AGREEMENT: **USBE230049RA**

RESEARCH DATA SHARING AGREEMENT

for External Data Sharing

UTAH STATE BOARD OF EDUCATION

REQUEST TYPE (check one of the following):

☑ Student PII
☐ Student-level de-identified data
☐ Unmasked aggregate student data

PARTIES: This Research Sharing Agreement (**"Agreement"**) is between the **Utah State Board of Education**, referred to as **"State Entity"** or **"USBE"**, and the following primary **"Researcher"(s)**, each individually a **"Party"** and together the **"Parties"**.

Richard R. Sudweeks				LEGAL STATUS OF RESEARCHER
Name of Researcher #1				Sole Proprietor ☐
Brigham Young University				Non-Profit Corporation ☑
Name of University, Organization, or Entity				For-Profit Corporation ☐
Brigham Young University				Partnership ☐
Address				Government Agency ☐
Provo	**UT**	**84602**	**www.byu.edu**	
City	State	Zip	Website	
richard_sudweeks@byu.edu			**(801) 422 - 7078**	
Email			Phone	

Nathaniel Mitchell				LEGAL STATUS OF RESEARCHER
Name of Researcher #1				Sole Proprietor ☐
Wasatch County School District				Non-Profit Corporation ☐
Name of University, Organization, or Entity				For-Profit Corporation ☐
101 East 200 North				Partnership ☐
Address				Government Agency ☑
Heber	**UT**	**84032**	**www.wasatch.edu**	
City	State	Zip	Website	
nathaniel.mitchell@wasatch.edu			**(435) 654 - 0280**	
Email			Phone	

AGREEMENT PERIOD:

Effective Date: **March 20, 2023**

Termination Date: **April 1, 2025**, unless terminated early or extended in accordance with the terms and conditions of this agreement.

Renewal Options, if any: **none**

ATTACHMENTS: Any conflicts between Attachment A and the other Attachments will be resolved in favor of Attachment A.

ATTACHMENT A: State of Utah Standard Terms and Conditions for Research
ATTACHMENT B: Scope of Research
ATTACHMENT C: Curriculum Vitae for external researcher(s)
ATTACHMENT D: Additional Scopes of Research if applicable

SIGNATURES OF APPROVAL:

Each signatory below represents that he or she has the requisite authority to enter into this Agreement.

IN WITNESS WHEREOF, the Parties sign and cause this Agreement to be executed.

BYU			Richard Sudweeks	Professor
	Signature	Date	Name	Title
WCSD			Tod Johnson	Director
	Signature	Date	Name	Title
USBE			Sydnee Dickson, Ed.D	State Superintendent of Public Instruction
	Signature	Date	Name	Title

USBE CONTACT PERSON:	Name/Title:	Katy Challis, Director of Privacy, USBE
	Phone/email:	801-538-7894, katy.challis@schools.utah.gov

ATTACHMENT A:
STATE OF UTAH STANDARD TERMS AND CONDITIONS FOR RESEARCH

1. **DEFINITIONS:** The following terms shall have the meanings set forth below:
   1.1. "**Authorized Persons**" means Researcher's employees, officers, partners, Subcontractors or other agents of Researcher who require access to Data and who have a legitimate educational interest in the education records to enable the Researcher to perform its responsibilities under this Agreement.
   1.2. "**Agreement Signature Page(s)**" means the State of Utah cover page(s) that the State Entity and Researcher signed.
   1.3. "**Data**" includes Student Personally Identifiable Information and Educator Data, and may also include Confidential Information.
   1.4. "**Data Steward**" means the entity responsible for combining two Data sets from different sources, and managing the resultant Data set. If a USBE Data system is being used, then USBE is the Data Steward. If another entity is doing the calculations or derivations, then that entity becomes the Data Steward.
   1.5. "**Destroy**" means to remove Data such that it is not maintained in retrievable form and cannot be retrieved in the normal course of business.
   1.6. "**Educator Data**" includes, but is not limited to, the educator's name; any unique identifier, including social security number; and other information that, alone or in combination, is linked or linkable to a specific educator.
   1.7. "**Incident**" means the potentially unauthorized access to Data that Researcher believes could reasonably result in the use, disclosure or theft of Data within the possession or control of Researcher or Researcher's Subcontractors.
   1.8. "**Metadata**" includes all information created manually or automatically to provide meaning or context to other data.
   1.9. "**State Entity**" means the department, division, office, bureau, agency, or other organization identified on the Agreement Signature Page(s).
   1.10. "**State of Utah**" means the State of Utah, in its entirety, including its institutions, agencies, departments, divisions, authorities, instrumentalities, boards, commissions, elected or appointed officers, employees, agents, and authorized volunteers.
   1.11. "**Student Personally Identifiable Information**" or "**PII**" has the same meaning as that found in U.C.A § 53E-9-301, and includes both direct identifiers (such as a student's or other family member's name, address, student number, or biometric number) and indirect identifiers (such as a student's date of birth, place of birth, or mother's maiden name). Indirect identifiers that constitute PII also include metadata or other information that, alone or in combination, is linked or linkable to a specific student that would allow a reasonable person in the school community, who does not have personal knowledge of the relevant circumstances, to identify the student with reasonable certainty.
   1.12. "**Subcontractors**" means any person or entity that will receive Data from Researcher shared as part of this agreement.
   1.13. "**Targeted Advertising**" means advertising to a student or a student's parent by Researcher if the advertisement is based on information or Data Researcher collected or received under this Agreement.
2. **GOVERNING LAW AND VENUE:** This Agreement shall be governed by the laws, rules, and regulations of the State of Utah. Any action or proceeding arising from this Agreement shall be brought in a court of competent jurisdiction in the State of Utah. Venue shall be in Salt Lake City, in the Third Judicial District Court for Salt Lake County.
3. **LAWS AND REGULATIONS:** At all times during this Agreement, Researcher and all research shall comply with all applicable federal and state constitutions, laws, rules, codes, orders, and regulations, including applicable licensure and certification requirements.
4. **RECORDS ADMINISTRATION:** Researcher shall maintain or supervise the maintenance of all records necessary to properly account for Researcher's performance under this Agreement. These records shall be retained by Researcher for at least six (6) years after termination of this Agreement, or until all audits initiated within the six (6) years have been completed, whichever is later. Researcher agrees to allow, at no additional cost, the State of Utah, federal auditors, State Entity staff, or their designees, access to all such records during normal business hours and to allow interviews of any employees or others who might reasonably have information related to such records. Further, Researcher agrees to include a similar right of the State to audit records and interview staff in any subcontract related to performance of this Agreement.
5. **CONFLICT OF INTEREST:** Researcher represents that none of its officers or employees are officers or employees of the State Entity or the State of Utah, unless disclosure has been made to the State Entity.
6. **INDEPENDENT CONTRACTOR:** Researcher and Subcontractors, in the performance of this Agreement, shall act in an independent capacity and not as officers or employees or agents of USBE.
7. **NON-FINANCIAL UNDERSTANDING:**
   7.1. This Agreement is a non-financial understanding between USBE and Researcher. No financial obligation by or on behalf of either of the Parties is implied by a Party's signature at the end of this Agreement.
   7.2. The terms of any financial liability that arises from Data processing activities carried out in support of the responsibilities covered herein must be negotiated separately and to the mutual satisfaction of the Parties.
   7.3. The legal authority for Data sharing for specified purposes conveyed by this Agreement cannot be used to support a subsequent claim of implied agreement to financial obligation.

8. **COST (OPTIONAL):** Researcher agrees to pay fees in the amount of $ for the preparation or delivery of the research Data (this payment may be required in advance). Payment shall be made to:
9. **RESEARCHER RESPONSIBILITY:** Researcher is solely responsible for fulfilling the Agreement. Researcher shall be the sole point of contact regarding all contractual matters. Researcher must incorporate Researcher's responsibilities under this Agreement into every subcontract with its Subcontractors. Moreover, Researcher is responsible for its Subcontractors compliance under this Agreement.
10. **INDEMNITY:** Researcher shall be fully liable for the actions of its agents, employees, officers, partners, and Subcontractors, and shall fully indemnify, defend, and save harmless the State Entity and the State of Utah from all claims, losses, suits, actions, damages, and costs of every name and description, including but not limited to any loss of Data and claims arising out of any data breach, arising out of Researcher's performance of this Agreement caused by any intentional act or negligence of Researcher, its agents, employees, officers, partners, or Subcontractors, without limitation; provided, however, that the Researcher shall not indemnify for that portion of any claim, loss, or damage arising hereunder due to the sole fault of the State Entity. The parties agree that if there are any limitations of the Researcher's liability, including a limitation of liability clause for anyone for whom the Researcher is responsible, such limitations of liability will not apply to injuries to persons, including death, or to damages to property.
11. **EMPLOYMENT PRACTICES:** Researcher agrees to abide by any other laws, regulations, or orders that prohibit the discrimination of any kind by any of Researcher's employees.
12. **AMENDMENTS:** This Agreement may only be amended by the mutual written agreement of the Parties, which amendment will be attached to this Agreement. Automatic renewals will not apply to this Agreement, even if identified elsewhere in this Agreement.
13. **DEBARMENT:** Researcher certifies that it is not presently nor has ever been debarred, suspended, proposed for debarment, or declared ineligible by any governmental department or agency, whether international, national, state, or local. Researcher must notify the State Entity within thirty (30) days if debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in any contract by any governmental entity during this Agreement.
14. **TERMINATION:** This Agreement may be terminated, with cause by either Party, in advance of the specified expiration date, upon written notice given by the other Party. The Party in violation will be given ten (10) days after written notification to correct and cease the violations, after which this Agreement may be terminated for cause immediately and subject to the remedies below. This Agreement may also be terminated without cause (for convenience), in advance of the specified expiration date, by the State Entity, upon thirty (30) days written termination notice being given to the Researcher. The Parties may terminate this Agreement, in whole or in part, at any time, by mutual agreement in writing.
    14.1. Following the termination of this Contract, USBE reserves the right to request a complete and secure (i.e. encrypted and appropriately authenticated) download file of all data, including, but not limited to, all Data, schema and transformation definitions, or delimited text files with documented, detailed schema definitions along with attachments in its native format. After USBE has been provided and confirmed as acceptable a complete download, or declines a download and requests immediate destruction, Contactor shall Destroy all Data collected, generated, or inferred as a result of this Contract. Should USBE not request a complete download, Contractor shall Destroy the Data immediately after thirty (30) days post termination of the Contract. The Contractor shall notify USBE in writing of the date upon which all of the Data is destroyed.
15. **CHANGES IN LAW:** Upon thirty (30) days written notice delivered to the Researcher, this Agreement may be terminated in whole or in part at the sole discretion of the State Entity, if the State Entity reasonably determines that a change in Federal or State legislation or applicable laws materially affects the ability of either Party to perform under the terms of this Agreement.
16. **RESERVED.**
17. **PUBLIC INFORMATION:** Researcher agrees that this Agreement shall be a public document and may be available for public and private distribution in accordance with the State of Utah's Government Records Access and Management Act (GRAMA). Researcher gives the State Entity and the State of Utah express permission to make copies of this Agreement in accordance with GRAMA. The State Entity and the State of Utah are not obligated to inform Researcher of any GRAMA requests for disclosure of this Agreement.
18. **INDEMNIFICATION RELATING TO INTELLECTUAL PROPERTY:** Researcher will indemnify and hold the State Entity and the State of Utah harmless from and against any and all damages, expenses (including reasonable attorneys' fees), claims, judgments, liabilities, and costs in any action or claim brought against the State Entity or the State of Utah for infringement of a third party's copyright, trademark, trade secret, or other proprietary right. The Parties agree that if there are any limitations of Researcher's liability, such limitations of liability will not apply to this section.
19. **OWNERSHIP IN INTELLECTUAL PROPERTY:** The State Entity and Researcher each recognizes that each has no right, title, or interest, proprietary or otherwise, in the intellectual property owned or licensed by the other, unless otherwise agreed upon by the Parties in writing.
20. **ASSIGNMENT:** Researcher may not assign, sell, transfer, subcontract or sublet rights, or delegate any right or obligation under this Agreement, in whole or in part, without the prior written approval of the State Entity.

21. **REMEDIES:** Any of the following events will constitute cause for the State Entity to declare Researcher in default of this Agreement: (i) Researcher's non-performance of its contractual requirements and obligations under this Agreement; or (ii) Researcher's material breach of any term or condition of this Agreement. The State Entity may issue a written notice of default providing a ten (10) day period in which Researcher will have an opportunity to cure. Time allowed for cure will not diminish or eliminate Researcher's liability for damages. If the default remains after Researcher has been provided the opportunity to cure, the State Entity may do one or more of the following: (i) exercise any remedy provided by law or equity; (ii) terminate this Agreement; (iii) impose liquidated damages, if liquidated damages are listed in this Agreement; (iv) debar/suspend Researcher from receiving future contracts from the State Entity or the State of Utah.
22. **FORCE MAJEURE:** Neither Party to this Agreement will be held responsible for delay or default caused by fire, riot, act of God, and/or war which is beyond that Party's reasonable control. The State Entity may terminate this Agreement after determining such delay will prevent successful performance of this Agreement.
23. **PUBLICITY:** Researcher shall submit to the State Entity for written approval all advertising and publicity matters relating to this Agreement. It is within the State Entity's sole discretion whether to provide approval, which approval must be in writing.
24. **INSURANCE:**
    24.1. Researcher shall obtain and maintain, and ensure that each Subcontractor shall obtain and maintain, at a minimum, insurance as specified in this section at all times during the term of this Contract. All insurance policies required by this Agreement shall be issued by insurance companies with an AM Best rating of A-VIII or better.
    24.2. Researcher shall maintain Protected Information Liability insurance covering all loss of Data and claims based on alleged violations of privacy rights through improper use or disclosure of protected information with minimum limits of $1,000,000 each occurrence and $2,000,000 general aggregate.
    24.3. USBE shall be named as additional insured on all commercial general liability policies required of Researcher and Subcontractors. Coverage required of Researcher and each Subcontractor shall be primary over any insurance or self-insurance program carried by Researcher or USBE.
    24.4. The above insurance policies shall include provisions preventing cancellation or non-renewal, except for cancellation based on non-payment of premiums, without at least 30 days prior notice to Researcher. Researcher shall forward such notice to the USBE's contact as listed in the Agreement within 7 days of Researcher's receipt of such notice.
    24.5. All insurance policies secured or maintained by Researcher or its Subcontractors in relation to this Agreement shall include clauses stating that each carrier shall waive all rights of recovery under subrogation or otherwise against Researcher or USBE, its agencies, institutions, organizations, officers, agents, employees, and volunteers.
    24.6. If Researcher is a "public entity" within the meaning of the Governmental Immunity Act of Utah, U.C.A. § 63G-7-101 et. seq. (the "GIA"), Researcher shall maintain, in lieu of the liability insurance requirements stated above, at all times during the term of this Agreement such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. If a Subcontractor is a public entity within the meaning of the GIA, Researcher shall ensure that the Subcontractor(s) maintain at all times during the terms of this Agreement, in lieu of the liability insurance requirements stated above, such liability insurance, by commercial policy or self-insurance, as is necessary to meet the Subcontractor's obligations under the GIA.
    24.7. Researcher shall provide to USBE certificates evidencing Researcher's insurance coverage required in this Agreement within 7 Business Days following the Effective Date. Researcher shall provide to USBE certificates evidencing Subcontractor insurance coverage required under this Agreement within 7 Business Days following the Effective Date, except that, if Researcher's subcontract is not in effect as of the Effective Date, Researcher shall provide to USBE certificates showing Subcontractor insurance coverage required under this Agreement within 7 Business Days following Researcher's execution of the subcontract. No later than 15 days before the expiration date of Researcher's or any Subcontractor's coverage, Researcher shall deliver to USBE certificates of insurance evidencing renewals of coverage. At any other time during the term of this Agreement, upon request by USBE, Researcher shall, within 7 Business Days following the request by USBE, supply to USBE evidence satisfactory to USBE of compliance with the provisions of this section.
    24.8. The State reserves the right to require higher or lower insurance limits where warranted. Failure to provide proof of insurance as required will be deemed a material breach of this Contract. Researcher's failure to maintain this insurance requirement for the term of this Agreement will be grounds for immediate termination of this Agreement.
25. **WORK ON STATE OF UTAH OR ELIGIBLE USER PREMISES**: Researcher shall ensure that personnel working on State of Utah premises shall: (i) abide by all of the rules, regulations, and policies of the premises; (ii) remain in authorized areas; (iii) follow all instructions; and (iv) be subject to a background check, prior to entering the premises. The State of Utah or Eligible User may remove any individual for a violation hereunder.
26. **WAIVER:** A waiver of any right, power, or privilege shall not be construed as a waiver of any subsequent right, power, or privilege.
27. **SUSPENSION OF WORK:** Should circumstances arise which would cause the State Entity to suspend Researcher s responsibilities under this Agreement, but not terminate this Agreement, this will be done by formal written notice pursuant

to the terms of this Agreement. Researcher's responsibilities may be reinstated upon advance formal written notice from the State Entity.

28. **CHANGES IN SCOPE**: Any changes in the scope of the services to be performed under this Agreement shall be in the form of a written amendment to this Agreement, mutually agreed to and signed by both Parties, specifying any such changes, fee adjustments, any adjustment in time of performance, or any other significant factors arising from the changes in the scope of services.
29. **DISPUTE RESOLUTION:** Prior to either Party filing a judicial proceeding, the Parties agree to participate in the mediation of any dispute. The State Entity, after consultation with Researcher, may appoint an expert or panel of experts to assist in the resolution of a dispute. If the State Entity appoints such an expert or panel, State Entity and Researcher agree to cooperate in good faith in providing information and documents to the expert or panel in an effort to resolve the dispute.
30. **ORDER OF PRECEDENCE:** In the event of any conflict in the terms and conditions in this Agreement, the order of precedence shall be: (i) this Attachment A; (ii) Attachment B; (iii) Agreement Signature Page(s); (iv) the State of Utah's additional terms and conditions, if any; (v) any other attachment listed on the Agreement Signature Page(s); and (vi) Researcher's terms and conditions that are attached to this Agreement, if any. Any provision attempting to limit the liability of Researcher or limit the rights of the State Entity or the State of Utah must be in writing and attached to this Agreement or it is rendered null and void.
31. **SURVIVAL OF TERMS:** Any terms that by their nature would survive the expiration of, completion, or termination of this Agreement shall survive.
32. **SEVERABILITY:** The invalidity or unenforceability of any provision, term, or condition of this Agreement shall not affect the validity or enforceability of any other provision, term, or condition of this Agreement, which shall remain in full force and effect.
33. **ERRORS AND OMISSIONS:** Researcher shall not take advantage of any errors and/or omissions in this Agreement. Researcher must promptly notify USBE of any errors and/or omissions that are discovered.
34. **ENTIRE AGREEMENT:** This Agreement constitutes the entire agreement between the Parties and supersedes any and all other prior and contemporaneous agreements and understandings between the Parties, whether oral or written.
35. **CONFIDENTIALITY GENERAL PROVISIONS:**
    - 35.1. This Agreement applies to all Data sharing between Researcher and USBE. Specific Data to be shared are outlined in the Attachments, along with the purpose of Data sharing, Data ownership and conditions and/or regulations governing the usage of the shared Data, requirements for shared data retention/destruction, and Party processes for implementing these actions.
    - 35.2. USBE and Researcher enter into this Agreement to share and exchange Data for the purposes of conducting studies for, or on behalf of, educational agencies or institutions to develop, validate, or administer predictive tests; administer student aid programs; or improve instruction.
    - 35.3. This Agreement will be reviewed, updated, and approved on an annual basis.
    - 35.4. USBE reserves all right, title, and interest, including all intellectual property and proprietary rights, in and to system data, Data, and all related data and content.
    - 35.5. Researcher, as USBE's agent, shall comply with all applicable laws and regulations including but not limited to FERPA, the Utah Family Education Rights and Privacy Act, Utah Code § 53E-9-2 ("UFERPA"), and the Individuals with Disabilities Educational Act, 30 U.S.C. §1400 et seq. and 34 C.F.R. Part 300 ("IDEA").
    - 35.6. Any terms that by their nature would survive the expiration of, completion, or termination of this Agreement shall survive.
    - 35.7. Researcher shall, upon written request, permit USBE or its designated representatives to perform an assessment, audit, examination, or review of all of Researcher's sites and environments in order to confirm Researcher's compliance with this Contract; associated Researchers or Scopes of Work; and applicable laws and regulations.
    - 35.8. During the term of this Contract, if USBE requests the Destruction of PII collected, generated or inferred as a result of this Contract, Researcher shall Destroy the information within five (5) calendar days after the date of the request. Researcher shall provide USBE with written confirmation of the date the data was Destroyed.
    - 35.9. USBE retains the right to use the established operational services to access and retrieve Data stored on Researcher's infrastructure at its sole discretion.
36. **DATA ACCURACY:**
    - 36.1. The Data provided are the best and most complete documentation available. USBE does not ensure 100% accuracy of all records and fields. Some data fields, including those that are not used, may contain incorrect or incomplete Data. USBE and Researcher will report any systematic problems with the Data to the data owner. Data that has been manipulated or re-processed by either USBE or Researcher is the responsibility of that Party.
37. **ACCESS TO DATA:**
    - 37.1. Researcher shall limit access to Data to Authorized Persons only and shall require a non-disclosure agreement be signed by all Authorized Persons prior to being granted access to Data.

37.2. Researcher shall maintain past and current lists of all Authorized Persons, maintain each non-disclosure agreement, and shall permit inspection of the same by USBE upon request.
37.3. Researcher shall maintain an audit trail for the duration of this Agreement, which reflects the granting and revoking of access privileges to Authorized Persons. A copy of this audit trail may be requested by USBE from Researcher at any time and shall be provided within 10 days of the USBE request.
37.4. Researcher shall have strong access controls in place. Researcher shall disable and/or immediately delete unused and terminated Authorized Persons' accounts and shall periodically assess account inactivity for potential stale accounts.
37.5. Researcher shall provide annual, mandatory privacy and security awareness and training for all Authorized Persons, maintain past and current lists of Authorized Persons that have completed training, and permit inspection of the same by USBE upon request.

38. USE AND DISCLOSURE OF DATA:

38.1. Researcher shall not collect, use, or share Data beyond the purposes set forth in the Attachments.
38.2. Researcher shall share Data only for the purposes stated in the Attachments and then only with the Authorized Persons stated in the Attachments.
38.3. If Researcher seeks to publicly release Data, Researcher must aggregate the Data by totaling the Data and reporting it at the group, cohort, school, school district, region, or state level. Researcher shall, upon request of USBE, provide USBE with a document that lists the steps and methods the Researcher shall use to de-identify the information. Any Data that is publicly released without being redacted using the methods in this Section shall be considered an Incident. The following methods shall be used on any aggregated reports:
38.3.1. Aggregate data shall be reported publicly only if there is a sufficient number of individuals represented in any demographic or subgroup so that an individual cannot be identified.
38.3.2. Aggregated reports shall redacted using complementary suppression methods that remove the risk of Data being identifiable using simple mathematics or formulas.
38.3.3. Aggregated reports shall be redacted to remove identifiability risks caused other prior releases of aggregate data by Researcher.
38.4. Researcher shall not use Data for the purposes of Targeted Advertising.
38.5. Researcher shall not sell or otherwise monetize Data except Data transferred through the purchase of, merger with, or otherwise acquisition of Researcher provided that all Parties remain in compliance with this Agreement.

39. DATA LINKAGE:

39.1. If Researcher will link USBE's Data with Data from another source, the result could be a new data set with potentially unique regulations and conditions governing its use. Prior to linking the Data, Researcher will provide detailed information to USBE outlining the Data being linked and the other sources for Data.
39.2. The Data Steward will classify the linked data based on security or privacy risks. This could include evaluating the method of release, on the likelihood of identifying individuals from the linked Data, if linking the Data will violate any laws or regulations, or if the new data set meets the original request.
39.3. Based on the results of the risk assessment, USBE may refuse to provide Researcher with some or all of the requested Data in its sole discretion in order to mitigate any risks identified.
39.4. Should USBE consent to the Data being linked, the Data Steward shall apply additional constraints as necessary to the usage of the new data set.
39.5. Detailed information on the Data being linked, the other sources of Data, and any additional constraints shall be documented in the Attachments.

40. SECURITY AND PROTECTION OF DATA:

40.1. Researcher shall notify USBE if there are any material changes that will negatively affect the system where all Data are stored and maintained.
40.2. If Researcher is given Data as part of this Agreement, the protection of Data shall be an integral part of the business activities of Researcher to ensure that there is no inappropriate or unauthorized use of Data. Researcher shall safeguard the confidentiality, integrity, and availability of Data.
40.3. Researcher shall comply with and protect and maintain Data using methods that are at least as good as or better than that established in the State of Utah's Department of Technology Policies (https://dts.utah.gov/policies).
40.4. Researcher shall only transmit or exchange Data via secure means (ex. HTTPS or FTPS). Researcher shall not use, store or process Data on any unencrypted portable or laptop computing device or any portable storage medium.
40.5. Researcher shall store and maintain all Data in data centers located in the United States.
40.6. Researcher shall permit its employees and Subcontractors to access Data remotely only via a secured manner, such as Virtual Private Networks (VPN).
40.7. Researcher shall store all Data, as well as any backups made of that Data, in encrypted form using no less than 128 bit key and include all Data as part of a designated backup and recovery process.
40.8. Researcher shall enforce strong password protections on all devices and networks with access to or that store Data.
40.9. Researcher shall maintain data only until such time that the data is no longer needed (Term Expiration) or upon early

termination of this Agreement (with Cause), whichever occurs first. At that point, the data will be destroyed within 30 days by the party holding the data, except for disclosed information possessed by any court. Researcher shall certify to USBE in writing that the data has been destroyed.

41. INCIDENTS:

41.1. If Researcher becomes aware of an Incident involving Data by either Researcher or any of Researcher's Subcontractors, Researcher shall notify USBE within one (1) calendar day and cooperate with USBE regarding recovery, remediation, and the necessity to involve law enforcement, if any.

41.2. Researcher shall produce a written remediation plan that includes information about the cause and extent of the Incident and the actions Researcher will take to remediate the Incident and to reduce the risk of incurring a similar type of Incident in the future. Researcher shall present its analysis and remediation plan to USBE within ten (10) calendar days of notifying USBE of an Incident. USBE reserves the right to adjust this plan, in its sole discretion. If Researcher cannot produce its analysis and plan within the allotted time, USBE, in its sole discretion, may perform such analysis and produce a remediation plan, and Researcher shall reimburse USBE for the reasonable costs thereof.

41.3. In the event of an Incident, Researcher shall provide USBE or its designated representatives with access seven (7) days a week, twenty-four (24) hours a day, for the purpose of evaluating, mitigating, or resolving the Incident.

41.4. Unless Researcher can establish that Researcher or any of its Subcontractors is not the cause or source of the Incident, Researcher shall be responsible for the cost of notifying each person whose personal information may have been compromised by the Incident.

41.5. Disclosure of Data by Researcher or any Subcontractor for any reason may be cause for legal action by third parties against Researcher, the State, or their respective agents. Researcher shall indemnify, save, and hold harmless the State, its employees, and agents against any and all claims, damages, liability, and court awards including costs, expenses, and attorney fees incurred as a result of any act or omission by Researcher, or its employees, agents, Subcontractors, or assignees pursuant to this Contract. Notwithstanding any other provision of this Contract, Researcher shall be liable to the State for all direct, consequential and incidental damages arising from an Incident caused by Researcher or its Subcontractors.

ATTACHMENT B:
SCOPE OF RESEARCH

RESEARCH OVERVIEW:

PROJECT TITLE:

State the title of the study.

The Effectiveness of Formative Assessments Developed by PLCs as a Basis for Informing Instructional Decisions and Collaborative Lesson Planning Strategies to Enhance Student Achievement in Middle School Mathematics.

PURPOSE OF STUDY:

Provide a description of the study, including the reason the data is needed.

This BYU CITES district partnership study is intended to discover top performing middle level teacher teams in terms of student math growth, among all subgroups, as measured on the Utah RISE assessment. Schools will be limited to those within the five BYU CITES partnership districts. Once identified, teacher teams that produce high math proficiency gains will be invited to participate in a three-year study conducted by Wasatch School District and BYU. This three-year study will follow the 2023/24 6th grade students who are enrolled in the teacher teams identified as high performing. This study will follow the 6th grade cohort through their 8th grade year, for a total of three years. The study will also add each subsequent 6th grade cohort during the three-year project for a total of three student cohorts. Participating teacher teams will be tasked with creating cross-district common formative assessments (CFA). Results from these CFAs will be analyzed using Item Response Theory (IRT) as well as regression analysis where CFAs are used as predictors of RISE performance. The goal is to produce assessments that are aligned with state core standards and help drive instructional practices.

DURATION:

Enter the estimated end date of the study.

The timeframe for completion is planned for 08/01/2026.

ADDITIONAL INFORMATION:

RESEARCH QUESTIONS:

List your research questions.

What can we learn from the highest performing math teams in Utah?

VARIABLES OF INTEREST:

List specific variables.

See Data Requested table below

DATA LINKAGE:

Provide detailed information on the Data being linked, the other sources of Data, and any additional constraints to protect the linked Data.

We will not be linking any outside data to the data being requested from USBE.

ANALYTIC APPROACH:

Describe analysis.

Hierarchical Linear Modeling to identify teacher team effect size.

OUTPUT:
Researchers must provide their output to the USBE.

OUTPUT DESCRIPTION:

Provide a summary of the output. This section states what reports or information will be produced because of this research and where that information will go.

Researchers will generate and provide Innovative Practice Reports to Utah Leading through Effective Actionable and Dynamic (ULEAD) Education outlining the findings of their research project, as detailed above. Within each Innovative Practice Report, Researchers will:

- Identify the causes of the LEA's successful practice;
- Identify opportunities for LEAs to adopt or customize innovative or best practices;
- Address limitations to successful replication or adaptation of the successful practice by other LEAs, which may include barriers arising from federal or state law, state or LEA policy, socioeconomic conditions, or funding limitations;
- Include practical templates for successful replication and adaptation of successful practices, following criteria established by the director;
- Identify experts in the successful practice that is the subject of the innovative practice report, including teachers or administrators at the subject LEA; and include:
    - an executive summary describing the innovative practice report; and
    - a video component or other elements designed to ensure that an innovative practice report is readily understandable by practitioners.

Additionally, Researchers will provide regular information progress updates to ULEAD.

OUTPUT DELIVERY DATE:

State the date when the output will be provided to USBE.

Researchers will deliver the initial Innovative Practice Report in Augus 2024, with additional reports generated annually thereafter for the duration of the study, dependent upon timelines of state data availability.

DATA:

DATA REQUESTED:

List the data requested. Add additional rows as needed.

Data (Data and other information requested)
All below data variables are limited to the BYU CITES partnership School Districts (Alpine, Jordan, Nebo, Provo, Wasatch):
2020-2021 school year:
• For each 5th grade student in participating districts:
• Statewide Student Identifier (SSID)
• RISE Math Scale Score
• RISE Math Proficiency Score
• RISE Math Student Growth Percentile (SGP)
2021-2022 school year:

• For each 6th grade student in participating districts::
• Statewide Student Identifier (SSID)
• School ID
• Math teacher CACTUS ID
• RISE Math Scale Score
• RISE Math Proficiency Score
• Rise Math Student Growth Percentile (SGP)
• Individualized Education Plan (IEP) Flag
• Low Socioeconomic Status (SES) Flag
• English Language Learner (ELL) Level
• Race
• Ethnicity
• Math State Course Code
• Math Course/Section Honors Flag
• Math Course/Section Special Education Flag
2022-2023 school year:
• For each 7th grade student in participating districts::
• Statewide Student Identifier (SSID)
• School ID
• Math teacher CACTUS ID
• RISE Math Scale Score
• RISE Math Proficiency Score
• Rise Math Student Growth Percentile (SGP)
• Individualized Education Plan (IEP) Flag
• Low Socioeconomic Status (SES) Flag
• English Language Learner (ELL) Level
• Race
• Ethnicity
• Math State Course Code
• Math Course/Section Honors Flag
• Math Course/Section Special Education Flag
2023-2024 school year:
• For each 8th grade student in participating districts::
• Statewide Student Identifier (SSID)
• School ID
• Math teacher CACTUS ID
• RISE Math Scale Score
• RISE Math Proficiency Score
• Rise Math Student Growth Percentile (SGP)
• Individualized Education Plan (IEP) Flag
• Low Socioeconomic Status (SES) Flag

• English Language Learner (ELL) Level
• Race
• Ethnicity
• Math State Course Code
• Math Course/Section Honors Flag
• Math Course/Section Special Education Flag

DELIVERY:

Desired delivery date: April 15, 2023 (first request)

Delivery method:
☑ Data will be compiled by USBE and sent securely to Researcher.
☐ Researcher will conduct on-premise research.
☐ Other (explain): _____

ROLES:

		Name	Title
BYU	Data Steward:	Richard Sudweeks	Professor
	Authorized Persons:	Kamalani Kaluhiokalani	PHD Student
WCSD	Data Steward:	Nathaniel Mitchell	Data Analyst
	Authorized Persons:	Tod Johnson	Director
		Brett Zabel	Director
		Eric Campbell	Director
		Garrick Peterson	Director
USBE	Data Steward:	Aaron Brough	Director of Data and Statistics
	Data Quality Manager:	Aaron Brough	Director of Data and Statistics

ATTACHMENT C
CURRICULUM VITAE

VITA

RICHARD R SUDWEEKS

October, 2022

HOME ADDRESS:

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CURRENT POSITION:

Professor, Instructional Psychology and Technology Department
Director, PhD Program in Educational Inquiry, Measurement, and Evaluation
Brigham Young University
Provo, Utah 84602
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PREVIOUS EMPLOYMENT EXPERIENCE:

1965-66	Teacher, Mayfair High School, Bellflower School District, Bellflower, CA
1966-69	Teacher, Fillmore LDS Seminary, Fillmore, UT
1969-70	Curriculum Writer, Central Office Staff, LDS Seminaries & Institutes of Religion, Provo, UT
1970-71	Graduate Assistant, Educational Technology Dept., Arizona State University, Tempe, AZ
1971-73	Assistant Director of Secondary Curriculum, Central Office, LDS Seminaries and Institutes of Religion, Salt Lake City, UT
1973-75	Graduate Assistant, Center for Instructional Research & Curriculum Evaluation (CIRCE), University of Illinois, Urbana, IL
1975-78	Research and Evaluation Specialist, LDS Church Education System, Salt Lake City, UT
1978-79	Instructional Psychologist, F-16 Pilot Training Project, Courseware Inc., Clearfield, UT
1979-80	Associate Director for Evaluation, Center for Instructional Development, Syracuse University, Syracuse, NY
1980-83	Evaluation Specialist, David O. McKay Institute of Education, Brigham Young `
1983-present	Faculty Member (Assistant Professor, Associate Professor, & Professor), David O. McKay School Education, Brigham Young University, Provo, UT

EDUCATION:

B.S.	Brigham Young University	1965	Geography
M.A.	Brigham Young University	1973	Secondary Curriculum and Instruction
PhD.	University of Illinois	1978	Educational Psychology with an emphasis in Quantitative and Evaluative Research Methods

BOOKS:

Worthen, B.R., White, K.R., Fan, X., & Sudweeks, R.R (1999). *Measurement and assessment in the schools* (2nd ed.). New York: Addison Wesley Longman.

CHAPTERS IN BOOKS:

Sudweeks, R.R (1996). Teaching by the power of the Spirit. In L.R. Hartshorn, D.A. Wright, & C.J. Ostler (Eds.), *The Doctrine and Covenants: A Book of Answers* (pp. 105-122). Salt Lake City: Deseret Book.

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Worthen, B.R. & Sudweeks, R.R (1998). Review of the Eskwall/Shanker Reading Inventory. In J.C. Impara and B.S. Plake (Eds.), *The Thirteenth Mental Measurements Yearbook* (pp. 406-407). Lincoln, NE: Buros Institute of Mental Measurements.

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Diamond, R.M. & Sudweeks, R.R (1980). A comprehensive approach to course evaluation. *Journal of Instructional Development, 4*(1), 28-34.

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Reutzel, D.R., Sudweeks, R.R & Hollingsworth, P.M. (1994). Issues in reading instruction: The views and information sources of state-level textbook adoption committee members. *Reading Research and Instruction, 34*(2), 149-171.

Hardy, G.R., Sudweeks, R.R, Tolman, M.N. & Burton, S.J. (1996). Dollars and Sense. *Science and Children. 34*(3), 12-15 & 34.

Allen, R.D., Swain, M.R., Sudweeks, R.R & Schaalje, G.B. (1998). The impact of recognition opportunities and examination format on students' examination performance. *Advances in Accounting Education, 1*, 189-214.

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Wilder, L.K. & Sudweeks, R.R (2003). Reliability of ratings across studies of the BASC. *Education and Treatment of Children, 26*, 382-399.

Dyches, T.T., Wilder, L.K., Sudweeks, R.R, Obiakor, F.E., & Algozzine, B. (2004). Multicultural issues in autism. *Journal of Autism and Developmental Disorders*, 34, 211-222.

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Hansen, K., Reeve, S., Gonzalez, J., Sudweeks, R.R., Hatch, G.L., Esplin, P., & Bradshaw, W.S. (2006). Are advanced placement English and first-year college composition equivalent? A comparison of outcomes in the writing of three groups of sophomore college students. *Research in the Teaching of English 40,* 461-501.

Kitchen, E., King, S.H., Robison, D.F., Sudweeks, R.R, Bradshaw, W.S., & Bell, J.D. (2006). Rethinking exams and letter grades: How much can teachers delegate to students? *CBE—Life Sciences Education, 5*, 270-280.

Fawson, P.C., Ludlow, B.C., Reutzel, D.R., Sudweeks, R.R, & Smith, J.A. (2006). Examining the reliability of running records: Attaining generalizable results. *Journal of Educational Research, 100*, 113-126.

Kitchen, E., Reeve, S., Bell, J.D., Sudweeks, R.R, & Bradshaw, W.S. (2007). The development and application of affective assessment in an upper-level cell biology course, *Journal of Research in Science Teaching, 44*(8), 1057-1087.

Lemley, D., Sudweeks, R.R, Howell, S., Laws, D. & Sawyer, O. (2007). The effects of immediate and delayed feedback on secondary distance learners. *Quarterly Review of Distance Education, 8*(3), 251-260. [This article received the Elizabeth Powell 2008 Community of Practice Award given by the University Continuing Education Association at the association's annual meeting in New Orleans, LA on March 27, 2008. "The Elizabeth Powell Award recognizes publication of merit that make significant contributions to research in the field of distance education."]

Bahr, D.L. & Sudweeks, R.R. (2008). Teacher-developed mathematics performance assessments in the context of reform-based professional development. *Focus on Learning Problems in Mathematics, 30* (1), 12-33.

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Jones, E.A., Larsen, R.A.A., Sudweeks, R.R., Young, R.K., & Gibb, G.S. (2018). Evaluating paraeducator-led reading interventions in elementary school: A multi-cutoff regression-discontinuity analysis. *Journal of Research on Educational Effectiveness*. 11(4), 507-534.

Manwaring, K.F., Jensen, J.L., Gill, R.A., Sudweeks, R.R., Davies, R.S., & Bybee, S.M. (2018). Scientific reasoning ability does not predict scientific views on evolution among religious individuals. (2017). *Evolution Education & Outreach*. Doi.org/10.1186/s12052-018-0076-8

Vogeler, H. A., Fischer, L., Sudweeks, R. R., & Skinner, K. B. (2018). An examination of the factor structure of the Trauma Inventory for Partners of Sex Addicts (TIPSA). *Sexual Addiction & Compulsivity*, 25(1), 46-64.

Moulton, S.D., Young, E.L., & Sudweeks, R.R (2019). Examining the psychometric properties of the SRSS-IE with the nominal response model within a middle school sample. *Assessment for Effective Intervention*, 44(4),1-14.

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Manwaring, K.F., Jensen, J.L., Gill, R.A, Sudweeks, R.R, Davies, R.S., Olsen, J.A., Phillips, A.J., & Bybee, S.M. (2019). Religious affiliation and religiosity and their impact on scientific beliefs in the United States. *BioScience, 69*(4), 292-304.

Stokes, S.S., Moulton, S., Sudweeks, R.R, & Fischer, L. (2020). An item analysis of the Trauma Inventory for Partners of Sex Addicts. *Sexual Addiction & Compulsivity*, 65(1-2), 65-89.

Rino, J., Bahr, D.L., Larsen, R.A.A., Sudweeks, R.R, Robinson, J., Everson, K., & Monroe, E.E. (2021). Examining the validity argument of a survey measuring elementary teachers' implementation of standards-based mathematics teaching: An argument-based approach. *Investigations in Mathematics Learning, 13*(2), 91-106.

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Sudweeks, R.R., & Walters, L. (1993). *Evaluation of inter-district special education programs and services in Oakland County*. (Report of an evaluation presented to the board of education of the Oakland Intermediate School District and the 28 constituent school districts in Oakland County, Michigan.)

Sudweeks, R.R & Sudweeks, J.S. (2003). *An evaluation of the K-2 integrated curriculum in selected Utah schools*. A report submitted to the Utah State Office of Education, Salt Lake City, UT.

Sudweeks, R.R (2015). *An evaluation of the Robert Noyce Scholarship program at Utah Valley University*. Report of an evaluation submitted to the National Science Foundation (NSF grant 0934942). Washington, D.C.

OTHER WRITINGS AND PRODUCTS:

Tolman, M.N., Tolman, R.R., Sudweeks, R.R, Baird, J.H. & Hardy, G., (1990). *Utah core curriculum assessment series end of level tests: Test booklets*. Two forms (A & B) plus an administrative manual for each of grades 1-3. Salt Lake City, UT: Utah State Office of Education.

Tolman, R.R., Tolman, M.N., Sudweeks, R.R, Baird, J.H. & Hardy, G., (1990). *Utah core curriculum assessment series end of level tests: Test booklets*. Two forms (A & B) plus an administrative manual for each of grades 4-6. Salt Lake City, UT: Utah State Office of Education.

Tolman, R.R., Baird, J.H., & Sudweeks, R.R, (1990). *Utah core curriculum assessment item pools: Elementary science, intermediate levels 4-6*. Salt Lake City, UT: Utah State Office of Education.

Sudweeks, R.R & Baird, J.H., (1990). *Technical manual: Utah core assessment series end of level tests*. Salt Lake City, UT: Utah State Office of Education.

Tolman, M.N., Baird, J.H. & Sudweeks, R.R., (1990). *Users Guide: Utah Core Assessment Series End of Level Tests*. Salt Lake City, UT: Utah State Office of Education.

Zimmerman, B.B., Sudweeks, R.R, Shelley, M.F. & Wood, B., (1990). *How to prepare better tests: Guidelines for university faculty*. Provo, UT: Testing Services, Brigham Young University.

Burton, S.J., Sudweeks, R.R, Merrill, P.F. & Wood, B., (1990). *How to prepare better multiple-choice tests: Guidelines for university faculty*. Provo, UT: Testing Services, Brigham Young University.

Sudweeks, R.R. (1990). *Validation of the Pre-Professional Skills Tests and determination of performance standards for the BYU College of Education*. College of Education, Brigham Young University, Provo, UT. (Technical report prepared for Educational Testing Service, Princeton, NJ.)

Sudweeks, R.R. (1992). *Content validation and standard setting studies for use of the Pre-Professional Skills Test at Utah State University*. College of Education, Utah State University, Logan, UT. (Technical report prepared for Educational Testing Service, Princeton, NJ.)

Sudweeks, R.R, Dickson, T., & Burton, S.J. (1993). *Instructor's manual* (including teaching tips and test item bank) to accompany the textbook, *Measurement and evaluation in the schools* by B.R. Worthen, W.R. Borg, & K.R. White. New York: Longman.

Sudweeks, R.R. (1993). *Local validation and standard setting studies for use of the Pre-Professional Skills Tests at Weber State University*. College of Education, Weber State University, Ogden, UT. (Technical report prepared for Educational Testing Service, Princeton, NJ.)

Sudweeks, R.R., Bahr, D., Jones, C.J., Jones, D., Bishop, K., Bishop, B. & Cook, V. (1993). Series of 28 performance assessment exercises developed for the Utah State Office of Education to accompany the new Utah Elementary School Science Core Curriculum.

Sudweeks, R.R., Baird, J.H., & Lawrence, B. (1994). Intended learning outcomes for the Utah core curriculum in science. In *Elementary School Science Core Curriculum Standards* (pp. 5-7). Salt Lake City, UT: Utah State Office of Education.

Sudweeks, R.R & Fan, X. (1999). *Instructor's manual/Test Bank* to accompany the textbook *Measurement and assessment in the schools* (2nd ed.) by B.R. Worthen, K.R. White, X. Fan, & R.R. Sudweeks. New York: Longman.

Sudweeks, R.R & Baird, J.H. (2002). *Reading, writing, and mathematics skills recommended for inclusion in Utah's Basic Skills Competency Test*. Report to the Steering Committee for the *Basic Skills Competency Test*, Utah State Office of Education.

Sudweeks, R.R. (2018). Guttman scaling. In B.B. Frey (Ed.), *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation* (vol. 2, pp. 763-766). Los Angeles: Sage Publications.

Sudweeks, R.R. (2018). Internal consistency. In B.B. Frey (Ed.), *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation* (vol. 2, pp. 853-856). Los Angeles: Sage Publications.

Sudweeks, R.R. (2018). Interval-level measurement. In B.B. Frey (Ed.), *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation* (vol. 2, pp. 870-871). Los Angeles: Sage Publications.

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Pfleger, P.I., Clark, J.C., Simpson, D., Larsen, R.A.A., Olsen, J.A., Owens, M., & Sudweeks, R.R (2021). *Report of Research Aimed at Identifying Barriers to Success and Predictors of Utah Students' Participation in and Completion of Postsecondary Education Based on Statewide Longitudinal Data*. A report presented to the Utah State Board of Education (Grant No. USBE-MI19034-PS).

PRESENTATIONS AT MEETINGS OF PROFESSIONAL SOCIETIES:

Baird, J.H., Sudweeks, R.R, Tolman, M.N., Tolman, R.R., & Hardy, G. (April, 1990). *Solving problems encountered in large-scale test development projects*. Seminar presented at the annual meeting of the National Science Teachers Association, Atlanta, GA.

Sudweeks, R.R & Tolman, R.R. (April, 1990). *The use of empirical versus subjective procedures for identifying science test items which function differentially for females and males*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA. (This paper was selected by NARST officers to be presented as one of the association's best papers at the annual meeting of the National Science Teachers Association in Houston, TX, March, 1991.)

Petersen, G.A., Sudweeks, R.R & Baird, J.H. (April, 1990). *Test-wise responses of third-, fifth-, and sixth-grade students to clued and unclued multiple-choice science items*. Paper presented at the annual meeting of the National Council on Measurement in Education, Boston, MA.

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Sudweeks, R.R & Dickson, T. (Oct., 1991). *Issues related to constructing and grading essay exams: A review of recent research*. Paper presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Jackson, WY.

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Sudweeks, R.R., Van Mondfrans, A., & Walters, L.C. (Sept., 1993). *The development of a Likert scale to assess educators' attitudes toward the practice of inclusion.* Paper presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Jackson, WY.

Sudweeks, R.R. & Clay, S.L. (March, 1994). *Using performance assessment to elicit cognitive processes: A comparison of knowledgeable versus less knowledgeable students*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Anaheim, CA.

Sudweeks, R.R. & Clay, S.L. (Oct., 1994). *Constructing performance assessments for use in science and mathematics classrooms*. Workshop presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Sun Valley, ID.

Sudweeks, R.R. (Dec., 1994). *Development of the intended learning outcomes for the new Utah elementary school science curriculum*. Presentation at the National Science Teachers Association Area Convention, Las Vegas, NV.

Sudweeks, R.R. (Dec., 1994). *How to construct performance assessments for elementary school science classrooms*. Workshop presentation at the area convention of the National Science Teachers Association , Las Vegas, NV.

Sudweeks, R.R & Clay, S.L. (April, 1995). *Two alternative approaches to performance assessment*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA.

Sudweeks, R.R (Oct., 1995). *How to successfully score performance assessments*. Workshop presented at the area convention of the National Science Teachers Association, Salt Lake City, UT.

Sudweeks, R.R (Oct., 1995). Organizer and moderator of panel discussion: Overcoming the obstacles to successful use of performance assessments in science classrooms. Participants included C. J. Jones, J. H. Baird, M. N. Tolman, D. Jones, and G. Twitchell. Presented at the area convention of the National Science Teachers Association, Salt Lake City, UT.

McKenna, H.J. & Sudweeks, R.R (April, 1996). *Detection of mathematics application items in the Stanford Achievement Test that function differentially for students with different levels of reading ability*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

Sudweeks, R.R (Oct., 1996). *Teaching statistics using spreadsheet software*. Workshop presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Detroit Lakes, MN.

Tolman, M.N., Hardy, G.R., & Sudweeks, R.R (Oct., 1996). *Effectiveness of the Christa McAuliffe Space Education Center*. Presented at the area convention of the National Science Teachers Association, Phoenix, AZ.

Hardy, G.R., Sudweeks, R. R, and Tolman, G.R. (Oct., 1996). *Dollars and Cents*. Presented at the area convention of the National Science Teachers Association, Phoenix, AZ.

Hardy, G.R., Tolman, M.N. & Sudweeks, R.R (Dec., 1997). *Availability of science materials in the elementary school classroom*. Presented at the area convention of the National Science Teachers Association, Nashville, TN.

Hardy, G.R., Tolman, M.N. & Sudweeks, R.R (Dec., 1997). *Reference materials used by elementary teachers and students in America*. Presented at the area convention of the National Science Teachers Association, Nashville, TN.

Glissmeyer, C.B. & Sudweeks, R.R (Nov. 1998). *Oral retelling as a measure of reading comprehension: The generalizability of ratings of college-aged second language learners reading expository text*. Paper presented the annual meeting of the California Educational Research Association, San Diego.

Mitchell, A., Erickson, L.B. & Sudweeks, R.R (Nov. 1998). *Literature or textbook: Does method really make a difference*? Paper presented at the 78th annual conference of the National Council for the Social Studies, Anaheim, CA.

Wolfersberger, M. A. & Sudweeks, R.R (April, 1999). *The development of the Classroom Literacy Environment Profile and an investigation of the generalizability of CLEP ratings*. Poster session presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Allen, S. & Sudweeks, R.R (April, 2001). *Identifying and managing local item dependence in context-dependent item sets*. Paper presented the annual meeting of the American Educational Research Association, Seattle, WA.

Sudweeks, R.R., Bell, J.D. & Bradshaw, W.S. (May, 2001). *Factors affecting the reliability of ratings of data analysis skills in cellular biology*. Poster session presented at the 8th Annual Undergraduate Education Conference of the American Society for Microbiology, Orlando, FL.

Bell, J.D., Sudweeks, R.R., & Bradshaw, W.S. (May 2001). *Assessing student performance on data interpretation tasks in a cell biology course*. Poster session presentation at the 8th Annual Undergraduate Education Conference of the American Society for Microbiology, Orlando, FL.

Bradshaw, W.S., Bell, J.D., & Sudweeks, R.R (May 2001). *Didactic strategies in teaching analytical skills in a cell biology course*. Poster session presented at the 8th Annual Undergraduate Education Conference of the American Society for Microbiology, Orlando, FL.

Sudweeks, R.R., Rogers, E. & Smith, R.M. (June, 2001). *Using Rasch scaling methods to describe and report student achievement of intended outcomes*. Poster session presented at the annual Assessment Conference of the American Association of Higher Education, Denver, CO.

Sudweeks, R.R., Curtin, J. & Smith, K. (October, 2001). *Creating a mission-based alumni questionnaire using Rasch scaling procedures*. Workshop presented at the annual meeting of the Rocky Mountain Association for Institutional Research, Vail CO.

Olsen, D., Sudweeks, R.R., & Smart, D. (2002, June), *Assessing difficult to measure institutional aspirations: Using alumni feedback to examine character, service, and spirituality*. Presented at the annual assessment conference of the American Association of Higher Education, Boston, MA.

Sudweeks, R.R (2002, July). *Understanding the uses and abuses of grade-equivalent scores from standardized tests*. Presented at the Utah Rural Schools Conference, Cedar City, UT.

Sudweeks, R.R (2002, July). *Using scores from standardized tests to improve instruction*. Presented at the Utah Rural Schools Conference, Cedar City, UT.

Curtin, J.A., Sudweeks, R.R, Smith, R.M. (2003, April). *Analyzing DIF for polytomous responses of university alumni to a follow-up questionnaire*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Sudweeks, R.R, Bradshaw, W.S. & Reeve, S. (2003, July). *Using generalizability theory to improve the reliability of an essay rating procedure*. Paper presented at the Summer Conference of Writing Program Administrators, Grand Rapids, MI.

Miller, R.L., Sudweeks, R.R, & Erickson, L. (2003, Oct.). *The reliability of ratings of student Teachers in the Teacher Education Department at Brigham Young University*. Paper presented at the annual meeting of the National Network for Educational Renewal, Salt Lake City, UT.

Reutzel, D.R., Dole, J.A., Sudweeks, R.R, Fawson, P.C., Read, S., Smith, J.A., Donaldson, R., Jones, C.D., Herman, K., & Drits, D. (2007, April). *Developing the Literacy Instruction Knowledge Scales (LIKS): A comprehensive assessment of primary grade teachers' knowledge of reading and writing instruction*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.

Sudweeks, R.R, Forgione, M.A., Bullough, R., V., Jr., Bahr, D.L., Monroe, E.E., Thayn, S., & McEwen, M. (2008, March), *Constructing vertically scaled mathematics tests for tracking student growth in value-added studies of teacher effectiveness*. Paper presented at the annual meeting of the National Council on Measurement in Education, New York City.

Reutzel, D.R. & Sudweeks, R.R (2008, June). *Assessing teacher knowledge in reading and writing instruction: Perplexities, problems, and promises*. Symposium presentation at the Third Annual Research Conference sponsored by the Institute of Education Sciences, Washington, DC.

Davison, K. & Sudweeks, R.R. (2010, September). Uses, misuses, and abuses of hypothesis testing. Workshop presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Big Sky, MT.

Sudweeks, R.R, Olsen, J., & Allen, D. (2010, October). *A divide-and-conquer approach to assessing the dimensionality of vertically scaled mathematics items using exploratory and confirmatory factor analysis*. Paper presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Big Sky, MT.

Sudweeks, R.R, Walker, T., & Davison, K. (2010, October). An introduction to and overview of confirmatory factor analysis. Workshop presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Big Sky, MT.

Bernfeld, E.S., Morrison, T., Wilcox, B., & Sudweeks, R.R (2010, November). Establishing reliability of ratings of fifth-graders' oral retellings of narrative text. Paper presented at the annual meeting of the Association of Literacy Educators and Researchers, Omaha, NB.

Hardy, A., Young, M., Yi, Q., Sudweeks, R.R, & Bahr, D. (2011, March). Investigating the content and construct representation of a common-item design when creating a vertical scale. Paper presented at the annual meeting of the National Council on Measurement in Education, New Orleans, LA.

Hite, J.M., Hite, S.J., Sudweeks, R.R, & Walker, T.D. (2011). *Validating TRENDS: the Typology of Relational Embeddedness Network Data Survey*. Paper presented at the 31st Sunbelt Conference, St. Petersburg, FL.

Sudweeks, R.R & Eckstein, G. (2011, October). The effects of different decisions about how many factors to retain when performing exploratory factor analysis. Paper presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Jackson, WY.

Sudweeks, R.R & Bliss, TJ. (2011, October). Using and interpreting Cronbach's alpha coefficient properly and avoiding misuse and misinterpretation. Workshop presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Jackson, WY.

Sudweeks, R.R, Davison, K., Shaw, L, & Hall, G. (2011, October). Issues and promise of value-added measurement to improve teaching. Panel discussion presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Jackson, WY.

Bliss, TJ, Zaugg, H., Allen, D. & Sudweeks, R.R (2011, October), *Descriptive and psychometric analysis of the Alberta Assessment Model*. Paper presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Park City, UT.

Bahr, D., Monroe, E., Wentworth, N., Sudweeks, R.R, & Rino, J. (2012, October), *Survey measuring elementary teacher's implementation of standards-based mathematics teaching: A psychometric analysis*. Paper presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Park City, UT.

Davison, K. & Sudweeks, R.R (2012, October). *Introduction to propensity score matching*. Series of two workshops presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Park City, UT.

Jensen, E., Olsen, D., & Sudweeks, R.R (2016, April). *Substantiating goal fulfillment in higher education: Developing useful measures of noncognitive college success indicators*. Paper presented at the International Objective Measurement Conference, Washington, DC.

Jones, E.A., Sudweeks, R.R, & Larsen, R.A.A. (2016, April). *Using regression discontinuity with multiple cutoffs to estimate treatment effects in elementary school reading interventions*. Poster presented at the annual meeting of the American Educational Research Association, Washington, DC.

Nixon, R.S., Smith, L.K., & Sudweeks, R.R. (2017, January). *Prospective vs. novice teachers: Teaching experience and science subject-matter knowledge*. Paper presented at the annual meeting of the Association for Science Teacher Education, Des Moines, IA.

Smith, L.K., Nixon, R.S., & Sudweeks, R.R. (2017, April). *Aspects of elementary teachers' experience: Predictors of science teachers' subject-matter knowledge*. Paper presented at the annual conference of the National Association for Research in Science Teaching, San Antonio, TX.

McLachlan, L., Sudweeks, R.R, & Pinnegar, S. (2017, April). *Exploring relationships among teacher beliefs, motivation, and classroom practices: A structural equation modeling analysis.* Poster presented at the American Educational Research Association, San Antonio, TX.

McLachlan, L., Popham, A., Sudweeks, R., & Summers, T. (2018, April). *Development of a teacher performance assessment used within a state consortium of teacher preparation programs.* Poster presented at the annual meeting of the American Educational Research Association, New York City, NY.

McEwen, M.R. & Sudweeks, R.R (2018, April). *Creating and visualizing incomplete rating designs intended for Many-Facet Rasch Model analysis*. Paper presented at the meeting of the International Objective Measurement Workshop, New York City, NY.

McEwen, M.R. & Sudweeks, R.R (2018, April). The effects of incomplete rating designs on results from Many-Facets Rasch Model analyses. Paper presented at the biannual meeting of the International Objective Measurement Workshop, New York City, NY.

Sudweeks, R.R., Cox, T., & McEwen, M.R. (2018, April). *How to use Facets software*. Workshop presented at the biannual meeting of the International Objective Measurement Workshop, New York City, NY.

Osguthorpe, R.D., Clark, S.K., & Sudweeks, R.R (2021, April). *Measuring self-efficacy in the moral work of teaching*. Paper presented at the online meeting of the American Educational Research Association.

OTHER PRESENTATIONS AND SPECIAL PROJECTS:

Co-Director and Instructor, Five-week summer workshop in instructional development, LDS Seminaries and Institutes of Religion, Provo, UT, 1970.

Alternative approaches to assessing affective outcomes. Paper presented at the symposium on Measuring Affect in Education, College of Education, Brigham Young University, April, 1972.

Assessing the outcomes of training sessions. Workshop presented at the annual training conference, Illinois Department of Transportation, Allerton Park, IL, January, 1974.

Designing and conducting an evaluation. Presented at the Curriculum Development Workshop, Instructional Development Center, University of Bridgeport, CT, June 15, 1979.

Four presentations on evaluation in higher education, Seventh and Eighth Annual Sagamore Seminars on Instructional Development in Higher Education, Syracuse University Minnowbrook Conference Center, Blue Mountain Lake, NY, July 1979 and July 1980.

Responsive evaluation. Presented as part of a series of traveling workshops for the National Curriculum Study Institute on Evaluation sponsored by the Association for Supervision and Curriculum Development, New York City, August 1979; San Francisco, August 1980; Sarasota, FL, January 1981; and Colorado Springs, CO, June 1981.

Evaluation consultant, College of Arts and Science, University of Rhode Island, Kingston, RI, June 1979 to February 1980.

Uses and abuses of testing in school evaluation. Presentation at the Mid-year Faculty Workshop, Payson High School, Payson, UT, January 1981.

A review of research findings on class-size and teaching effectiveness. Presented at the Creative Classroom Conclave, College of Engineering Faculty, Brigham Young University, January, 1981.

Developing and using performance tests. A workshop presented to the faculty of the College of Engineering, Brigham Young University, January-February, 1982.

Improving classroom testing and evaluation procedures. Faculty Inservice Workshop, Brigham Young University--Hawaii Campus, Laie, Hawaii, August, 1982.

Suggestions for improving public education in the state of Utah. Presented to the Joint Interim Committee on Education, Utah State Senate and House of Representatives, June, 1984.

What patrons can do to improve schools. Series of four classes presented jointly with Adrian Van Mondfrans at Education Week, Brigham Young University, Provo, Utah, August, 1984.

How to evaluate your performance as a school board member. Workshop presented jointly with R.G. Briscoe at the annual meeting of the Utah School Boards Association, Salt Lake City, January, 1986 and at the annual convention of the National School Boards Association, San Francisco, April, 1987.

Constructing and scoring essay tests, and *Performance testing in the college classroom*, Two inservice training workshops presented to the faculty of Utah Valley Community College, May, 1987.

Using essay tests and interpretive exercises to assess complex cognitive outcomes, and *Writing better objective test items*. Two inservice training workshops presented at the CES Higher Education Summer Workshop, Brigham Young University, Provo, Utah, June, 1987.

Alternatives to consolidation of rural school districts. A seminar presented jointly with Adrian Van Mondfrans to the 10th annual Utah Rural Schools Conference sponsored by the Utah State Office of Education, Price, Utah, August, 1988.

A review of the feasibility study conducted for the Cache County and Logan City School Districts. Report presented to the Joint Interim Committee on Education, Utah Legislature, September 21, 1988 and to the Utah State Board of Education, October 14, 1988.

Constructing better examinations. An inservice training workshop presented to the faculty of Snow College, Ephraim, Utah. September, 1989.

Improving the use of essay exams. Faculty inservice training workshop sponsored by the Honors and General Education Program. Brigham Young University, Provo, Utah. March 3, 1990.

How to write lesson plans to teach higher order thinking skills. Presented at the ACT Workshop, Granite School District, Salt Lake County, UT, June, 1990

Evaluation of Learning. Presented jointly with J. Hugh Baird at the Dimensions of Teaching Effectiveness Workshop sponsored by the Honors and General Education Program, Brigham Young University, Provo, UT, August, 1990.

Evaluating student achievement in design courses. Presented jointly with Adrian van Mondfrans to the faculty of the Department of Design, Brigham Young University, February, 1991.

Series of inservice training workshops on assessing higher-order thinking presented to teachers of the Science-Technology-Society courses in Utah high schools with the assistance of J. Hugh Baird.

These workshops were funded by an $8,000 Title II Eisenhower grant administered by the Utah State System of Higher Education, September, 1990--June, 1992.

Developing curriculum and instruction consistent with the purposes of schooling. Presentation to the faculty of Dixon Middle School, Provo, Utah, November, 1991.

Family, school, and peer influence on adolescent alcohol use in Utah. Paper by Larson, D.C., Briscoe, R.G., Caycedo, J.C., & Sudweeks, R.R. Paper presented at the 19th annual conference of the Center for Studies of the Family, Brigham Young University, Provo, Utah, March 1992.

Planning and evaluating classroom tests. Presentation to the Utah NCS Users Group Meeting sponsored by National Computer Systems. Salt Lake City, Utah, May 1992.

Authentic Assessment. Seminar presented to the 14th annual Utah Rural Schools Conference sponsored by the Utah State Office of Education, Orem, Utah, July 1992.

Constructing better test items for certification examinations. Workshop presented at Word Perfect Corporation, Orem, Utah, July 1992.

Expert witness called by the defense to testify in the court hearing of a case challenging the validity of the performance test used in the chiropractic licensing examination, Division of Occupational and Professional Licensing, Utah State Department of Commerce, Salt Lake City, UT, December, 1992.

The basics of item response theory. A series of two training seminars presented to the Learning Disabilities Test Selection Committee, Utah State Office of Education, Salt Lake City, UT, March and October, 1993.

Consultant, PPST Validation and Standard Setting Project, College of Education, Weber State University, Logan, Utah, April-November, 1993.

Steering committee member and consultant on assessment-related issues, Elementary School Science Core Curriculum Revision Project, Utah State Office of Education, Salt Lake City, Utah, 1993-94.

Consultant on the development of performance assessments for elementary school mathematics curricula. Jostens Learning Corporation, Carlsbad, CA. (April 1993-June, 1994).

Improving assessment of student achievement in university courses. Workshop presented jointly with Adrian van Mondfrans, Faculty Development Center, Brigham Young University, June, 1994.

Constructing valid and reliable tests. Workshop presented to the faculty at Utah Valley State College, Orem, Utah, August 1994

How to score performance assessments in science. Workshop presented to secondary science teachers sponsored by the Utah Office of Education, Midvale Utah, January, 1995.

How to write and score essay questions. Series of two faculty development workshops presented to the faculty of the Department of Spanish and Portuguese Languages, Brigham Young University, January-February, 1995.

How to construct context-dependent test items. Presented at the workshop for new faculty sponsored by the Faculty Center, Brigham Young University, Provo, UT, May 6th, 1997.

Performance assessment in college classrooms. Presented at the workshop for new faculty sponsored by the Faculty Center, Brigham Young University, Provo, UT, May 13th, 1997.

*Improving the use of essay tests in college classrooms***.** Presented at the workshop for new faculty sponsored by the Faculty Center, Brigham Young University, Provo, UT, May, 1998.

Mistakes to avoid when using students' scores from standardized tests as a basis for making instructional decisions. Keynote speech presented at the Utah Testing and Evaluation Conference, Snowbird Resort, October 29, 1998.

Basic concepts and applications of item response theory. Inservice training workshop presented to the staff of the Evaluation and Assessment Division, Utah State Office of Education, Provo, Utah, June 22, 2000.

Using test scores as basis for making informed decisions about how to improve classroom instruction. Series of two inservice workshops presented to the principals and central office staff of the Provo School District, Provo, Utah, December 10, 2001 and January 7, 2002.

Aligning instructional methods and assessment practices with curricular goals. Presented to the faculty of Orem High School, Orem, Utah, February 1, 2008.

Problems and Possibilities Associated with Using Mathematics Tests to Track Student Growth and Assess Teacher Effectiveness. Presented jointly with John Bennion to the Education Interim Committee of the Utah Legislature in Salt Lake City, May 22, 2008.

The Use, Misuse, and Misinterpretation of Coefficient Alpha, Invited presentation given at the meeting of the Church Sponsored Educational Research Practitioners, Aug. 1, 2008, Provo UT.

Why Documenting Student Learning Matters (Keynote Address to the Faculty at the New Academic Year Annual Meeting). Dixie State University, St. George, UT, August 15, 2016.

THESES AND DISSERTATIONS SUPERVISED:

Isbell, Celia Ann (1985). *The incongruence of two criterion-referenced tests used to assess mastery of the same skills*. EdD dissertation.

Gubler, Shandon D. (1985). *The development and evaluation of a collegiate excellence program designed to utilize an organizer as a tool to assist students in improving their academic performance*. EdD dissertation.

Applegate, Lynn R. (1985). *The formative evaluation of a graduate-level quantitative reasoning class*. EdD dissertation.

Smith, Brian L. (1986). *Academic tasks and student response strategies in LDS Seminary classrooms*. PhD dissertation.

Lake, David L. (1987). *The effects of self-evaluation and teacher-evaluation on missionary trainees*. PhD dissertation.

Thurman, Richard (1988). *The effect of temporal position of reviews on the retention of a paired-associate task*. PhD dissertation.

Hall, Robert F. (1988). *Highly-similar versus relatively-dissimilar stimuli in instruction on an aural discrimination task*. PhD dissertation.

Moss, Vanessa D. (1988*). The development and validation of a scale for assessing parents' attitudes towards year-round school*. M.S. thesis.

Francis, Leslie (1988). *Alternative methods of estimating the curricular validity of locally constructed course examinations*. PhD dissertation.

Dunn, Bill, (1989). *Respondent centered item generation vs. expert centered item generation for Likert Scale construction*. PhD dissertation.

Petersen, Gary A. (1989). *Test-wise responses of third-, fifth-, and sixth-grade students to clued and unclued multiple-choice science items*. PhD dissertation.

Eisley, Mark E. (1990). *The effect of sentence form and problem scope in multiple-choice item stems on indices of test and item quality*. PhD dissertation.

Johnson, Kelly C. (1990). *The development and evaluation of an information management system for LDS Seminaries*. EdD dissertation.

Lin, Wang Man (1992). *The development of a reading comprehension test for the Chinese Basic Course at the Defense Language Institute*. M.S. thesis.

Matsumoto, Audrey (1993). *Performance assessment of separate component skills in elementary school science versus a composite integrated skill*. M.S. thesis.

Gull, Gayla (1993). *Standardized testing results in grades four, seven, nine, and ten from a predominantly home school population*. M.S. thesis.

Eschler, Wayne (1993). *How explicit, empirically-determined mental models of experts and typical users influence design decisions*. PhD dissertation.

Howell, Scott L. (1994). *The effects of using test blueprints as a test preparation method*. PhD dissertation.

Mishou, Matthew A. (1995). *Tutor fidelity in the implementation of a remedial reading program*. M.S. thesis.

McKenna, Hazel (1995). *Detection of mathematics application items in the Stanford Achievement Test that are differentially difficult for students with different levels of reading ability*. PhD dissertation.

Zaugg, Holt (1995). *Development of process-centered assessments for Grade 8 mathematics*. M.S. thesis.

Griph Gerald W. (1996). *"It's all in the translation:" The equivalence of an English language versus a Japanese language version of a computer certification exam*. PhD dissertation.

Martineau, Joseph A. (1997). *Exchangeability of two modes of performance assessment*. M.S. thesis.

Bothell, Timothy W. (1998). *Exact replacement scoring versus semantically acceptable scoring of cloze passages as a basis for classifying students into reading ability levels*. PhD Dissertation.

Elzey, Robert (1998). *The construct validity of the principles of edification as measures of edifying teaching in the LDS Church Educational System*. PhD dissertation.

Allen, Sally (2000). *Identifying and managing local item dependence in context-dependent item sets*. M.S. Thesis.

Miller, Robert L. (2001). *The reliability of ratings of student teachers in the Teacher Education Department at Brigham Young University*. PhD Dissertation.

Thayn, Kim Scott (2001). *The effects of small sample sets in item selection*. M.S. project.

Nielson, Elizabeth R. (2002). *Investigating the effects of combining positively and negatively oriented items on the dimensionality of Likert scales*. PhD Dissertation.

Reiner, Christian M. (2002). *How to prepare effective essay questions: Guidelines for university faculty*. M.S. Project.

Spencer, Steven G. (2002). *The generalizability of ratings in a freshman English composition course*. M.S. Project.

Steadman, Anna Kay (2003). *The development and use of a performance assessment and a two-tiered, multiple-choice test to identify misconceptions among preservice elementary school teachers about the area of rectangles*. M.S. Thesis.

Pearson, Kathryn R. (2003). *Design and development of the Self-Efficacy for Musical Studies scale*. M.S. Project.

Rogers, Eric Paul (2005). *Scale construction and halo effect in secondary student ratings of teacher performance*. PhD Dissertation.

Lemley, Duane Charles (2005). *Delayed versus immediate feedback in an independent study high school setting*. PhD Dissertation.

Robison, Diane F. (2006). *Active learning in a large enrollment introductory biology class: Problem solving, formative feedback, and teaching as learning*. PhD Dissertation.

Curtin, Joseph (2007). *Testing the assumption of sample invariance of item difficulty parameters in the Rasch rating scale model*. PhD Dissertation.

Talbert, Bradford N. (2007). *Development of the Characteristics of Science Questionnaire (CSQ): Assessing student knowledge of the Utah State Secondary Science Core intended learning outcome 6 on the nature of science*. M.S. Thesis.

Hunter, Eric D. (2007). *Using interactive diagrams in a Web-based tutorial to teach graduate students about statistical power*. M.S. Thesis.

Lees, Jared (2007). *Differential item functioning analysis of the Herrmann Brain Dominance Instrumen*t. M.S. Project.

Verhaaren, Catherine (2008). *Improving course assessments through a product assessment template*. M.S. Thesis.

Plummer, Kenneth J. (2008). *Psychometric properties of a construct-a-map task designed to account for proposition choice*. PhD dissertation.

Wang, Kairong (2008). *Investigating the domain of geometric indicative reasoning: A structural equation modeling analysis*. PhD dissertation.

Radford, Brian (2009). *The effect of formative assessments on teaching and learning*. M.S. thesis.

Erskine, Dana (2010). *Effect of prompted reflection and metacognitive skill instruction on university freshmen's use of metacognition*. PhD dissertation.

Snelson, Laura Jimenez (2011). *Estimating the reliability of concept map ratings using a scoring rubric based on three attributes*. PhD dissertation.

Thayn, Kim Scott (2011). *An evaluation of multiple-choice test questions deliberately designed to include multiple correct answers*. PhD dissertation.

Ure, Abigail (2011). *The effect of raters and rating conditions on the reliability of the Missionary Training Assessment*. PhD dissertation.

Hardy, Assunta (2011). *Investigating How Equating Guidelines for Screening and Selecting Common Items Apply When Creating Vertically Scaled Elementary Mathematics Tests*. PhD dissertation.

Yoon, Young-Beol (2011). *A comparative analysis of two forms of Gyeonggi English Communicative Ability Test based on classical test theory and item response theory*. M.S. thesis.

Davison, K.K.C. (2012). *Propensity score methods as alternatives to value-added modeling for the estimation of teacher contributions to student achievement*. PhD dissertation.

Phillips, W. (2012). *Evaluation of the effectiveness of the Students and Teachers Achieving Reading Success program for first graders*. PhD dissertation.

Bliss, TJ (2013). *A model of digital textbook quality from the perspective of college students*. PhD dissertation.

Radford, B. (2014). *The effect of formative assessments on language performance*. PhD. dissertation.

Thompson, K.R. (2015). *Analysis of undergraduate grade trends at Brigham Young University across a 20-year period*. PhD dissertation.

Qudisat, R. M. (2015). *Effect of gender, guilt, and shame on BYU Business school students' innovativeness: A structural equation modeling approach*. PhD dissertation.

Jones, E. (2016). *A multiple-cutoff regression-discontinuity analysis of the effects of Tier 2 reading interventions in a Title 1 elementary school*. PhD. dissertation.

Allen, D. (2016). *The impact of shortening a long survey on response rate and response quality*. PhD. dissertation.

Chapman, S. (2016). *Student growth trajectories with summer achievement loss using hierarchical and growth modeling*. PhD. dissertation.

Wilcox, M. (2016). *Evidence for the validity of the Student Risk Screening Scale in middle school: A multilevel confirmatory factor analysis*. PhD. dissertation.

Alsarhan, A.M. (2017). *Alternative methods of estimating the degree of uncertainty in student ratings of teaching*. PhD. dissertation.

Stokes, S.S. (2017). *An examination of the psychometric properties of Trauma Inventory for Partners of Sex Addicts (TIPSA)*. PhD. dissertation.

McEwen, M. (2018). *The effects of incomplete rating designs on results from Many-facets Rasch Model analyses*. PhD. dissertation.

Anderson, N. (2019). *Testing a scale of teacher beliefs about universal curriculum integration in the 21st century*. PhD dissertation.

Fuentes, D. (2019). *A validity study of the Cognitively Guided Instruction Teacher Knowledge Assessment*. PhD dissertation.

Allen, H. L. (2020). *Factor structure of the Jordan Performance Appraisal System: A multilevel, multi-group study using categorical and count data*. PhD dissertation.

Pfleger, P.I. (2020). *Designing software to unify person-fit assessment*. PhD dissertation.

Jones, B.L. (2021). *A psychometric analysis of the Precalculus Concept Assessment*. PhD dissertation.

Simpson, D.M. (2021). *The problem of missing data and the Conover solution in state-level data*. PhD dissertation.

Busath, C.H. (2021). *The development of a social and emotional well-being scale using ESEM and CFA: Synergistic stories in complex models*. PhD dissertation.

PROFESSIONAL AFFILIATIONS:

National Council on Measurement in Education
American Educational Research Association
Program chair for the Multiple Linear Regression/General Linear Model SIG (2004 and 2005)

FUNDED RESEARCH:

Dissemination and Assessment of Best Practices in Teaching Analytical Reasoning in Biology, Co-investigators: John D. Bell, William S. Bradshaw, and R.R Sudweeks. Funded by the Fund for the Improvement of Postsecondary Education (Grant No. P116B041238, $486,570, Sept. 1, 2004-Aug. 31, 2007)

Connecting Primary Grade Teacher Knowledge to Primary Grade Student Achievement: Developing the Evidence-Based Reading/Writing Teacher Knowledge Assessment System. Co-investigators: D. Ray Reutzel, Parker Fawson, and Jamison Fargo (Utah State University), Janice A. Dole (University of Utah), and R.R Sudweeks (Brigham Young University), Teacher Quality Research—Reading/Writing Grant (No. CFDA #84.305, $926,810, Sept. 1, 2005-August 31, 2008) funded by the Institute for Education Sciences

Influence of Teaching Experience on Elementary Teachers' Grade-level Subject Mater Knowledge and Documented Science Misconceptions. Principal investigator: Ryan S. Nixon (Teacher Education Department); Co-investigators: Leigh K. Smith (Teacher Education Department) and Richard R. Sudweeks (Department of Instructional Psychology); $22,900 awarded by the David O. McKay School of Education Research and Projects Committee, January 2016—January 2018.

Determining the Effects of Two Instructional Strategies when Teaching Second Graders to Read and Write Science Informational Text. Principal investigator: Sarah Clark (Teacher Education Department); Co-investigator: Richard Sudweeks (Instructional Psychology & Technology Department); $33, 597 awarded by the David O. McKay School of Education Research and Projects Committee, January, 2018--January, 2020.

Analysis of data from the Utah Statewide Longitudinal Data System aimed at identifying barriers to success and predictors of Utah students' participation in and completion of postsecondary education. Principal Investigator: Richard Sudweeks (Educational Inquiry, Measurement, and Evaluation PhD program); Co-investigators: Joseph Ross Larsen, Joseph Olsen, Michael Owens and four EIME graduate students; $75,000 awarded by the Utah State Board of Education, January 2019-August 2020 (Grant No. USBE-MI19034-PS).

AWARDS RECEIVED:

David O. McKay Fellowship

Two-year fellowship awarded August 23, 2005 at the Annual University Conference "In recognition of scholarly efforts in teaching and teacher education, especially in light of the aims of a BYU education."

Benjamin Cluff Jr. Award for Excellence in Education
Awarded by the David O. McKay School of Education, March 2010

Steven M. Rose Teaching and Learning Faculty Fellowship
Three-year fellowship (2012-2015) awarded "To recognize achievement in and support for teaching and learning and mentoring activities."

Nancy Peery Marriott Outstanding Mentor Award
Awarded by the David O. McKay School of Education, August 2013

Distinguished Service Award for Contributions to Higher Education in Utah,
Awarded at the annual conference of the Utah Academy of Sciences, Arts, & Letters, March 27, 2015.

NATHANIEL MITCHELL

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Education

PhD Education—*Brigham Young University*
- Currently enrolled - expected graduation August 2023

Master in Educational Leadership—*Brigham Young University*
- Graduated April 20th 2012 and received a Utah Administrative license

B.S. Neuroscience—*Brigham Young University* - 2006

Work Experience

Wasatch County School District—(Aug '11- to date)
- District Data Analyst – (June '21 – to date)
  - Develop and monitor program metrics to evaluate efficacy
- High School Academic Director – (July '17 – May '21)
  - Develop PD for teachers and PLC teams
- Summer School Principal – (July '15 – May '21)
  - Maintain Budget, Hire Staff, Oversight of teaching and learning
- Assessment Specialist – (Jun '14 – July '17)
  - Implement State Mandates: *Principal and Teacher Evaluations, SLOs*
- Science Teacher & Chair: 7th & 8th grade – (Aug '11 – May '14)
  - Collaborate & Coordinate with department
  - Implement Principal's Vision
- Coach: Wrestling – (Nov '11 – Feb '20)

Provo Freedom Academy—(Aug '07-April '11)
- Science Teacher: 7th & 8th grade
- Science Coordinator K-8 program
- Coach: Girls Basketball & Coed Soccer

Achievements

- **2004-2005 Peach Belt Scholar Athlete—***University of North Carolina at Pembroke (Wrestling)*
- **Coached League Championship Soccer Teams back-to-back years; and Runner-up the following year –** *Freedom Academy 2008 – 2010*
- **Coached junior high state championship wrestling team 3 consecutive years –** *RMMS 2012 - 2014*

References

Johnson, Tod	Judd, James	Campbell, Eric
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