INCREASING ACCESS AND IMPACT AND MEETING FUNDER MANDATES



TEXAS STATE UNIVERSITY

The rising STAR of Texas

MEMBER THE TEXAS STATE UNIVERSITY SYSTEM



HOW IT ALL GOT STARTED:

Open Data Executive Order May 9, 2013

The Obama Administration took steps to make information generated and stored by the Federal Government more open and accessible to innovators and the public, to fuel entrepreneurship and economic growth while increasing government transparency and efficiency.

The public access requirement applies now to new awards resulting from proposals submitted, or due, on or <u>after</u> <u>January 25, 2016.</u>

Since that time Texas State University has received approx. 135 awards under this requirement.















OBJECTIVES OF THE EXECUTIVE ORDER (PUBLICATIONS)

- ❖ Public can read, download, analyze in digital form
- ❖ 12-month post-publication embargo as guideline, with stakeholder petitions to change
- Easy public search, analysis of, and access to publications
- Full public access to metadata without charge upon first publication
- Public-private collaboration
- Attribution to authors, journals, and original publishers
- Archival solutions that provide long-term preservation & access without charge
- Uses widely available, nonproprietary standards/formats
- Provides access for persons with disabilities
- Enables integration and interoperability with other Federal archival solutions and other appropriate archives.



OBJECTIVES OF THE EXECUTIVE ORDER (DIGITAL DATA)

- Maximize free access while protecting privacy and confidentiality, national security
- Recognizing intellectual property rights
- ❖ Balancing costs & benefits of long-term preservation
- Require data management plans (DMPs)
- Allow inclusion of costs in applications for funding
- Ensure appropriate evaluation of DMPs
- Monitor compliance by investigators
- Encourage deposit of data in public repositories, where possible
- Cooperate with the private sector
- Develop approaches for data citation & attribution
- Support training, education and workforce development
- Assess long-term needs for preservation and options for repositories



AVAILABLE RESOURCES

OFFICE OF RESEARCH AND SPONSORED PROGRAMS

About Us Research Services For Researchers STAR Park University Research Foundation Online Systems Centers & Institutes Resources E-Newsletter

Texas State > Office of Research and Sponsored Programs > Welcome: Quicklinks > Research Data Management and Security

Research Data Management and Security

Research Data Management: An increased focus on the accessibility, usability, and impact of research data brings with it new priorities for researchers. Funders, journals, and the taxpaying public are requiring greater access to research results, especially if the research has been sponsored by public funds. This section provides a variety of resources on data management practices and concepts, as well as specific information to help Texas State researchers fulfill data management and sharing requirements of NSF, NIH and other funders.

Research Data Security: Texas State is responsible for ensuring the security of highly sensitive research data, such as Protected Health Information (PHI) and Personally Identifiable Information (PII). The release of such data not only threatens research subjects but can result in financial liability for the institution and in some case, the researchers making the data available. This section contains information and links to Texas State policies and procedures applicable to all research or sponsored projects involving data security and acquisition of IT products and services.

Texas State University offers researchers multiple resources to ensure compliance with federal funders' mandate for open access data and publications.

Where to go for assistance:

Understand funder requirements for your data management plan

- Check the DMP tool for Funder Requirements and templates
- Contact your College Research Coordinator
- Contact <u>Pre-Award Support Services</u>, Office of Research and Sponsored Programs

Learn the basics of data management planning

- Check Alkek Library's <u>Data Management and Planning guide</u> (includes librarian contact info for additional assistance)
- Attend a <u>workshop on Data Management planning</u> offered regularly by Alkek librarians

Deposit and publish data/open access publications

- . Dataverse Data Repository for research datasets
- Dataverse Quick Start Guide
- . Digital Collections for open access research publications
- For additional support with Dataverse or Digital Collections, contact a librarian at digitalcollections@txstate.edu

Research Data Security

- Assistance during Proposal Submission or Prior to Grant Set Up
- Data Use Agreements
- Research Data Security Form



DATA MANAGEMENT PLANS

- Different funders = Different requirements
- Types of data produced
- Data and metadata standards
- Policies for access
- Policies for reuse
- Plans for archiving
- Roles and responsibilities





DATA MANAGEMENT PLANNING AND DATA CURATION



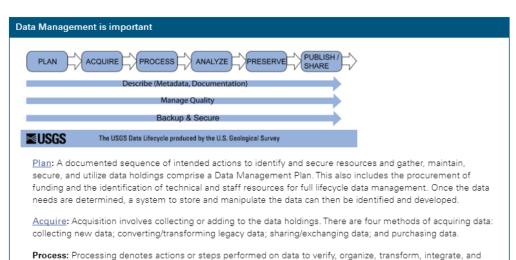
Library > LibGuides > Data Management and Planning > Welcome

Search this Guide Q

Data Management and Planning: Welcome

Use this guide to learn the basics of Data Management and Data Management Planning, to prepare to write a Data Management Plan (DMP), or use it as a reference tool for various aspects of the same.

Welcome Working with Data Sharing your Data Preserving your Data Writing a DMP Learn more and get assistance.



extract data in an appropriate output form for subsequent use. This includes data files and content organization, and data synthesis or integration, format transformations, and may include calibration activities (of sensors and





CHOOSING A REPOSITORY

- 1. Does the solicitation specify a repository for the data or software?
- 2. Does institution have an institutional repository?
- 3. Is there a discipline-relevant repository used by the research community?
- 4. Is the repository sustainable? And if not, are there contingency plans?
- 5. Does the repository require at least minimal identification and description sufficient to enable discovery, access, and retrieval?
- 6. Has the PI made any contingency plans in the event a designated repository becomes unavailable?



WHO ARE OUR IN-HOUSE REPOSITORIES BEST FOR?

- Anyone who needs or wants to share their publications
 - DOI issued for Data (meets base requirements for most funders)
 - Data preserved for required time (plus more)
 - Indexing, and others previously mentioned
 - Collocate your data and pubs with your prior data and pubs, and with those of the department and University
- Non-confidential data
 - Funder requirement to de-identify/anonymize/cleanse
 - Library can help with this
 - Texas State Policy
- Active Texas State NetID
 - Though we are working on allowing cross-institution working groups
- Small-Medium sized files self-service
 - Large data accommodated via consultation
 - Library can help facilitate that connection
- Any file type
 - Open non-proprietary is encouraged
 - We can help with conversion





LEARN MORE:

- From Office of the White House Chief Information Officer: https://project-open-data.cio.gov/
- Links to Federal Agency Open Mandates: http://www.library.cmu.edu/datapub/sc/publicaccess/policies/usgovfunders
- ICPSR: What is data curation? https://www.youtube.com/watch?v=ZEkqF8cL2qQ
- Find the Texas State University Dataverse on the library website under "Services to Faculty": http://www.library.txstate.edu/services/faculty.html
- Find Research Data information from the Office of Research and Sponsored Services at http://www.txstate.edu/research/avpr/data mgmt



Digital Repositories

TXST Digital Collections Repository



TXST Dataverse Repository



TXST Digital Collections Repository

• • •





| TEXAS STATE | Login |
|----------------------------------|---|
| UNIVERSITY | |
| The rising STAR of Texas | |
| ♠ Digital Collections Home / Dig | ital Collections Home |
| Search | Texas State University |
| AUTHOR'S CORNER | |
| About Digital Collections | Digital Collections Repository |
| First-time Users | The Digital Collections repository is a service that provides free and open access to the scholarship and creative works produced and owned by the Texas State University community. The Digital Collections centralizes, preserves, and makes accessible the knowledge generated by the university community, which includes faculty publications, theses & dissertations, plus digitized materials from The |
| Submission Types | Wittliff Collections, the University Archives, and other materials unique to Texas State University. It is a professionally maintained archive that gives the university's intellectual and creative output increased visibility and accessibility over time. |
| License and Agreements | |
| FAQs | Communities in Digital Collections |
| BROWSE | Select a community to browse its collections. |
| All of Digital Collections | Departments, Schools, Centers & Institutes |
| Communities & Collections | This collection provides access to the research, creative, and scholarly activities of Texas State University. |
| ACCOUNT | Dissertations and Theses |
| Login | The Dissertations and Theses The Dissertations and Theses Collection represents the valuable scholarly and artistic content created by doctoral and masters students at Texas State University. |
| STATISTICS | created by doctoral and masters students at rexas state officersity. |
| Most Popular Items | Journals and Peer Reviewed Series |
| | The Journals and Peer-reviewed Series Collection includes series publications reviewed and |





Scholarly Work of TXST Community

- Articles
- Books and chapters
- Working papers
- Presentations
- Conference posters
- Reports





Benefits and Features

- Showcase for research output of TXST
- Permanent URL (handles)
- Organize and archive
- Increase citations and impact
- Viewable statistics

A Look Around Digital Collections

• • •

Search **AUTHOR'S CORNER About Digital Collections** First-time Users Submission Types License and Agreements **FAQs BROWSE All of Digital Collections** Communities & Collections **ACCOUNT** Login **STATISTICS** Most Popular Items Statistics by Country Most Popular Authors **RSS FEEDS** N RSS 1.0 **RSS 2.0** Atom

Texas State University

Digital Collections Repository

The Digital Collections repository is a service that provides free and open access to the scholarship and creative works produced and owned by the Texas State University community. The Digital Collections centralizes, preserves, and makes accessible the knowledge generated by the university community, which includes faculty publications, theses & dissertations, plus digitized materials from The Wittliff Collections, the University Archives, and other materials unique to Texas State University. It is a professionally maintained archive that gives the university's intellectual and creative output increased visibility and accessibility over time.

Communities in Digital Collections

Select a community to browse its collections.

Departments, Schools, Centers & Institutes

This collection provides access to the research, creative, and scholarly activities of Texas State University.

Dissertations and Theses

The Dissertations and Theses Collection represents the valuable scholarly and artistic content created by doctoral and masters students at Texas State University.

Journals and Peer Reviewed Series

The Journals and Peer-reviewed Series Collection includes series publications reviewed and published by members of the university community.

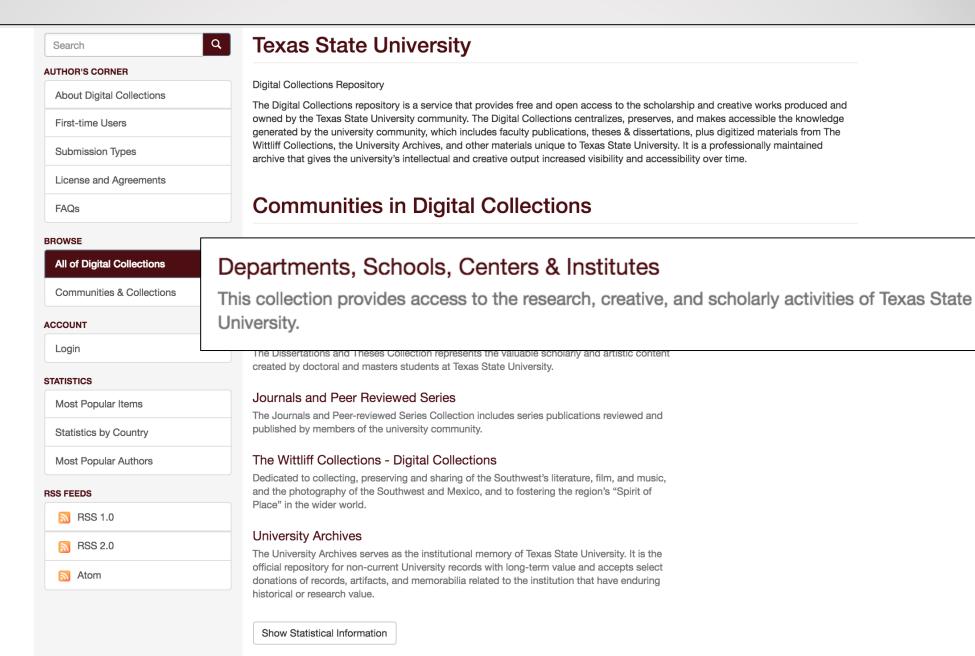
The Wittliff Collections - Digital Collections

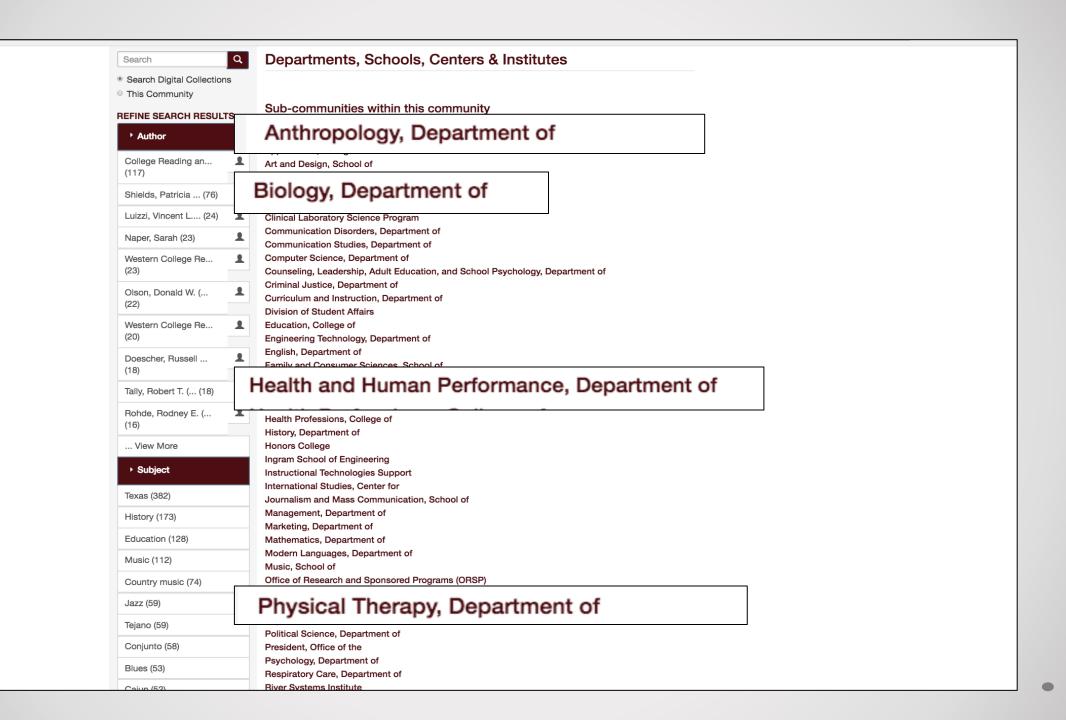
Dedicated to collecting, preserving and sharing of the Southwest's literature, film, and music, and the photography of the Southwest and Mexico, and to fostering the region's "Spirit of Place" in the wider world.

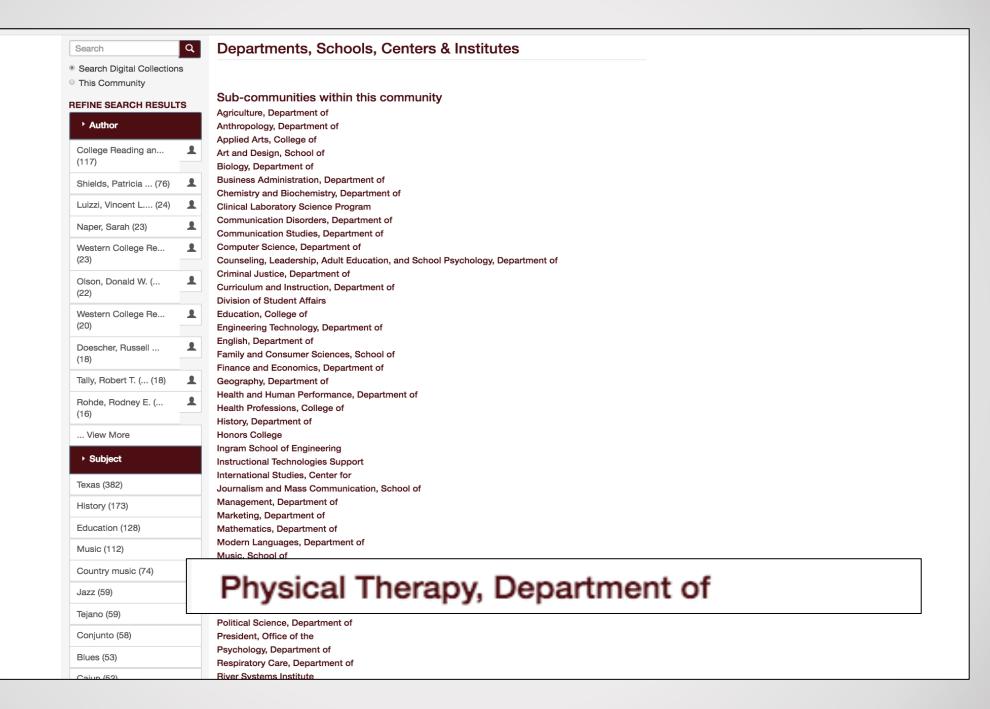
University Archives

The University Archives serves as the institutional memory of Texas State University. It is the official repository for non-current University records with long-term value and accepts select donations of records, artifacts, and memorabilia related to the institution that have enduring historical or research value.

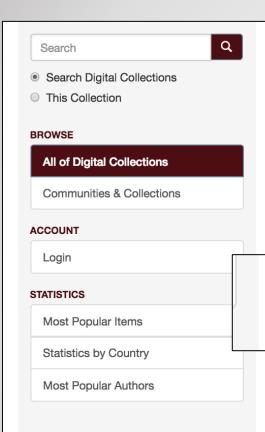
Show Statistical Information











Comparison of Ankle Strategies for Balance in Persons After Mild Head Injury

Date 2010-01-02

Author

- Gobert, Denise V.
- Liao, Ursula
- ♣ Grattan, Shannon
- ▲ Marie, Martha N.

Metadata Show full metadata

Objective: The purpose of this project was to characterize and compare balance in persons after MHI using an assessment of ankle strategies. Design: This project used an observational cohort study design. Methodology: Thirty male and female participants aged 18 - 40 years of age provided written consent according to university guidelines and were grouped as being with or without a history of MHI over the past 12 months. Computerized protocols of the NeuroCom EquiTest® system included assessments of static and dynamic standing balance during six sensory conditions in the Sensory Organization Test (SOT) and during translational perturbations of the Motor Control Test

addition to standard balance scores, a new method proposed by Zhiming et al. alled the "Postural Stability Index" (PSI) was used to process platform data to nt ankle stiffness. Data Analysis: Data analysis included standardized Student T-tistics (SPSS v.16) at an alpha level of 0.05. Also, a Pearson's Correlation nt was calculated to identify significant relationships within the data pool.

remmidry Results: Preliminary findings indicate no significant differences according to standard SOT or MCT scores. Results indicate significant differences in ankle stiffness or PSI scores which have been shown to be highly correlated to decreased balance skills in other patient populations. Clinical Relevance: Preliminary results indicate that assessment of ankle strategies used during challenged balance may be a more sensitive indicator of balance skills in patients after MHL Final results will be presented along with

Uri

https://digital_library.txstate.edu/handle/10877/3938

Download



Name: fulltext.pdf Size: 239.4Kb Format: PDF

Download

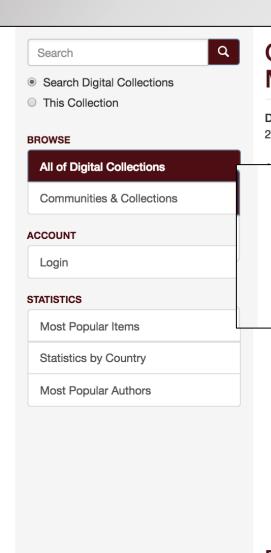
| | tients after MHI. Final results will be presented along with a discussion of possible clinical use in rehabilitation programs. | |
|---------------------------|--|-------|
| dc.format | Image | en_US |
| dc.format.extent | 1 page | en_US |
| dc.format.medium | 1 file (.pdf) | en_US |
| dc.language.iso | en_US | en_US |
| dc.subject E | Balance | en_US |
| dc.subject F | Postural stability index | en_US |
| dc.subject N | Mild head injury | en_US |
| dc.subject E | Equilibrium score | en_US |
| dc.subject [| Dynamic computerized posturography | en_US |
| dc.subject.classification | Biomechanics and biotransport | en_US |
| dc.subject.classification | Musculoskeletal, Neural, and Ocular Physiology | en_US |
| dc.subject.classification | Rehabilitation and Therapy | en_US |
| dc.title (| Comparison of Ankle Strategies for Balance in Persons After Mild Head Injury | en_US |
| txstate.publication.title | Faculty Publications-Physical Therapy | en_US |
| txstate.documenttype F | Poster | en_US |

Download



Name: fulltext.pdf Size: 239.4Kb Format: PDF

Download



Comparison of Ankle Strategies for Balance in Persons After Mild Head Injury

Date 2010-01-02

Author

- Gobert, Denise V.
- Liao, Ursula
- ♣ Grattan, Shannon
- A Marie, Martha N.

Objective: The purpose of this project was to characterize and compare balance in persons after MHI using an assessment of ankle strategies. Design: This project used an observational cohort study design. Methodology: Thirty male and female participants aged 18 - 40 years of age provided written consent according to university guidelines and were grouped as being with or without a history of MHI over the past 12 months. Computerized protocols of the NeuroCom EquiTest® system included assessments of static and dynamic standing balance during six sensory conditions in the Sensory Organization Test (SOT) and during translational perturbations of the Motor Control Test (MCT). In addition to standard balance scores, a new method proposed by Zhiming et al. (2004) called the "Postural Stability Index" (PSI) was used to process platform data to document ankle stiffness. Data Analysis: Data analysis included standardized Student T-Test statistics (SPSS v.16) at an alpha level of 0.05. Also, a Pearson's Correlation Coefficient was calculated to identify significant relationships within the data pool. Preliminary Results: Preliminary findings indicate no significant differences according to standard SOT or MCT scores. Results indicate significant differences in ankle stiffness or PSI scores which have been shown to be highly correlated to decreased balance skills in other patient populations. Clinical Relevance: Preliminary results indicate that assessment of ankle strategies used during challenged balance may be a more sensitive indicator of balance skills in patients after MHI. Final results will be presented along with a discussion of possible clinical use in rehabilitation programs.

Uri

https://digital.library.txstate.edu/handle/10877/3938

Collections

Faculty Publications-Physical Therapy

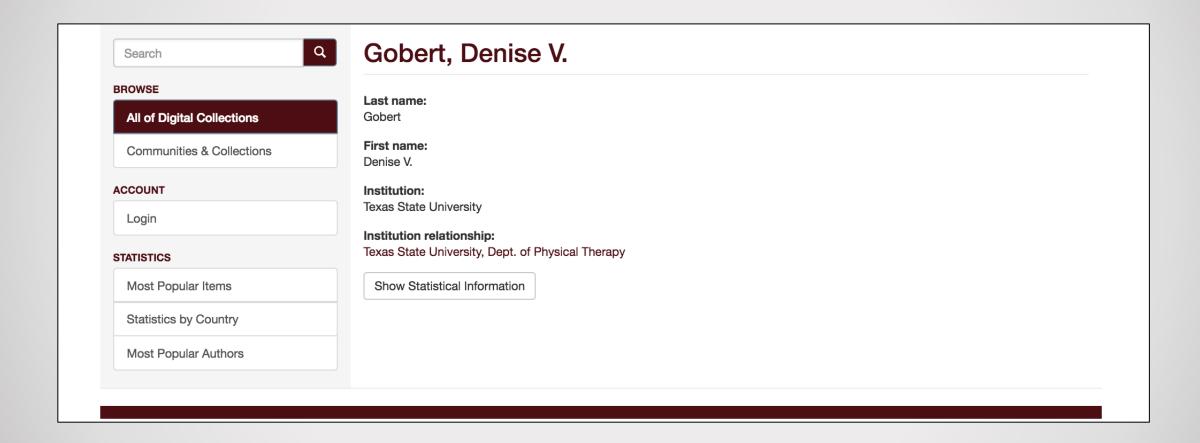
Download



Name: fulltext.pdf Size: 239.4Kb Format: PDF

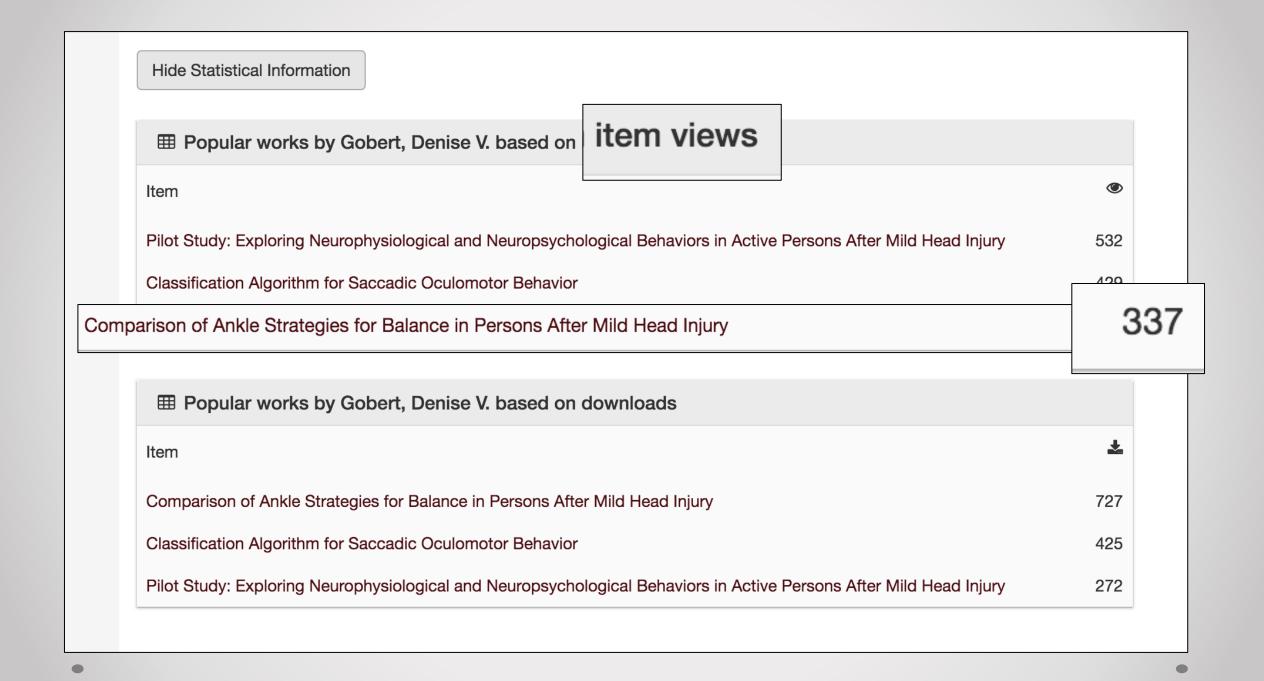
Download

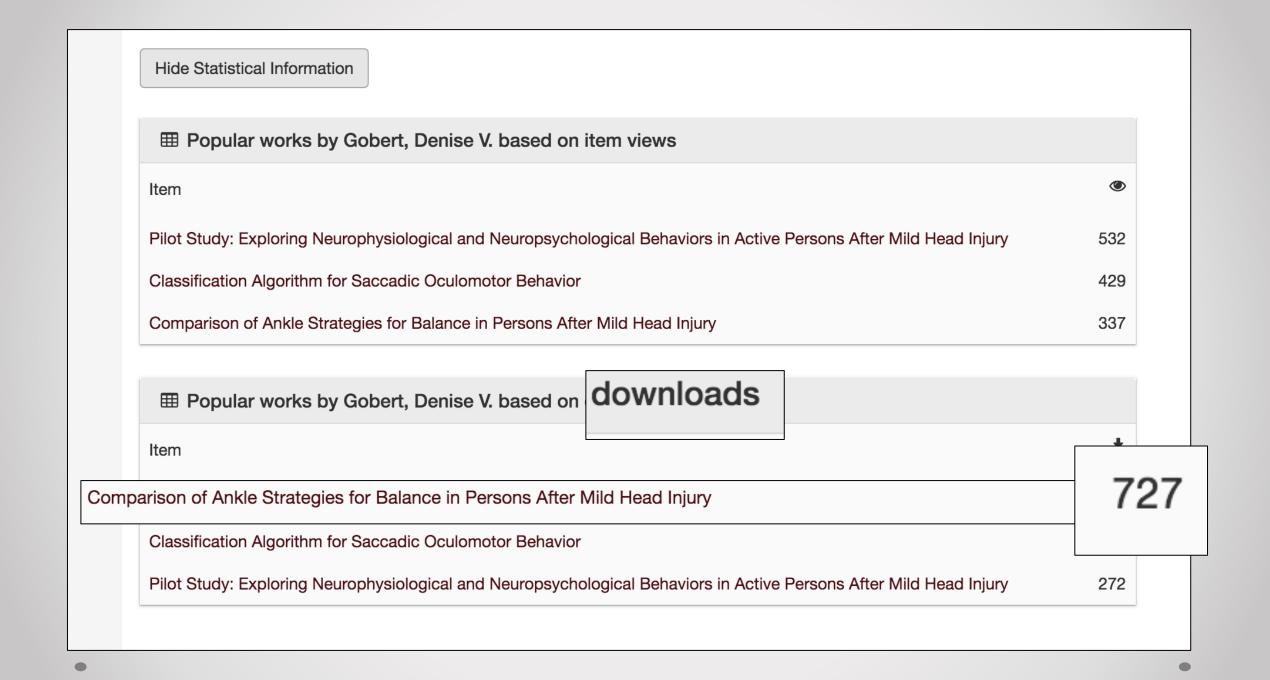
Author Profile Information



Citations and Impact

• • •







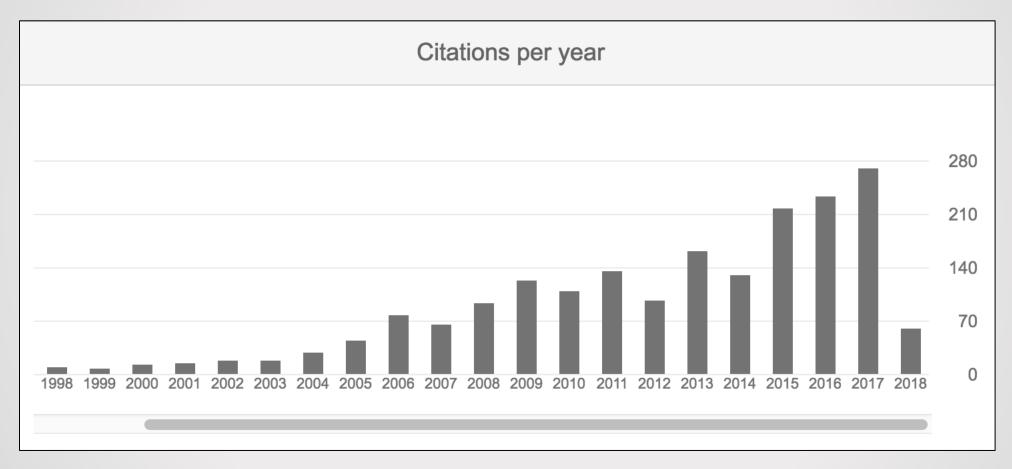


Faculty Member: Beatrice A. Jones

- May 2006 through March 2018
 - Item Views: 59,722
 - 29% of all Faculty Item Views
 - Downloads: 99,519
 - 17% of all Faculty Downloads







Organization and Archiving

• • •

Where is that, again?



- That article from 2012?
- Report from 2015?
- Presentation from the conference last year?

Recent Submissions



Dynamics and Visualization of MCF7 Adenocarcinoma Cell Death by Aptamer-C1q-Mediated Membrane Attack

Stecker, John; Savage, Alissa A.; Bruno, John G.; Garcia, Dana M.; Koke, Joseph R. (Mary Ann Liebert, Inc., 2012-11)

This study was designed to characterize binding of a DNA aptamer to breast cancer cells and to test whether that aptamer could be used to kill target cells in vitro as part of an aptamer-C1q protein conjugate by coupling ...



Intermediate filaments of zebrafish retinal and optic nerve astrocytes and Müller glia: differential distribution of cytokeratin and GFAP

Koke, Joseph R.; Mosier, Amanda L.; Garcia, Dana M. (BioMed Central, 2010-03)

Background: Optic nerve regeneration (ONR) following injury is a model for central nervous system regeneration. In zebrafish, ONR is rapid - neurites cross the lesion and enter the optic tectum within 7 days; in ...



Molecular and pharmacological characterization of muscarinic receptors in retinal pigment epithelium: role in light-adaptive pigment movements

Phatarpekar, Prasad V.; Durdan, Simon F.; Copeland, Chad M.; Crittenden, Elizabeth L.; Neece, James D.; Garcia, Dana M. (International Society for Neurochemistry, 2005)

Muscarinic receptors are the predominant cholinergic receptors in the central and peripheral nervous systems. Recently, activation of muscarinic receptors was found to elicit pigment granule dispersion in retinal pigment ...



Uptake of 3H-cAMP by retinal pigment epithelium isolated from bluegill sunfish (Lepomis macrochirus)

Keith, Thomas A.; Radhakrishnan, Varsha; Moredock, Steve; Garcia, Dana M. (BioMed Central Ltd., 2006-12)

Background: In bluegill sunfish, the melanin-containing pigment granules of the retinal pigment

PUBLICATIONS

No

M

September 2017 Brannon, S., Waugh, L., "Rendering repositories: Taking out the fat and

getting to the impact." Library Assessment Cookbook. Chicago: IL:

Association of College and Research Libraries (ACRL)

ISBN: 9780838988664

https://digital.library.txstate.edu/handle/10877/6866

of Academic Librarianship. Elsevier.

https://doi.org/10.1016/j.acalib.2015.08.007

https://doi.org/10.1016/j.acalib.2015.08.007

http://digital.library.unt.edu/ark:/67531/metadc725844/

collections." Serials Librarian. 65(1-4). Taylor & Francis.

DOI: 10.1080/0361526X.2015.1017715

http://digital.library.unt.edu/ark:/67531/metadc406384/

PRESENTATIONS

August 2016 Presenter, "A consortial approach to data repository services." CTLC

Scholarly Communication and Digital Curation Affinity Group Meeting,

Fort Worth, Texas.

http://hdl.handle.net/2249.1/76319

June 2016 Collaborator, "A consortial model for research data services using

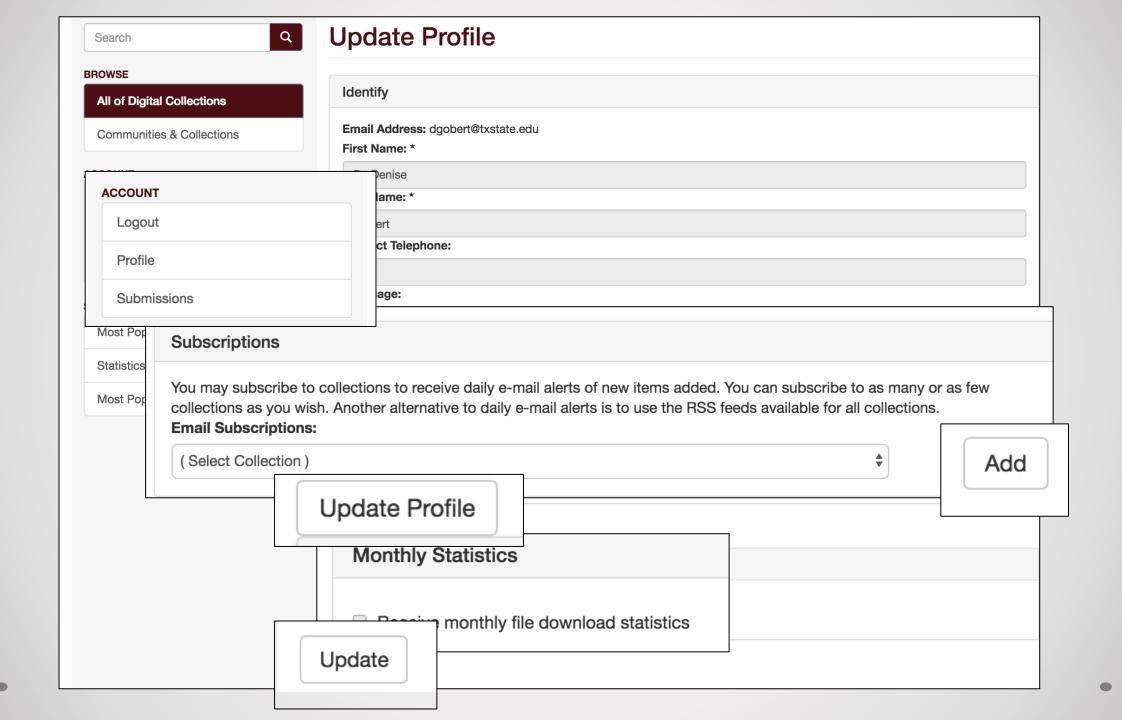
Dataverse." Open Repositories Conference, Dublin, Ireland.

http://hdl.handle.net/2249.1/76314

Submitting Your Work

Submitting Your Work





The rising STAR of Texas

Dr. Denise Gobert -

Profile

Logout

↑ Digital Collections Home / Digital Collections Home

Search AUTHOR'S CORNER **About Digital Collections** First-time Users **Submission Types** License and Agreements

Texas State University

Digital Collections Repository

The Digital Collections repository is a service that provides free and open access to the scholarship and creative works produced and owned by the Texas State University community. The Digital Collections centralizes, preserves, and makes accessible the knowledge generated by the university community, which includes faculty publications, theses & dissertations, plus digitized materials from The Wittliff Collections, the University Archives, and other materials unique to Texas State University. It is a professionally maintained archive that gives the university's intellectual and creative output increased visibility and accessibility over time.

Communities in Digital Collections

BROWSE

FAQs

Select a community to browse its collections.

| ACCOUNT | |
|-------------|--|
| Logout | |
| D. Cl | |
| Submissions | |

Dissertations and The and scholarly activities of Texas State

The Dissertations and These created by doctoral and ma

luable scholarly and artistic content

Journals and Peer Re Jniversity.

The Journals and Peer-revie

published by members of the series publications reviewed and

nublished by members of the university community

| Search | Submissions & Workflow Tasks | |
|---|-------------------------------------|--|
| All of Digital Collections Communities & Collections | Submis You may start The submission | s(s) comprising it. Each community or collection may set its |
| ACCOUNT | own submission policy. | |
| Logout | | |
| Profile | | |
| Submissions | | |
| STATISTICS | | |
| Most Popular Items | | |
| Statistics by Country | | |
| Most Popular Authors | | |

Q Search **BROWSE All of Digital Collections** Communities & Collections **ACCOUNT** Logout **Profile** Submissions **STATISTICS** Most Popular Items Statistics by Country Most Popular Authors

Item submission

Select a collection

Collection:

✓ Select a collection...

Departments, Schools, Centers & Institutes > Agriculture, Department of > Faculty Publications-Agriculture
Departments, Schools, Centers & Institutes > Agriculture, Department of > Theses and Dissertations-Agriculture
Departments, Schools, Centers & Institutes > Anthropology, Department of > Faculty Publications-Anthropology
Departments, Schools, Centers & Institutes > Anthropology, Department of > Theses and Dissertations-Anthropology
Departments, Schools, Centers & Institutes > Applied Arts, College of > Faculty Publications-College of Applied Arts
Departments, Schools, Centers & Institutes > Art and Design, School of > Faculty Publications-Art and Design
Departments, Schools, Centers & Institutes > Art and Design, School of > Theses and Dissertations-Art and Design
Departments, Schools, Centers & Institutes > Biology, Department of > Faculty Publications-Biology
Departments, Schools, Centers & Institutes > Business Administration, Department of > Faculty Publications - Business
Departments, Schools, Centers & Institutes > Chemistry and Biochemistry, Department of > Faculty Publications-Chemistry and

Departments, Schools, Centers & Institutes > Chemistry and Biochemistry, Department of > Theses and Dissertations-Chemistry

Departments, Schools, Centers & Institutes > Clinical Laboratory Science Program > Faculty Publications-Clinical Laboratory

Departments, Schools, Centers & Institutes > Communication Disorders, Department of > Faculty Publications-Communication

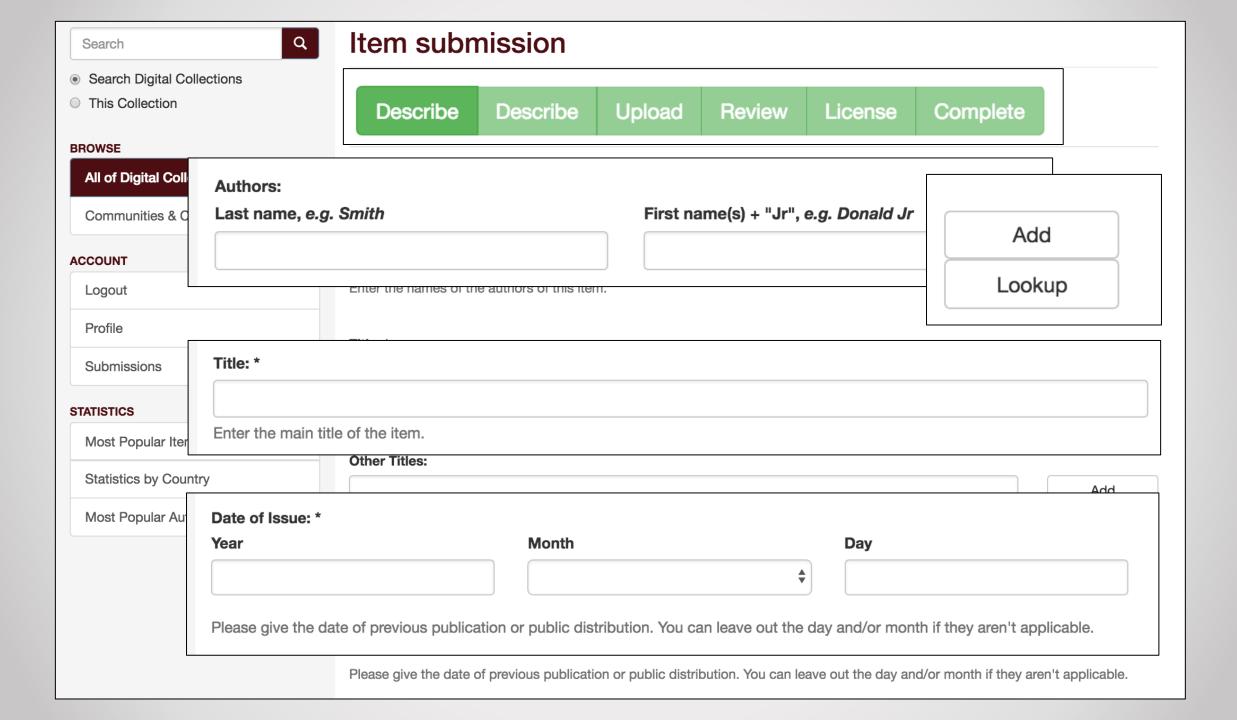
Departments, Schools, Centers & Institutes > Communication Disorders, Department of > Theses and Dissertations-

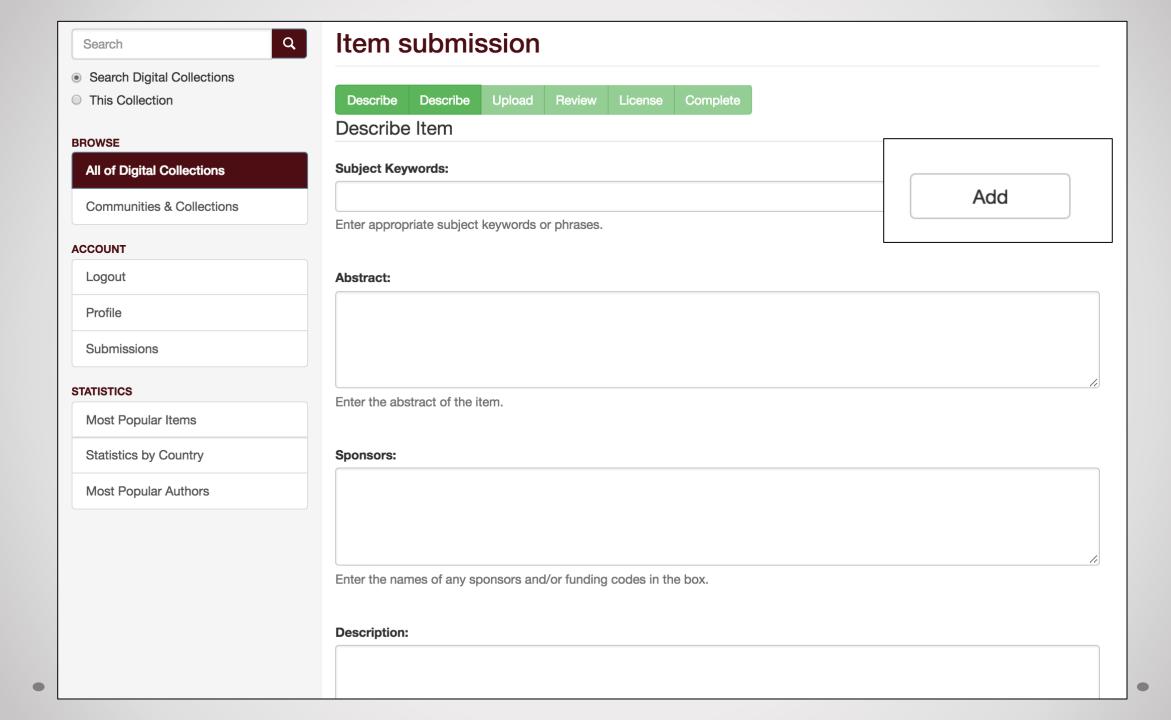
Departments, Schools, Centers & Institutes > Communication Studies, Department of > Faculty Publications-Communication

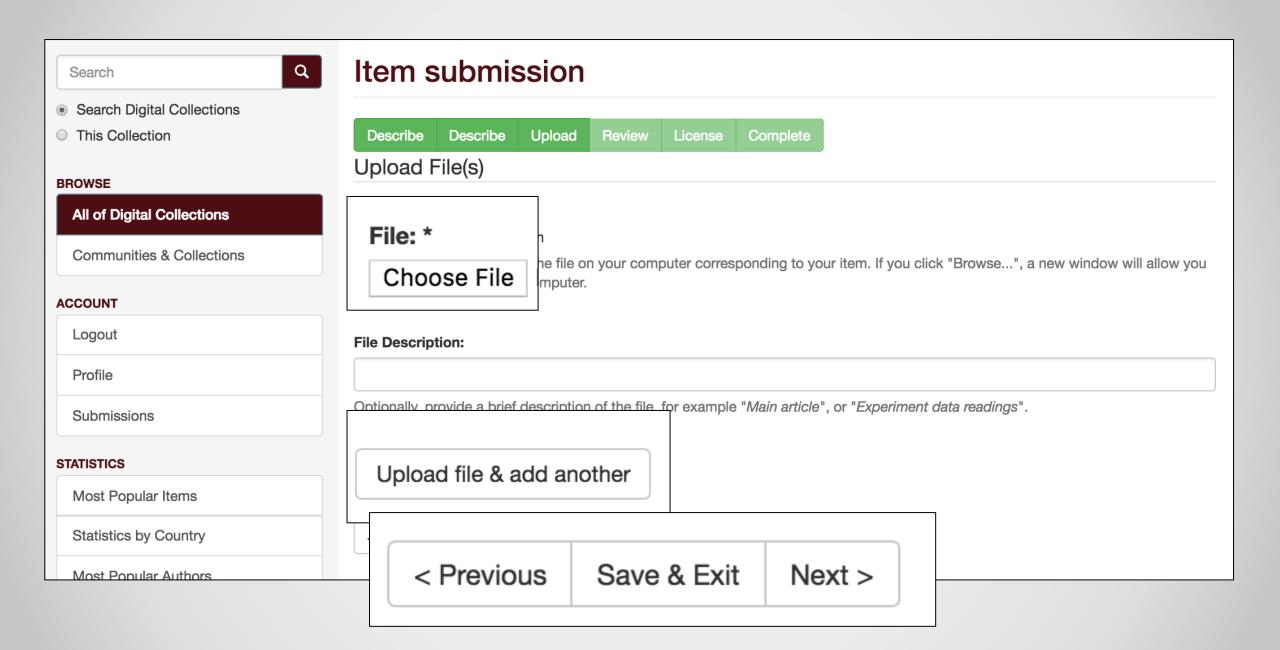
Departments, Schools, Centers & Institutes > Communication Studies, Department of > Theses and Dissertations-

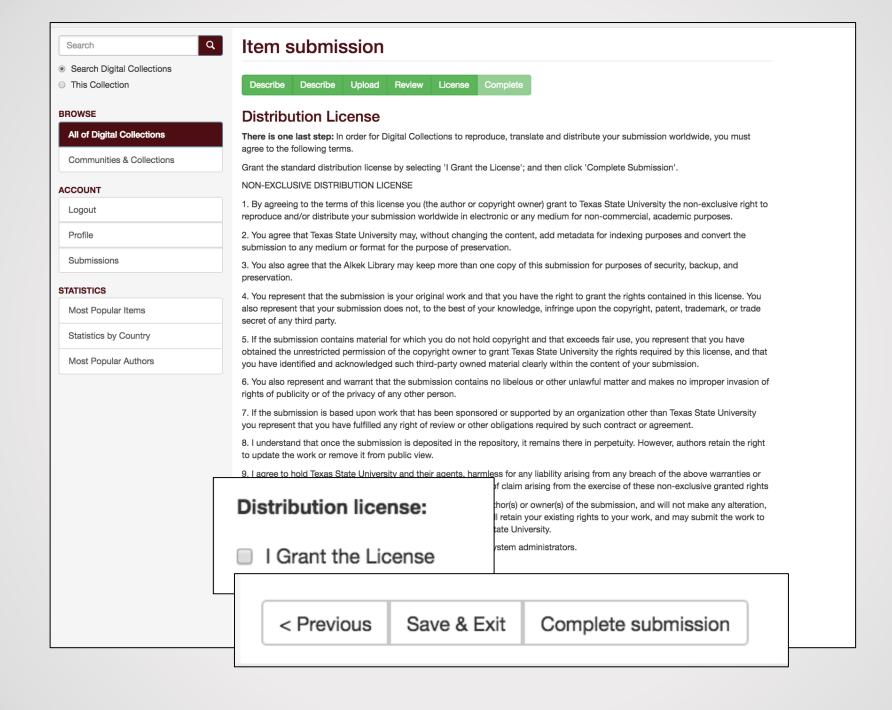
Departments, Schools, Centers & Institutes > Computer Science, Department of > Faculty Publications-Computer Science

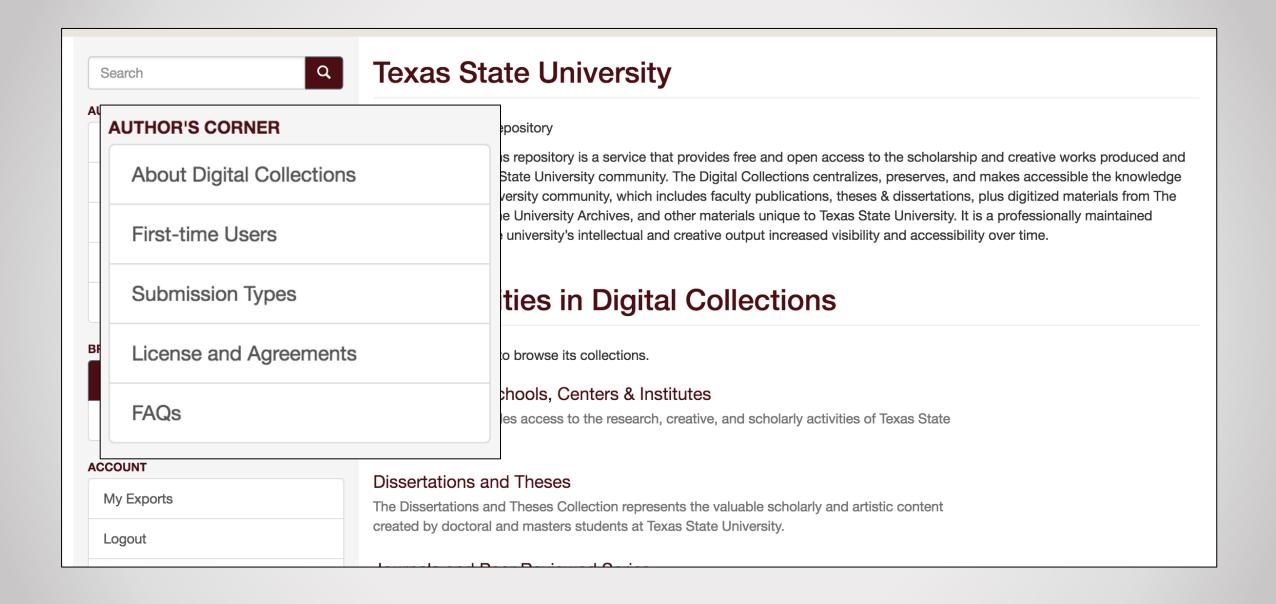
Departments, Schools, Centers & Institutes > Computer Science, Department of > Theses and Dissertations-Computer Science











Submitting Your Work



- Email me your items:
 - o lwaugh@txstate.edu
 - o digitalcollections@txstate.edu
- We'll upload it, normalize the file format, check copyright, add metadata – anything you need!

Preprint, Post-Print, Publisher PDF, Oh my!

• • •

Preprint Version

DEVELOPMENT OF ABRAHAM MODEL CORRELATIONS FOR SOLVATION CHARACTERISTICS OF LINEAR ALCOHOLS

Laura M. Sprunger^a, Sai S. Achi^a, Racheal Pointer^a, Brooke H. Blake-Taylor^a, William E. Acree,

Jr. a*. Michael H. Abraham^b

- Department of Chemistry, 1155 Union Circle Drive #305070, University of North Texas,
 Denton, TX 76203-5017 (USA)
- b Department of Chemistry, University College London, 20 Gordon Street, London, WC1H 0AJ (UK)

Abstract

Data have been compiled from the published literature on the partition coefficients of solutes and vapors into the anhydrous linear alcohols (methanol through 1-heptanol, and 1-decanol) from both water and from the gas phase. The logarithms of the water-to-alcohol partition coefficients (log P) and gas-to-alcohol partition coefficients (log K) were correlated with the Abraham solvation parameter model. The derived correlations described the observed log P and log K values to within average standard deviations of 0.14 and 0.12 log units, respectively. The predictive abilities of the each correlation were assessed by dividing databases into a separate training set and test set.

Preprint:

- Submitted manuscript
- Authors' initial, submitted version of the article before peer-review
- Include in Repository (most cases)

Post-print Version

DEVELOPMENT OF ABRAHAM MODEL CORRELATIONS FOR SOLVATION CHARACTERISTICS OF LINEAR ALCOHOLS

Laura M. Sprunger^a, Sai S. Achi^a, Racheal Pointer^a, Brooke H. Blake-Taylor^a, William E. Acree, Jr. ^{a*}. Michael H. Abraham^b

- Department of Chemistry, 1155 Union Circle Drive #305070, University of North Texas,
 Denton, TX 76203-5017 (USA)
- b Department of Chemistry, University College London, 20 Gordon Street, London, WC1H 0AJ (UK)

Abstract

Data have been compiled from the published literature on the partition coefficients of solutes and vapors into the anhydrous linear alcohols (methanol through 1-heptanol, and 1-decanol) from both water and from the gas phase. The logarithms of the water-to-alcohol partition coefficients (log P) and gas-to-alcohol partition coefficients (log K) were correlated with the Abraham solvation parameter model. The derived correlations described the observed log P and log K values to within average standard deviations of 0.14 and 0.12 log units, respectively. The predictive abilities of the each correlation were assessed by dividing databases into a separate training set and test set.

Post-print:

- Accepted manuscript
- Authors' version of the article after accepted, peer-reviewed, and revisions, but before publishing
- Include in Repository (most cases)

Published (PDF) Version

Journal of King Saud University - Computer and Information Sciences (2014) 26, 5-10



King Saud University

Journal of King Saud University – Computer and Information Sciences

www.ksu.edu.sa www.sciencedirect.com



ORIGINAL ARTICLE

Emerging educational technologies: Tensions and synergy

J. Michael Spector *

Learning Technologies, University of North Texas, 3940 N. Elm Street, G 150 Denton, TX 76207, USA

Available online 4 November 2013

KEYWORDS

Game-based learning; Knowledge objects; Learning objects; Instructional objects; MOOCs; Personalized learning Abstract A review of high level sources with regard to new and emerging technologies was conducted. Three technologies, according to these sources, appear especially promising: (a) massive open online courses (MOOCs), (b) personalized learning, and (c) game-based learning. This paper will review information from the US National Science Foundation, the US Department of Education, the New Media Consortium, and two European Networks of Excellence with regard to new and emerging technologies. A critique will then be provided using established principles pertaining to learning and instruction and a recommended curriculum for advanced learning technologies. The general result is that it appears that some educational technology advocates are overstating the like-lihood of these three technologies having a significant and sustained impact in the near future, although there are promising aspects to each of these technologies in the long terms.

© 2013 King Saud University. Production and hosting by Elsevier B.V. All rights reserved.

1. Introduction

It is obviously true that technology changes and that changes are happening at an ever increasing pace with regard to digital technologies. This rapid pace of change places a burden on educators and instructional designers. The challenge is to make effective use of new technologies while preparing students for productive lives in the 21st century. Three technologies will be examined in this paper with regard to their likely impact on learning and instruction: (a) massive open online courses (MOOCs), (b) personalized learning, and (c) game-based learning. The sources that will be examined that propose these as promising technologies include a report entitled "Roadmap for Education Technology commissioned by the National

* Tel.: +1 940 369 5070; fax: +1 940 565 4194. E-mail address: Mike.Spector@unt.edu

Peer review under responsibility of King Saud University.



Production and hosting by Elsevier

1319-1578 © 2013 King Saud University, Production and hosting by Elsevier B.V. All rights reserved.

Science Foundation" (Woolf, 2010), the US National Educational Plan (REF), the European Network of Excellence for Technology Enhanced Learning (STELLAR; REF), the European Network of Excellence for Game-based Learning (GaLA; REF), and the New Media Consortium's 2013 Horizon Report for Higher Education (REF). A critical review will be provided that shows that there are serious challenges for each of these promising new technologies. The conclusion will suggest what needs to be done in order for these technologies to have the impact their proponents envision.

As a foundation for what follows, several definitions and principles are necessary to consider. First, it is necessary to say how education should be considered. Education involves the systematic development of knowledge, skills, and attitudes to be responsible, thoughtful and productive members of society (Dewey, 1910, 1938). Each part of this definition is essential. Education clearly involves learning (knowledge, skills and attitudes). Developing responsible individuals involves the application of knowledge, skills and attitudes to the benefit of many without disadvantaging any particular individual or group (responsibility). Thoughtfulness is of vital individual or group (responsibility). Thoughtfulness is of vital

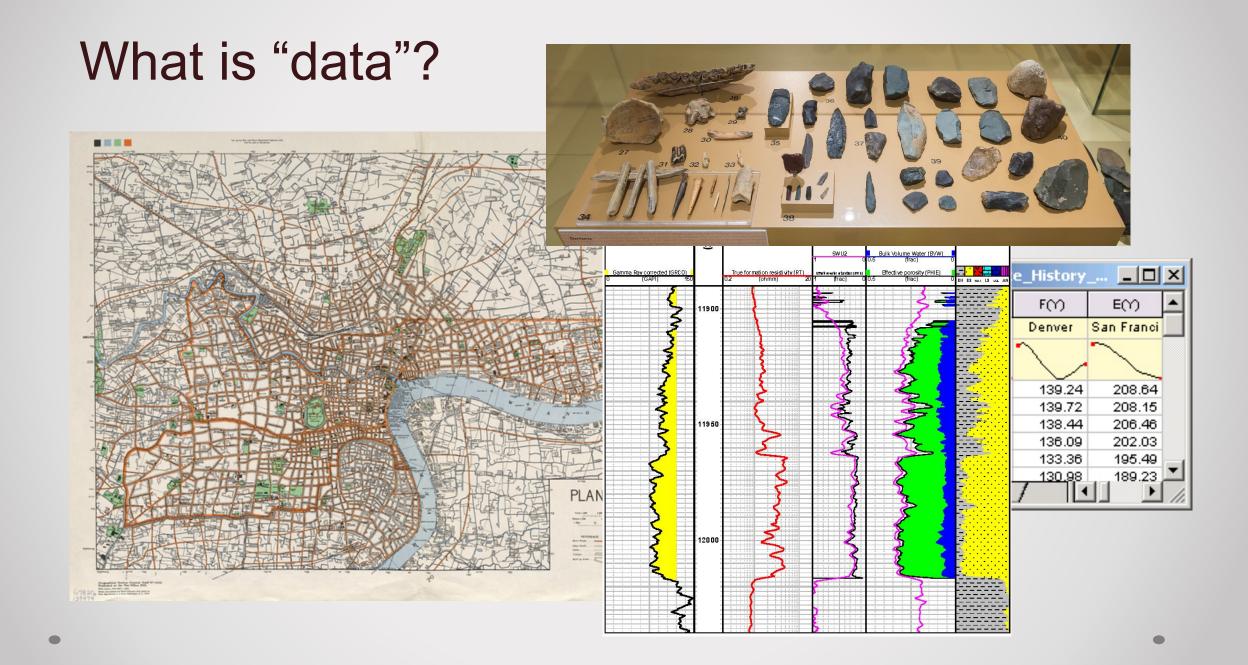
- Published (PDF):
 - Publisher-generated
 - Final published version with typesetting and logos
 - Sometimes, can include in Repository (potential copyright restrictions)

Submit & Send as You Go



TXST Dataverse Repository

• • •



Differs by Discipline

Natural/Physical Sciences

- Observational
- Experimental
- Simulation
- Compiled

Social Sciences

- Qualitative
- Quantitative

Humanities

- Raw
- Primary
- Interpretive/Derived

Examples of Data

"...materials generated or collected during the course of conducting research." (National Endowment for the Humanities)

- Databases
- Recordings
- Geospatial coordinates
- Documentation
- Software code

Why bother with this?

- Save time and money
- Maximize your impact
- Allow for reuse
- Do better research

And, it's required!

File Format Considerations

- Dataverse accepts any format
- Use what's common in your discipline
- Non-proprietary, open standards
 - Suggested formats:
 - Comma-Separated Values (.csv)
 - Plain Text (US-ASCII, UTF-8 (.txt)
 - XML (.xml)
 - JPEG (.jpg)
 - PNG (.png)
 - AIFF (.aif, .aiff)
 - WAVE (.wav)
 - AVI (uncompressed) (.avi)











Finally, the moment you've all been waiting for...



TXST Dataverse Repository



Benefits and Features

- Meeting funder mandates
- Permanent URL (doi)
- Organize and archive
- Increase citations and impact
 - (receive credit for you work)
- Viewable statistics

https://digital.library.txstate.edu

Structure of Dataverse

• • •

Schematic Diagram of a **Dataset** in Dataverse 4.0 Descriptive Metadata Data files Dataset Documentation Code Container for your data, documentation, and code.

Schematic Diagram of a **Dataverse** in Dataverse 4.0 Dataset #1 Dataset #2 Dataverse* Dataverse Container for your **Datasets** and/or **Dataverses*** * Dataverses can now contain other Dataverses (this replaces Collections & Subnetworks)

TXST Dataverse Repository



Option 1:

Deposit data directly into TXST Dataverse

Option 2:

- Create a 'dataverse' inside the TXST Dataverse and deposit all your data
 - o(e.g., research project, grant, department, group, etc.)

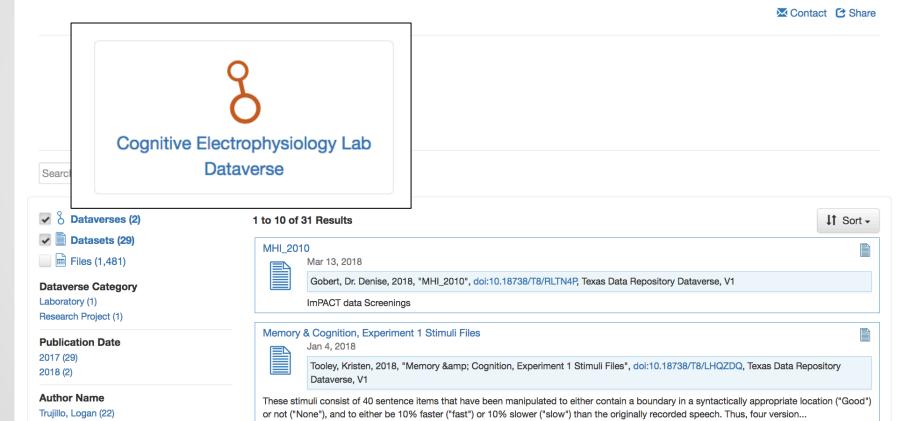
https://digital.library.txstate.edu

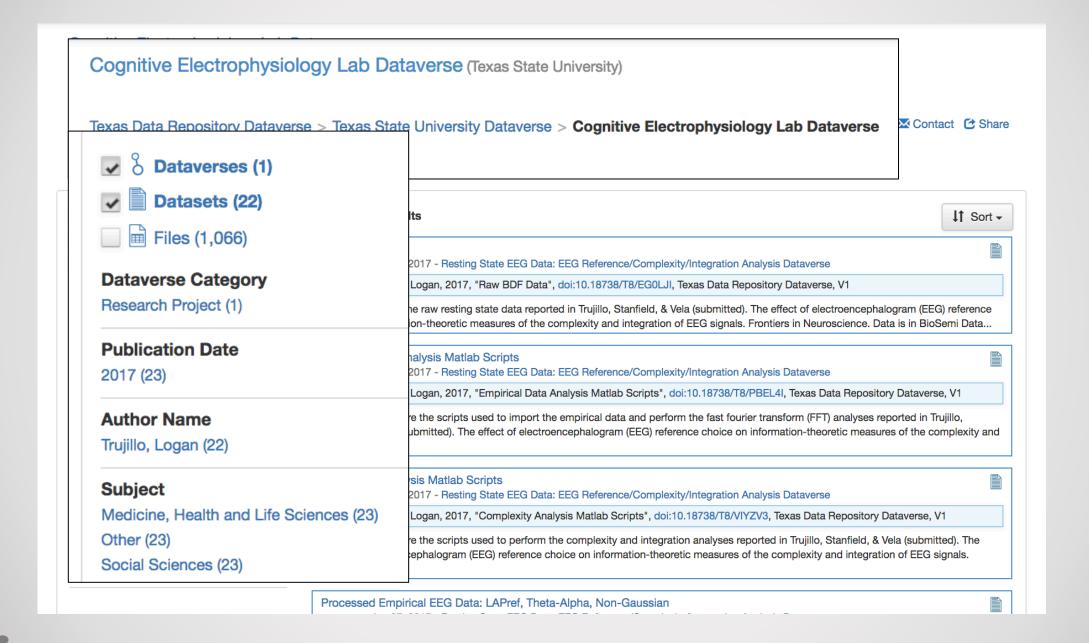


The rising STAR of Texas

Texas State University Dataverse (Texas State University)

Texas Data Repository Dataverse > Texas State University Dataverse





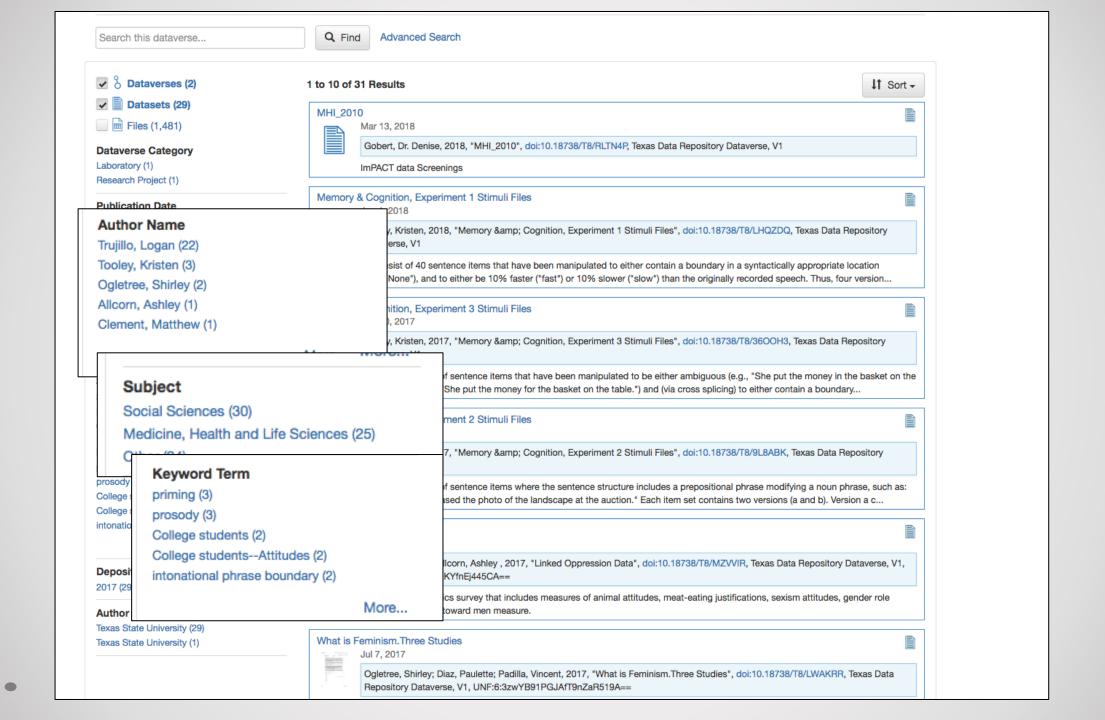
A Look Around Dataverse

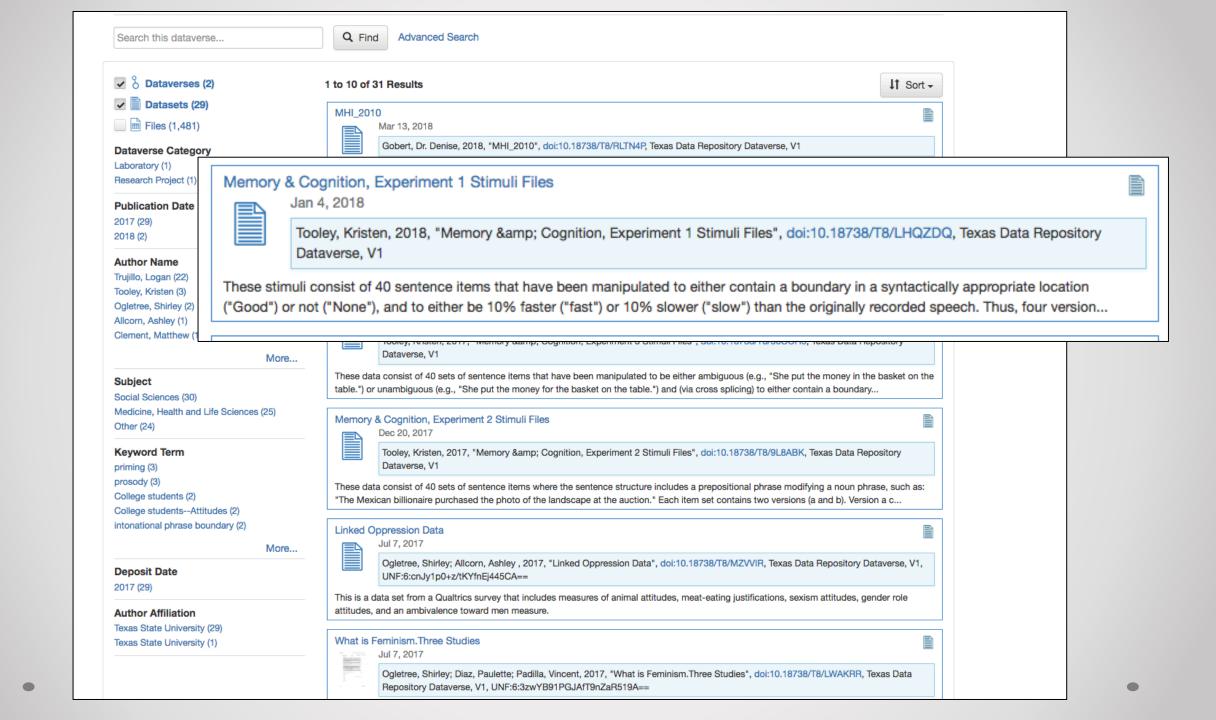


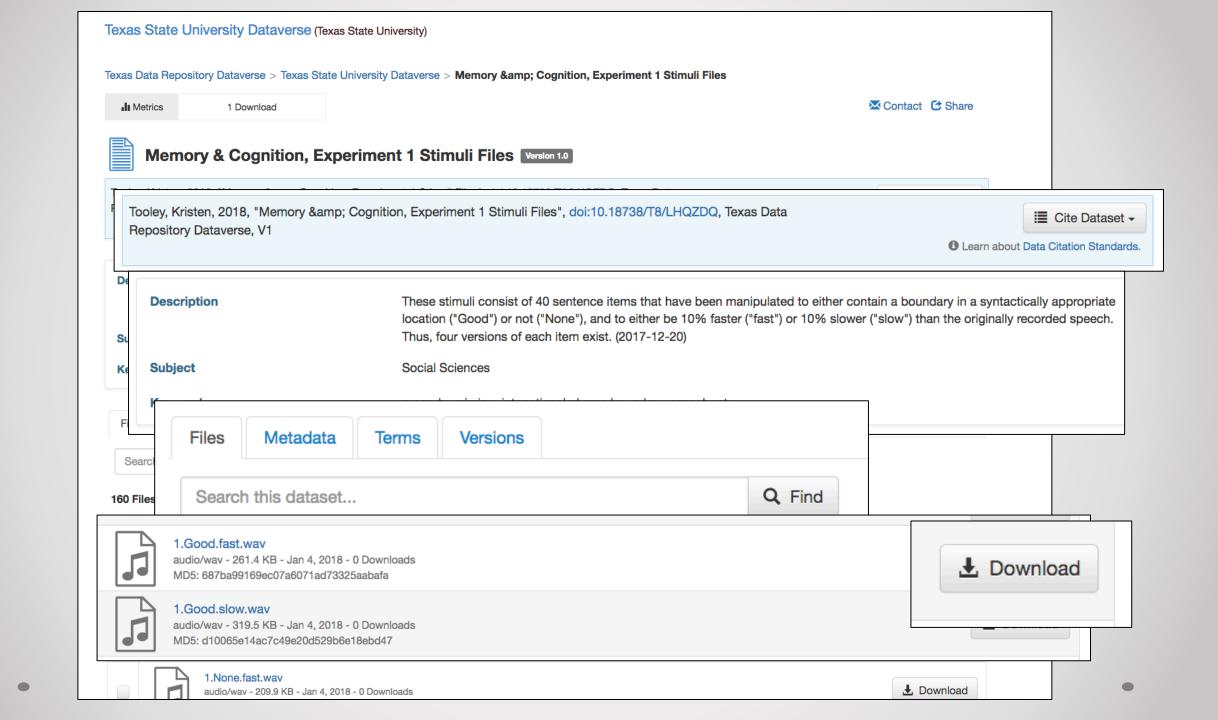


| TEXAS STATE | | |
|--|--|--|
| UNIVERSITY | - 0 | |
| The rising STAR of Texas | | |
| | | |
| Texas State University Data | Verse (Texas State University) | |
| Tours Date Describes Date | Town Olds Helmork, Between | |
| lexas Data Repository Dataverse > | Texas State University Dataverse | |
| | ☑ Contact ② Share | |
| | | |
| 9 | | |
| 0 | | |
| Cognitive Electrophysio Dataverse | logy Lab | |
| | | |
| Search this dataverse | Q Find Advanced Search | |
| | | |
| ✓ 🖔 Dataverses (2) | 1 to 10 of 31 Results | |
| ✓ Datasets (29) | MHI_2010 | |
| Files (1,481) | M 10, 0010 | |
| Dataverse Category Laboratory (1) Research Project (1) | Gobert, Dr. Denise, 2018, "MHI_2010", doi:10.18738/T8/RLTN4P, Texas Data Repository Dataverse, V1 | |
| | ImPACT data Screenings | |
| Publication Date 2017 (29) 2018 (2) | Memory & Cognition, Experiment 1 Stimuli Files | |
| | Jan 4, 2018 Tooley, Kristen, 2018, "Memory & Cognition, Experiment 1 Stimuli Files", doi:10.18738/T8/LHQZDQ, Texas Data Repository | |
| | Tooley, Kristen, 2018, "Memory & Dataverse, V1 Tooley, Memory & Data | |
| Author Name | These stimuli consist of 40 sentence items that have been manipulated to either contain a boundary in a syntactically appropriate location ("Good") | |
| rujillo, Logan (22) | or not ("None"), and to either be 10% faster ("fast") or 10% slower ("slow") than the originally recorded speech. Thus, four version | |

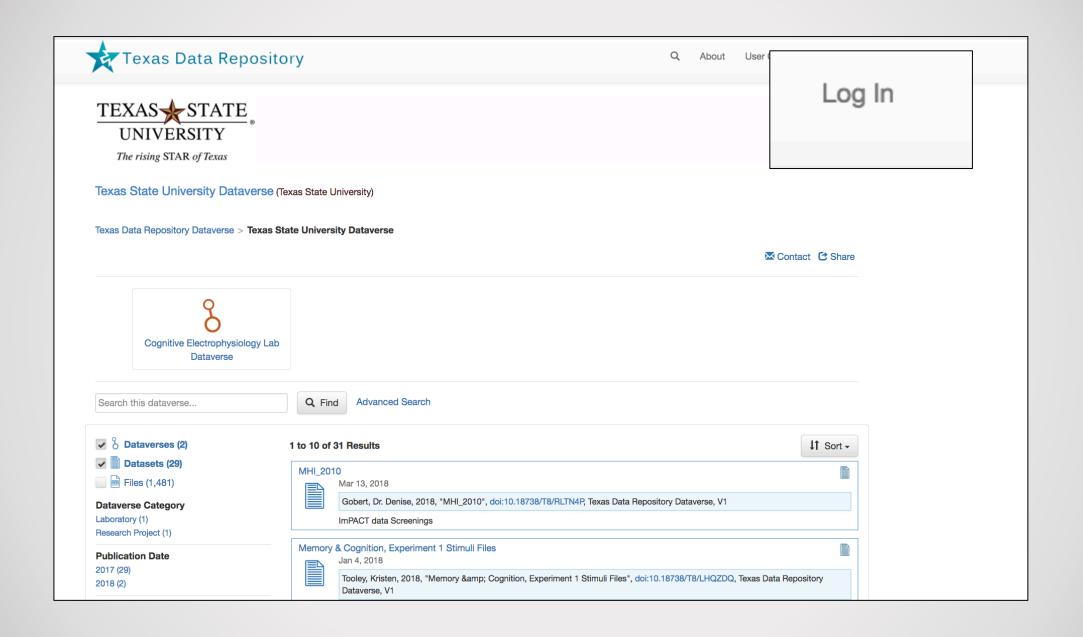
https://dataverse.tdl.org/dataverse/txstate

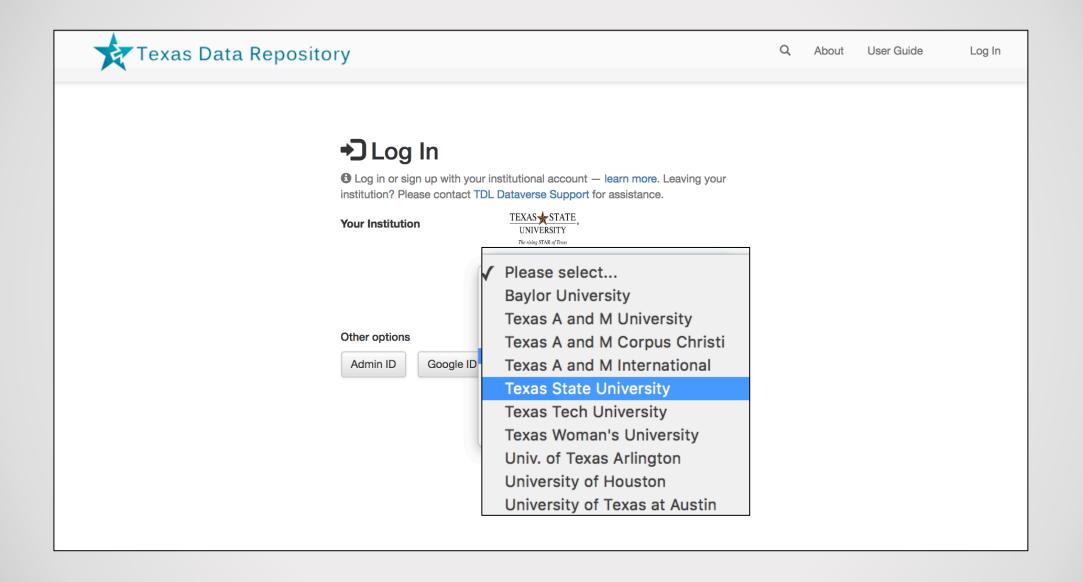


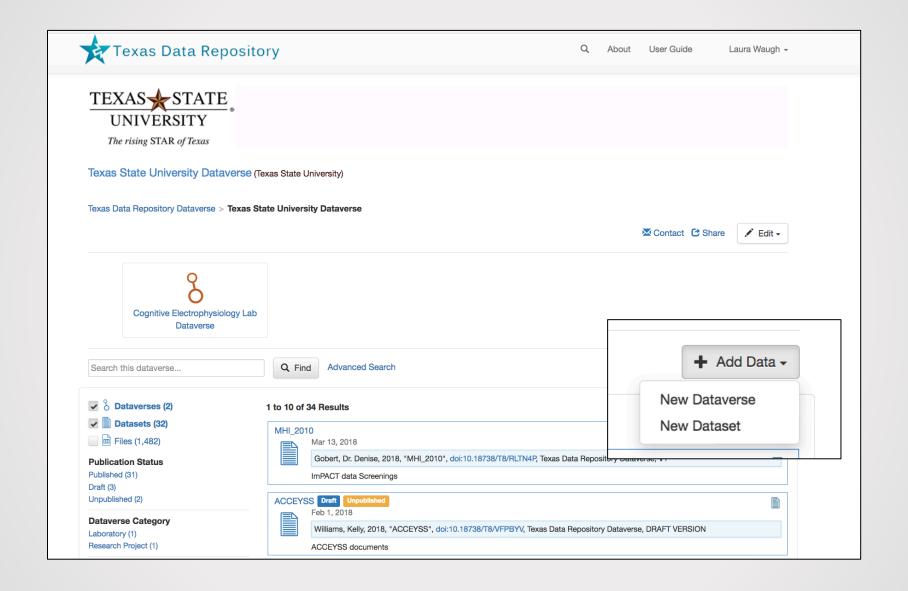


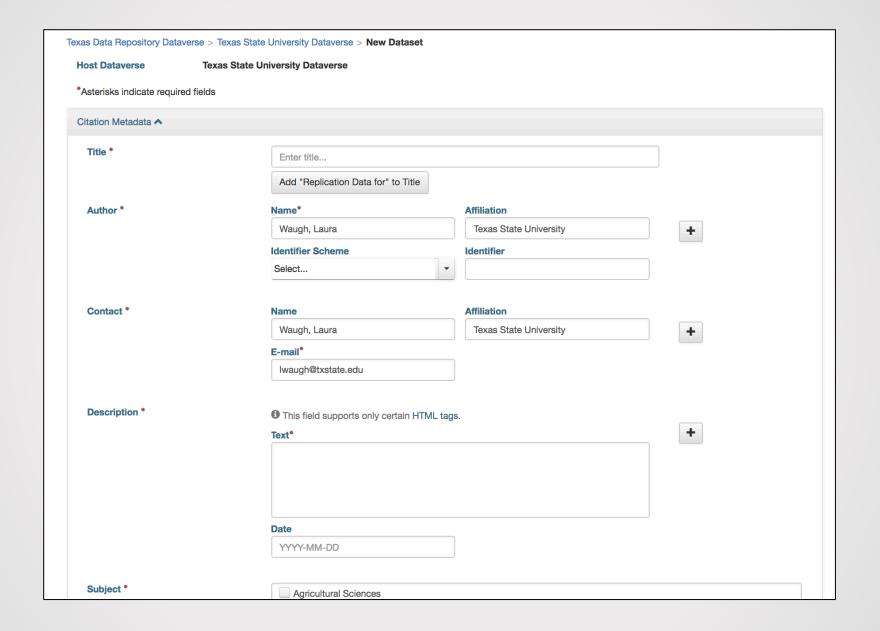


Submitting Your Data









Describe Your Data

- Ensure reusability
- Metadata helps
- Consider your Discipline
- ReadMe (.txt) file

TXST Dataverse Repository



- Remains 'unpublished' until you click "Publish"
- Can share unpublished data with colleagues
- User Guide with step-by-step instructions:

http://data.tdl.org/user-guide/

https://digital.library.txstate.edu

Learn More:

- From Office of the White House Chief Information Officer: https://project-open-data.cio.gov/
- Links to Federal Agency Open Mandates: http://www.library.cmu.edu/datapub/sc/publicaccess/policies/usgovfunders
- ICPSR: What is data curation? https://www.youtube.com/watch?v=ZEkqF8cL2qQ
- Find the Texas State University Dataverse on the library website under "Services to Faculty": http://www.library.txstate.edu/services/faculty.html
- Find Research Data information from the Office of Research and Sponsored Services at: http://www.txstate.edu/research/avpr/data_mgmt

Questions?

Dianna Morganti<u>diannamorganti@txstate.edu</u>

Laura Waughlwaugh@txstate.edu