quarterly to ensure the integrity of the data. An additional safeguard is that our central campus IT department uses TSM to do its own backup and to provide fee-for-services backup for other units. We have a cooperative agreement in place to use each other's database servers as a remote recovery site in the event of catastrophic loss.

h. Ensure the physical security of IT resources.

Logon to workstations is limited to named users. Logon to servers is restricted to named operators in the Technical Services unit. We have 45 minutes of battery power for all systems. The server room also has an emergency air conditioning system to ensure that systems do not overheat in the event of a cooling failure. The server room is behind a series of locked doors in an alarmed space. System disposal policies ensure that all data are removed from machines that are redeployed or surplus.

i. Perform periodic vulnerability scanning.

WCER IT staff members schedule periodic vulnerability scans of all departmental computers connected to the University campus network. The vulnerability scans include selective probes of communication services, operating systems, and applications to identify system weaknesses that could be exploited by intruders to gain access to the network. Responsibility for taking follow-up action to correct vulnerabilities, e.g., applying security patches to operating systems, is assigned to Computer Services support staff.

j. Firewall Policy.

The School of Education has implemented a school-wide hardware firewall. Responsibility for maintaining the firewall, updated firewall policies, and periodic review of firewall logs is shared between the Dean's IT office and the senior administrators of WCER Technical Services. We currently do not require host-based (software) firewalls for remote machines. This policy is scheduled to be reviewed by the School of Education's IT Policy Advisory Committee this winter. The draft recommendations require remotely connected machines to have both virus protection software and to either be behind a physical firewall or to run specific firewall software on the device.

k. Increasing awareness of securing data access and transfer.

Ongoing training of users focuses on developing an awareness of how sensitive information is accessed and transferred. Some lower-sensitivity resources may need to be protected to ensure that they are not used to capture higher-sensitivity information. Precautions for protecting the access and transfer of data include ensuring password controls and using encryption where possible. The Director of Technical Services is also a consultant to the Social Science and Education IRB and assists the board with reviewing the technical aspects of human subjects research.

12. *Names and titles of:*

*a. The officials with the authority to bind the requesting organization to the agreement.*

Mitchell J. Nathan—Professor, lead researcher on the AWAKEN Project.  
Wisconsin Center for Education Research (WCER), University of Wisconsin—  
Madison.

L. Allen Phelps—Professor, lead researcher on the AWAKEN Project. Wisconsin  
Center for Education Research (WCER), University of Wisconsin—Madison.

Natalie Tran—Graduate Student, project assistant on the AWAKEN Project.  
Wisconsin Center for Education Research (WCER), University of Wisconsin—  
Madison.

Amy Prevost—Graduate Student, project assistant on the AWAKEN Project.  
Wisconsin Center for Education Research (WCER), University of Wisconsin—  
Madison.

*b. The officials in charge of the day-to-day operations involving the use of the data.*

Natalie Tran, Wisconsin Center for Education Research (WCER), University of  
Wisconsin—Madison

*c. The professional and support staff who conduct the research and analysis, as well as any others who may have access to the data.*

Mitchell J. Nathan, Ph.D., Professor-Co-Principal Investigator  
L. Allen Phelps, Ph.D., Professor-Co-Principal Investigator  
Sandra Courter, Ph.D., Professor, Principal Investigator  
David Kaplan, Ph.D., Professor in the School of Education at UW-Madison  
Christopher A. Thorn, Ph.D., Director of Technical Services, Data Coordinator  
Natalie Tran, M.Ed, Project Assistant  
Amy Prevost, MS, Project Assistant



All Graduate Research Assistants work under the supervision of the project's directors, principal investigators, and project manager.

13. *Signature, title and address, and telephone number of the individual submitting the application.*

A handwritten signature in black ink, appearing to read 'M. J. Nathan', written in a cursive style.

Mitchell J. Nathan, BSEE, PhD  
Chair, Learning Sciences  
Departments of Educational Psychology,  
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Center for Education and Work

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