



# Vireo ETD System:

Online submission and management of  
electronic theses and dissertations



# Summary

- Overview of Vireo
- Student Submission of ETDs
- Graduate School Management of ETDs
- Configuration Settings for Vireo
- Use of Vireo at Texas institutions of higher learning

About the Vireo ETD System

# OVERVIEW

# What is Vireo?

- Electronic thesis and dissertation submission and management system
  - Provided by the [Texas Digital Library \(TDL\)](#)
  - Consists of easy **student submission** interface and expert **management system** for graduate school staff
  - Provides for local review and approval of manuscripts
  - Approved ETDs can be deposited in TDL federated repository and local institutional repositories (IRs)
  - Based on ETD workflows at several Texas universities

# Why switch to Vireo?

- You want to provide open access to all manuscripts (no cost to student, searchable by Google)
- You want access to TDL training and technical support.
- You need customizable options and views within the management system.
- You want the peace of mind that comes with preservation of files in TDL repositories.

Easy, intuitive online submission of ETDs

# STUDENT SUBMISSION

# Student Submission System

- Simple and intuitive – students will likely use it only once
- Autofill capability for some personal information (via [Shibboleth](#) distributed authentication)
- Allows embargoes on any document
- Allows for ETDs to go to UMI Dissertation Publishing

# Student Submission: 5-Step Process



1. Verify your personal information.
2. Agree to the license.
3. Enter information about your document.
4. Upload main document and supplementary files.
5. Confirm your information and complete the submission.



# Student Submission Step 1: Verify your information

1 Verify Your Information
2 License Agreement
3 Document Information
4 Upload Your Files
5 Confirm & Submit

## Verify Your Information

Please verify all of your personal information. Some of the information has been provided by your school; if this information is in error, you will need to correct it through the appropriate office at your school.

Required fields are indicated with an asterisk.

### Personal Information

\* **First Name:** Jane

Middle Initial:

\* **Last Name:** Doe

Suffix:

\* **Email:** jane.doe@school.edu

Year of Birth:

### Affiliation

\* **School:** State University

\* **College:** ...choose

\* **Department:**

Your name should appear as it does on your title page. You can use Unicode characters, if your computer supports them.

Select the degree and major that are listed on your title page.

You must enter a permanent, long-term address. If your present address is different, use the Current Address field.

System autofills name, e-mail, and school affiliation

# Student Submission Step 2: License agreement

1 Verify Your Information
2 License Agreement
3 Document Information
4 Upload Your Files
5 Confirm & Submit

## License Agreement

You must agree to the non-exclusive license below in order to continue:

I grant the Texas Digital Library (hereafter called "TDL"), my home institution (hereafter called "Institution"), and my academic department (hereafter called "Department") the non-exclusive rights to copy, display, perform, distribute and publish the content I submit to this repository (hereafter called "Work") and to make the Work available in any format in perpetuity as part of a TDL, Institution or Department repository communication or distribution effort.

I understand that once the Work is submitted, a bibliographic citation to the Work can remain visible in perpetuity, even if the Work is updated or removed.

I understand that the Work's copyright owner(s) will continue to own copyright outside these non-exclusive granted rights.

I warrant that:

1. I am the copyright owner of the Work, or
2. I am one of the copyright owners and have permission from the other owners to submit the Work, or
3. My Institution or Department is the copyright owner and I have permission to submit the Work, or
4. Another party is the copyright owner and I have permission to submit the Work.

Based on this, I further warrant to my knowledge:

1. The Work does not infringe any copyright, patent, or trade secrets of any third party,
2. The Work does not contain any libelous matter, nor invade the privacy of any person or third party, and
3. That no right in the Work has been sold, mortgaged, or otherwise disposed of, and is free from all claims.

I agree to hold TDL, Institution, Department, and their agents harmless for any liability arising from any breach of the above warranties or any claim of intellectual property infringement arising from the exercise of these non-exclusive granted rights.

☐ By checking here you agree to the above license in its entirety.

Agree and Continue>>

“...non-exclusive rights to copy, display, perform, distribute and publish the content...”

Student maintains copyright to the work, outside of the non-exclusive rights.

# Student Submission Step 3: Document information

1 Verify Your Information
2 License Agreement
3 Document Information
4 Upload Your Files
5 Confirm & Submit

## Document Information

In this step you describe your thesis or dissertation. Please make sure that the information entered below matches the information contained in your document.

Document Information

\* Title:

...

...

...

\* Degree Date:

...choose

...

...

\* Document Type:

...choose

\* Abstract:

...

\* Keywords:

Keyword 1; Key Phrase One; Keyword 2; Key Phrase Two

Your Committee

For the degree date, enter the semester in which your degree will be conferred (typically your graduation semester).

You can use Unicode characters (like accents and diacritics) in these fields.

You can enter multiple keywords. Use semi-colons ( ; ) to separate the entries.

Enter the names of each member of your committee, and use the checkboxes to indicate which one is the committee chair (check two if you have co-chairs).

- Document information
- Committee & chair information
- Release options (embargoes, publication to UMI)

# Student Submission Step 4: Upload Your Files

1 Verify Your Information
2 License Agreement
3 Document Information
4 Upload Your Files
5 Confirm & Submit

## Upload Your Files

In this step you will upload your thesis or dissertation to the server. Optionally, you may upload additional supplementary files that will be available along with your document after publication.

Upload your manuscript

\* Manuscript in PDF:

Upload supplementary files

Supplementary Files:

Your thesis or dissertation can only be one file, and the only allowable file format is PDF. Please contact your school for help or information related to creating a PDF file.

There is no limit on the number or formats of supplementary files you may upload.

SIZE QUOTA: no individual file may exceed 512 MB, and the total of all files must not exceed 4 GB.

Student may upload supplementary files in addition to the main thesis or dissertation.

There is no restriction on file formats students can upload.

# Student Submission Step 5: Confirm & Submit

1

Verify Your Information

2

License Agreement

3

Document Information

4

Upload Your Files

5

Confirm & Submit

## Comfirm & Submit

About You

Name:

User, Student

Email:

student1@tdl.org

Phone:

555-555-5555

Address:

123 Elm St. University, Texas 77777

[\[edit your personal information\]](#)

Academic Affiliation

School:

Vireo Training Class

Degree:

Ph. D.

Major:

Biology

[\[edit your personal information\]](#)

Document Information

Title:

Biology Dissertation Title

Degree Date:

May 2010



Students may check all information and return to any previous step to make corrections using the bar at the top.

# Student Submission: Submittal Complete

## Submittal Complete

Please alert your departmental office that you have completed the Thesis and Dissertation submission process.

[View submission status](#)

Once submission is complete, the student receives customizable instructions for other actions he or she must take outside the Vireo system.

Vireo's interface for thesis office personnel

# ETD MANAGEMENT

# Management System for Grad School Offices

- Flexible and easy-to-use interface
- Manuscript review process tracking
- Customized document lists and customizable filters for individual users
- Export functionality
- Manages communication with students and faculty chairs



# Management Interface: List available ETDs

Admin users can manage the list by using savable filters

Now Filtering By: [-]

**Filter Options** [-]

**MANAGE FILTERS**

Clear current filter  
Save or edit filters

**SAVED FILTERS**

New submissions (require assignment)  
Students in progress

**Filter Further By:** [-]

**SEARCH BOX**

**STATUS**

Active  
Archived

**ASSIGNED TO**

Unassigned  
Courtney Grimland  
OMG!  
Sam Khosh-khui  
jc  
Jill Kleister  
more...

**GRADUATION SEMESTER**

December 2010  
May 2010  
December 2009  
August 2009  
May 2009  
more...

## List ETDs

ID	Student name	Status	Document title	Graduation semester	Do
5	Grimland, Courtney g.	Published	I don't know	May 2009	Ja Er
13	Canales, JoAnn	Published	English Language Proficiency Assessment	May 2008	Te Ec
16	Kleister, Jill S.	Needs Correction	SELF-ESTEEM AND LIFE SATISFACTION OF AGED INDIVIDUALS WITH	May 2007	Bi LI
8	Khosh-khui, Sam A.	Approved	Table Look-up CORDIC	May 2008	Al TD
21	Maslov, Alexey K.	Needs Correction	A master's thesis, edited	December 2008	Ec
20	Mikeal, Adam	Under Review	test	May 2008	Cc Sc
23	Khosh-khui, Sam A.	Cancelled	History of Texas State University	August 2008	Hi
24	Rentz, Paivi H.	Submitted	Test Document	August 2008	Ps
25	Rentz, Paivi H.	Needs Correction	My dissertation	August 2008	Ec
27	Mikeal, Adam	Submitted	test	May 2008	Cc Sc
28	Donohue, Timothy G.	Needs Correction	Test Theses	August 2008	Cc Sc
29	Donohue, Tim G.	Waiting On Requirements	My New Dissertation	December 2008	Cc Sc
30	Donohue, Timothy G.	Under Review	My Thesis	December 2008	as
74	Brunder, Donald G.	Needs Correction	My thesis	December 2008	Ac Cc
193	Larrison, Stephanie	Under Review	lions tigers and bears	December 2008	Da
198	Professor, Paula	Submitted	Title	May 2009	Er
253	Texasdiglib, Joe	Under Review	Demonstration Dissertation	December 2009	Er

# Management Interface: Filtered list

This list shows only active submissions that are currently under review.

**Now Filtering By:** [-]

**STATUS**

- ✖ Active
- ✖ Under Review

**Filter Options** [-]

**MANAGE FILTERS**

Clear current filter  
Save or edit filters

**SAVED FILTERS**

New submissions (require assignment)  
Students in progress

## List ETDs

ID	Student name	Status	Document title	Graduation semester	Department
20	Mikeal, Adam	Under Review	test	May 2008	Computer Science
30	Donohue, Timothy G.	Under Review	My Thesis	December 2008	asd
193	Larrison, Stephanie	Under Review	lions tigers and bears	December 2008	Dance
253	Texasdiglib, Joe	Under Review	Demonstration Dissertation	December 2009	English
243	User, Student	Under Review	The Best Dissertation Stella has Ever Read	May 2010	Graduate


5 matching records displayed on 1 page

# Management Interface: Student record

Within an individual ETD record, an administrative user can see:

- the active, viewable ETD
- student and document metadata
- the status of the submission
- action log showing all actions taken on this record
- the custom action checklist showing actions that must be taken outside the Vireo system

Active Document

 3737\_001[1].pdf  
Download

FILE OPTIONS

[View All Files](#)  
[Upload New File](#)

Submission Status

Under Review

Assigned To:  
**Angusyoung**  
 Last Action:  
**12 Nov 2009; 1:38 PM**  
 What:  
**Status Changed**  
 Embargo:  
**Patent Hold**

Custom Actions

☐ Survey of earned doctorates  
☐ Received UMI payment.

User, Student (Business - Ph. D.)

Personal Info

Document Info

Degree Info

First Name: Student  
 Middle Initial: none  
 Last Name: User  
 Suffix: none  
 Email: student5@tdl.org  
 Year of Birth: none

Permanent Phone: 512-555-1234  
 Permanent Email: none  
 Permanent Address: There here, TX 12345  
 Current Phone: none  
 Current Address: none

ACTION LOG

Action by	Action/Comment	Time
Angusyoung	Submission status changed to Under Review by Student User	12 Nov 2009; 1:38 PM
Angusyoung	Note file '3737_001[1].pdf' added by Student User: <b>3737_001[1].pdf</b> (0.13MB)	12 Nov 2009; 1:38 PM
Angusyoung	Submission assigned to Student User by Student User.	12 Nov 2009; 1:37 PM
Angusyoung	Email to student failed: Invalid Addresses	12 Nov 2009; 10:35 AM
Angusyoung	Initial submission on Thu Nov 12 10:35:30 CST 2009 by Student User	12 Nov 2009; 10:35 AM
Angusyoung	Submission status changed to Submitted by Student User	12 Nov 2009; 10:35 AM
Angusyoung	Primary file '3737_001[1].pdf' added by Student User: <b>3737_001[1].pdf</b> (0.13MB)	12 Nov 2009; 10:34 AM

Add Comment

ALL FILES

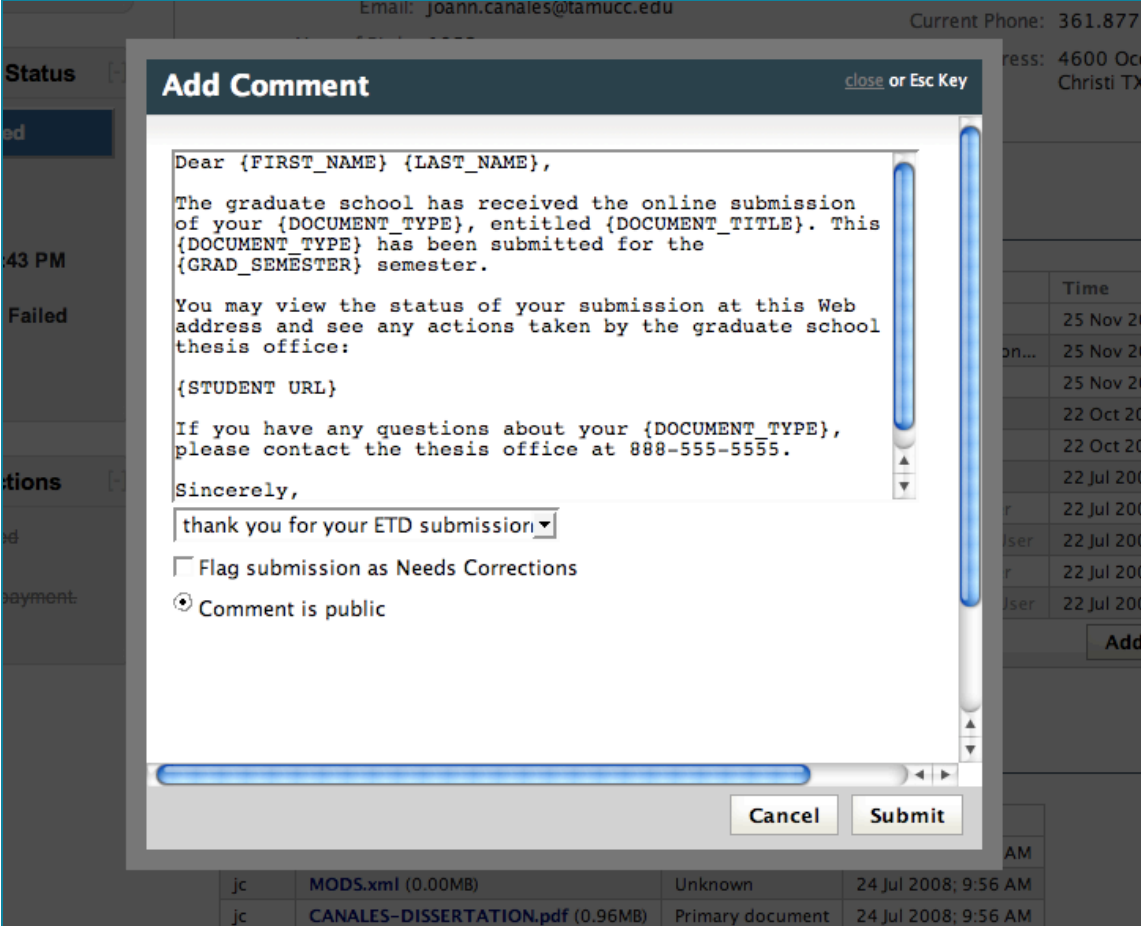
Name	File	Type	Time
Angusyoung	<b>3737_001[1].pdf</b> (0.13MB)	Notes / feedback	12 Nov 2009; 1:38 PM
Angusyoung	<b>3737_001[1].pdf</b> (0.13MB)	Primary document	12 Nov 2009; 10:34 AM

Add File

# Management Interface: Student record

Within an ETD record, an administrator can use the Add Comment feature to:

- generate e-mail notifications to the student and/or faculty adviser
- add updates about the status of the ETD or actions taken outside the system
- designate comments as public or private



Email: joann.canales@tamucc.edu Current Phone: 361.877.4600  
Address: 4600 Occident Blvd., Christy TX 75755

**Add Comment** [close or Esc Key](#)

Dear {FIRST\_NAME} {LAST\_NAME},

The graduate school has received the online submission of your {DOCUMENT\_TYPE}, entitled {DOCUMENT\_TITLE}. This {DOCUMENT\_TYPE} has been submitted for the {GRAD\_SEMESTER} semester.

You may view the status of your submission at this Web address and see any actions taken by the graduate school thesis office:

{STUDENT URL}

If you have any questions about your {DOCUMENT\_TYPE}, please contact the thesis office at 888-555-5555.

Sincerely,

thank you for your ETD submission

☐ Flag submission as Needs Corrections

☒ Comment is public

Cancel Submit

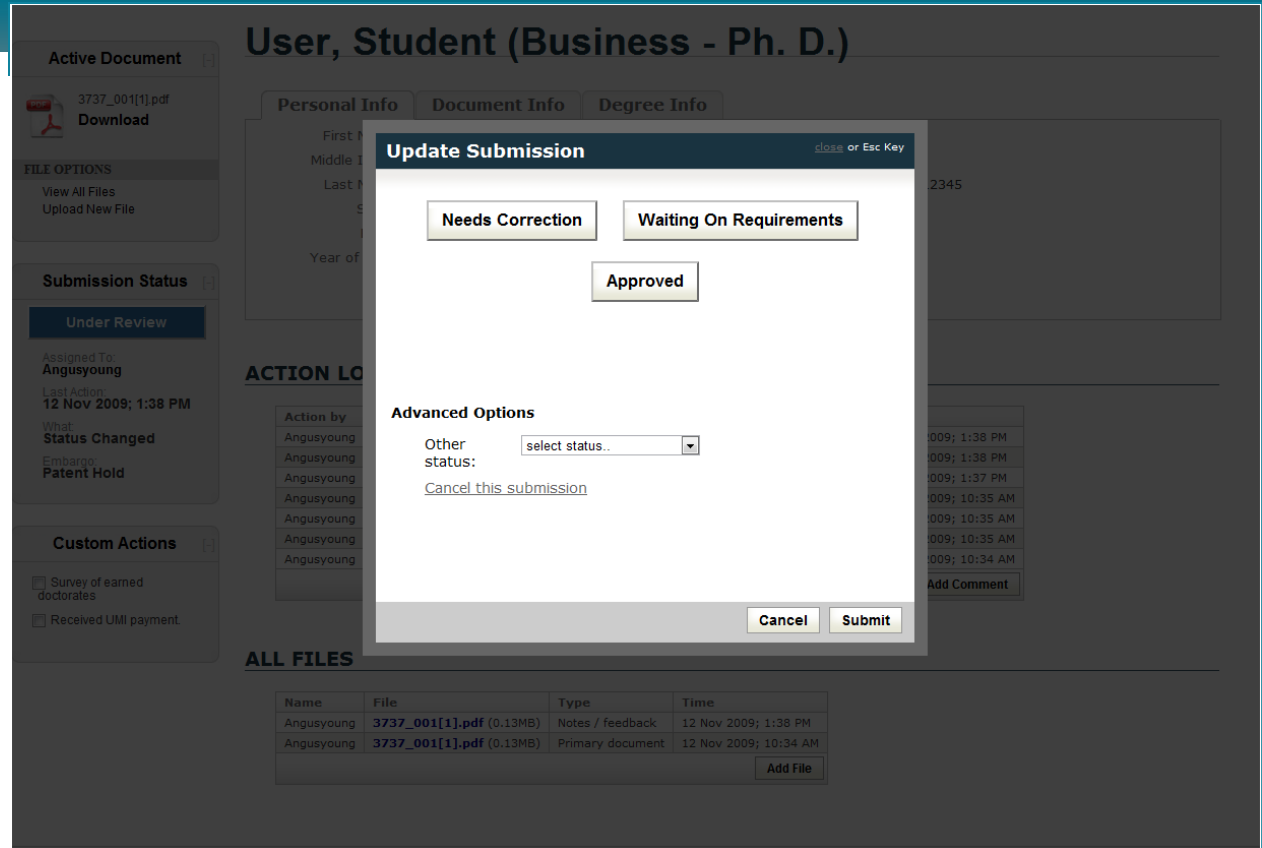
	Time
25 Nov 2008	25 Nov 2008
25 Nov 2008	25 Nov 2008
25 Nov 2008	25 Nov 2008
22 Oct 2008	22 Oct 2008
22 Oct 2008	22 Oct 2008
22 Jul 2008	22 Jul 2008
22 Jul 2008	22 Jul 2008
22 Jul 2008	22 Jul 2008
22 Jul 2008	22 Jul 2008

jc	MODS.xml (0.00MB)	Unknown	24 Jul 2008; 9:56 AM
jc	CANALES-DISSERTATION.pdf (0.96MB)	Primary document	24 Jul 2008; 9:56 AM

# Management Interface: Changing the submission status

As an ETD proceeds through the workflow, administrators can change its status to one of several options:

- Submitted
- Under Review
- Needs corrections
- Waiting on Requirements
- Approved
- Pending Publication
- On Hold
- Published\*\*
- Withdrawn
- Cancelled



The screenshot displays the 'User, Student (Business - Ph. D.)' management interface. A modal dialog titled 'Update Submission' is open, allowing the user to change the status of a submission. The dialog includes three buttons: 'Needs Correction', 'Waiting On Requirements', and 'Approved'. Below these, there is an 'Advanced Options' section with a dropdown menu for 'Other status:' and a link to 'Cancel this submission'. At the bottom of the dialog are 'Cancel' and 'Submit' buttons.

The background interface shows the 'Active Document' section with a download link for '3737\_001[1].pdf'. The 'Submission Status' section shows the current status as 'Under Review'. The 'ACTION LOG' section lists actions performed by 'Angusyoung'. The 'ALL FILES' section shows a table of files.

Name	File	Type	Time
Angusyoung	3737_001[1].pdf (0.13MB)	Notes / feedback	12 Nov 2009; 1:38 PM
Angusyoung	3737_001[1].pdf (0.13MB)	Primary document	12 Nov 2009; 10:34 AM

*\*\*Setting the status to "Published" automatically deposits the thesis into an institutional repository.*

Customizing Vireo for your institution

# CONFIGURATION

# Configuration settings

- Create customized submission instructions
- Customize e-mail templates and variables
- Customize drop-down menus used in student submission process
- Control appearance and filtering options within the user interface

Two levels of access: Regular administrative user and Manager (or Superuser)

# Configuration Settings: User Preferences

## LIST TAB OPTIONS

### What filter options should appear?

- |   |  |   |
|---|--|---|
| <input checked="" type="checkbox"/> Assigned To   | <input checked="" type="checkbox"/> Submission Date (Choose) | <input checked="" type="checkbox"/> Submission Date (Range) |
| <input checked="" type="checkbox"/> Document Type | <input checked="" type="checkbox"/> Embargo Type             | <input checked="" type="checkbox"/> College                 |
| <input checked="" type="checkbox"/> Department    | <input checked="" type="checkbox"/> UMI Release              | <input checked="" type="checkbox"/> Graduation Semester     |
| <input checked="" type="checkbox"/> Search Box    | <input checked="" type="checkbox"/> Status                   |   |

### What columns should appear?

- |   |  |   |
|---|--|---|
| <input checked="" type="checkbox"/> ID                  | <input checked="" type="checkbox"/> Student name   | <input checked="" type="checkbox"/> Status          |
| <input type="checkbox"/> Assigned to                    | <input checked="" type="checkbox"/> Document title | <input checked="" type="checkbox"/> Submission date |
| <input checked="" type="checkbox"/> Graduation semester | <input type="checkbox"/> Degree name               | <input type="checkbox"/> Department                 |
| <input checked="" type="checkbox"/> Major               | <input checked="" type="checkbox"/> Embargo type   | <input type="checkbox"/> Document type              |
| <input type="checkbox"/> Keywords                       | <input type="checkbox"/> College                   | <input type="checkbox"/> UMI release                |
| <input checked="" type="checkbox"/> Last event          | <input type="checkbox"/> Event time                |   |

### How many records per page should appear?

- ☐ 20
 ☐ 40
 ☐ 60
 ☐ 100
 ☐ 200
 ☒ 400

Any administrative user can customize his or her interface to show certain columns, filters, and other information.



# Configuration Settings: Application Settings

## SUBMISSION AVAILABILITY

Submissions are currently:   
Click to close

Current submission semester:   
'Month Year' (i.e. May 2006)

Allow multiple submissions:   
Click to stop allowing multiple submissions

Request "College" parameter:   
Click to stop requesting

Offer UMI release option:   
Click to stop offering

Administrative “superusers” can determine:

- when the system is accepting submissions
- customized submission instructions that appear to students
- a custom action checklist for actions that must be taken outside the Vireo system (such as signing of documents)
- who has administrative and superuser access

## SUBMISSION INSTRUCTIONS

Please confirm all of the information on this page before clicking submit.

After you click submit, an advisor within the Graduate School will review your thesis and contact you if any corrections are needed.

In addition to submitting your thesis through this system, you also need to take the following steps in order to receive your degree:

- 1) Obtain signatures of the dean and your committee advisors and return signature sheet to the office of graduate studies.

These instructions will be shown as part of the submission confirmation. The following HTML tags are allowed: h1 - h5, p, a, b, i, u, ol, li, img. Newlines are converted to paragraphs automatically.

# Configuration Settings: E-mail Settings

User Preferences

Application Settings

Email Settings

Configurable Settings

**EMAIL OPTIONS**

Choose email options:

☐ Make administrative staff email address available to students.

☒ CC the student's advisor as soon as student submits their work.

Which template should be sent to the student upon submittal?:  
Use default message

Which template should be sent to the student's advisor?:  
Use default message

Administrative “superusers” can determine:

- default options for automated e-mails
- e-mail templates for common messages sent from the system to students and supervisors

# Configuration Settings: Other Settings

Administrative “superusers” can customize the dropdown menus that appear in the student submission interface for:

- Colleges
- Degrees
- Document types
- Graduation months

## AVAILABLE COLLEGES

1. College of Cool Stuff [Remove]
2. Liberal Arts [Remove]
3. Engineering [Remove]
4. Education [Remove]

[\[ADD NEW\]](#)

## AVAILABLE DEGREES

1. B.A. (Undergraduate) [Remove]
2. D.M.A (Doctoral) [Remove]
3. M. A. (Masters) [Remove]
4. M. S. (Masters) [Remove]
5. Ed. D. (Doctoral) [Remove]
6. Ph. D. (Doctoral) [Remove]

[\[ADD NEW\]](#)

## AVAILABLE DOCUMENT TYPES

1. Thesis (Undergraduate) [Remove]
2. Dissertation (Doctoral) [Remove]
3. Record of Study (Doctoral) [Remove]

[\[ADD NEW\]](#)

## AVAILABLE GRADUATION MONTHS

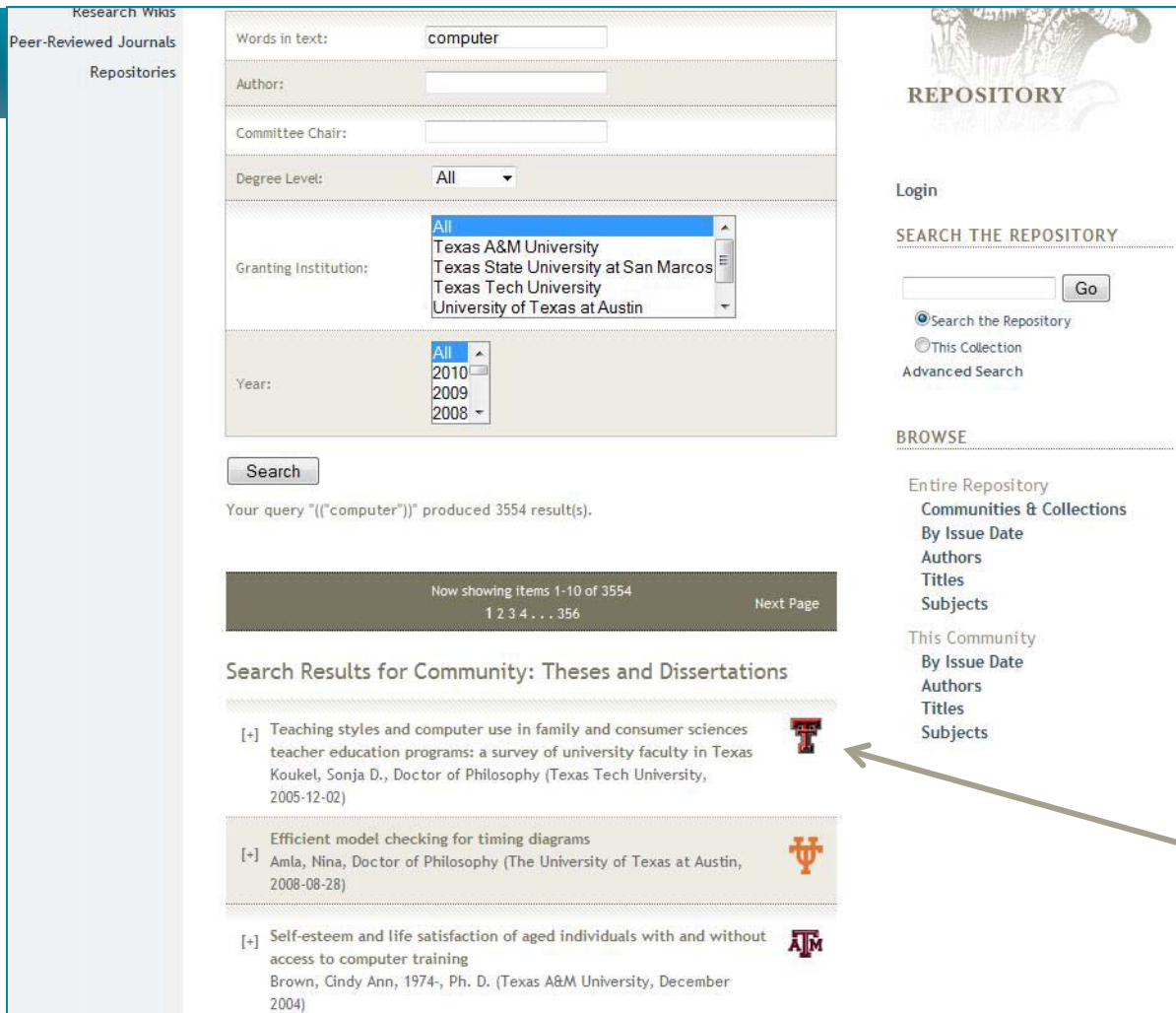
1. August [Remove]
2. May [Remove]
3. December [Remove]

[\[ADD NEW\]](#)

Harvesting and Curating ETDs

# THE FEDERATED ETD COLLECTION

# Federated ETD Repository



Research Wikis  
Peer-Reviewed Journals  
Repositories

Words in text:

Author:

Committee Chair:

Degree Level:

Granting Institution:   
 Texas A&M University  
 Texas State University at San Marcos  
 Texas Tech University  
 University of Texas at Austin

Year:   
 2010  
 2009  
 2008

Your query "((computer))" produced 3554 result(s).

Now showing items 1-10 of 3554  
 1 2 3 4 . . . 356

Search Results for Community: Theses and Dissertations

[+] Teaching styles and computer use in family and consumer sciences teacher education programs: a survey of university faculty in Texas  
 Koukel, Sonja D., Doctor of Philosophy (Texas Tech University, 2005-12-02)

[+] Efficient model checking for timing diagrams  
 Amla, Nina, Doctor of Philosophy (The University of Texas at Austin, 2008-08-28)

[+] Self-esteem and life satisfaction of aged individuals with and without access to computer training  
 Brown, Cindy Ann, 1974-, Ph. D. (Texas A&M University, December 2004)

REPOSITORY

Login

SEARCH THE REPOSITORY

☒ Search the Repository  
☐ This Collection  
 Advanced Search

BROWSE

Entire Repository  
 Communities & Collections  
 By Issue Date  
 Authors  
 Titles  
 Subjects

This Community  
 By Issue Date  
 Authors  
 Titles  
 Subjects

- The TDL Federated Repository collects ETDs from universities statewide.
- All ETDs appear in a single searchable location.
  - Metadata harvested automatically from member repositories.
  - Bitstream (i.e. ETD file) remains at home institution.
  - Home institution identified within the federated repository.

# Federated ETD Repository: Google Searchable



The ETD  
in the  
TDL's  
federated  
repository

## [Self-esteem and life satisfaction of aged individuals with and ...](#)

by CA Brown - 1974 - [Cited by 1](#) - [Related articles](#)

Title: **Self-esteem** and life satisfaction of **aged individuals** with and **without access to computer training**. Author: Brown, Cindy Ann, 1974- ...  
[repositories.tdl.org/handle/1969.1/1367](http://repositories.tdl.org/handle/1969.1/1367) - [Cached](#)

## [Self-esteem and life satisfaction of aged individuals with and ...](#)

by CA Brown - 2005 - [Cited by 2](#) - [Related articles](#)

**Self-esteem** and life satisfaction of **aged individuals** with and **without access to computer training**. Show simple item record ...  
[txspace.tamu.edu/handle/1969.1/1367?show=full](http://txspace.tamu.edu/handle/1969.1/1367?show=full) - [Cached](#)

## [\[PDF\] SELF-ESTEEM AND LIFE SATISFACTION OF AGED INDIVIDUALS WITH AND ...](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

by CANN BROWN - 2004 - [Cited by 2](#) - [Related articles](#) - [All 4 versions](#)

study is entitled **Self-esteem** and Life Satisfaction of **Aged. Individuals** With and **Without Access to Computer Training**, and will allow Cindy Brown to meet ...  
[txspace.tamu.edu/bitstream/handle/.../etd-tamu-2004C-2-EPSY-Brown.pdf?...](http://txspace.tamu.edu/bitstream/handle/.../etd-tamu-2004C-2-EPSY-Brown.pdf?...)

Development and Support

# **VIREO & THE TEXAS DIGITAL LIBRARY**



# Vireo and the Texas Digital Library

- Vireo was developed by the [Texas Digital Library](#), originally for use by its member organizations.
- The TDL developed Vireo and the TDL Federated Repository with grant funding from the Institute of Museum and Library Services. (IMLS GRANT #: LG - 05-07-0095-07)
- Vireo is in production at Texas A&M University, the University of Texas at Austin, and Texas Tech University, with testing sites at several other TDL member schools (as of March 2010).
- Once tested and deployed widely within the state, all source code, documentation, and training materials will be made publicly available under an open-source license.





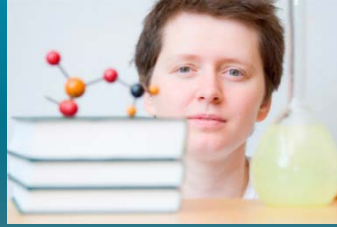
# Vireo 1.0.1

- In March 2010, TDL released an updated version of Vireo with bug fixes and new capabilities.
- New capabilities and features include:
  - Automated publishing to an institutional repository (via [SWORD](#))
  - Automated harvesting of ETDs to the TDL Statewide ETD Repository (via [OAI-ORE](#))
  - Full compliance with metadata standards
  - User interface enhancements in management interface
  - Complete installation instructions shipped with new version

# For more information on Vireo

For more information about Vireo:

- Go to the TDL Wiki: <http://wikis.tdl.org/tdl/Vireo>
  - Vireo training videos - <https://wikis.tdl.org/tdl/Vireo/Videos>
- Visit the TDL website: <http://www.tdl.org/>
- Contact the TDL: [info@tdl.org](mailto:info@tdl.org)



For more information about Vireo, please visit the Texas Digital Library Web site at <http://www.tdl.org> or contact us at [info@tdl.org](mailto:info@tdl.org).

