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Application Summary

Competition Details

Competition Title:	Textbook Transformation Grants, Round Thirteen (Spring 2019-Spring 2020)
Category:	University System of Georgia
Award Cycle:	Round 13
Submission Deadline:	01/14/2019 at 11:59 PM

Application Information

Submitted By:	Cathy Hakes
Application ID:	2865
Application Title:	406
Date Submitted:	01/15/2019 at 7:31 AM

Personal Details

Institution Name(s):	Georgia Gwinnett College
Applicant First Name:	Yi
Applicant Last Name:	Ding
Applicant Email Address:	yding1@ggc.edu
Applicant Phone Number:	678-464-6931
Primary Appointment Title:	Associate Professor of IT
Submitter First Name:	Cathy
Submitter Last Name:	Hakes
Submitter Email Address:	chakes@ggc.edu
Submitter Phone Number:	678-407-5875
Submitter Title:	Executive Director, Office of Research and Sponsored Programs

Application Details

Proposal Title

406

Final Semester of Project

Spring 2020

Requested Amount of Funding

\$10,800

Type of Grant

No-or-Low-Cost-to-Students Learning Materials

Course Title(s)

Introduction to Information Systems; Management Information Systems

Course Number(s)

ITEC 2201, BUSA 3100

Team Member 1 Name

Yi Ding

Team Member 1 Email

yding1@ggc.edu

Team Member 2 Name

Yaquan Xu

Team Member 2 Email

yxu@ggc.edu

Team Member 3 Name

Madhurshri Banerjee

Team Member 3 Email

mbanerje@ggc.edu

Team Member 4 Name

Team Member 4 Email

Additional Team Members (Name and email address for each)

N/A

Sponsor Name

Thomas Mundie

Sponsor Title

Dean

Sponsor Department

School of Science & Technology

Original Required Commercial Materials (title, author, price)

Business Driven Technology by Paige Baltzan (Required for ITEC 2201), \$178.55

Principles of Information Systems by Stair (Required for BUSA 3100), \$250

Average Number of Students per Course Section Affected by Project in One Academic Year

20

Average Number of Sections Affected by Project in One Academic Year

18

Total Number of Students Affected by Project in One Academic Year

360

Average Number of Students Affected per Summer Semester

40

Average Number of Students Affected per Fall Semester

160

Average Number of Students Affected per Spring Semester

160

Original Total Cost per Student

\$178.55 for ITEC 2201 student; \$250.00 for BUSA 3100 student, Total \$428.55

Post-Project Cost per Student

\$0 for ITECH 2201 student; \$120.00 for BUSA 3100 student, Total \$120.00

Post-Project Savings per Student

Saving: \$178.55 for ITEC 2201 student, Saving: \$130 for BUSA 3100 student, Total: \$308.55

Projected Total Annual Student Savings per Academic Year

\$53,565 for ITEC 2201 student; \$7,800 for BUSA 3100 student, Total \$61,365

Using OpenStax Textbook?

No

Project Goals

The goals of the project are to:

A. Improve the textbook affordability for ITEC 2201 and BUSA 3100 by replacing the current expensive traditional textbooks used in those courses with low to zero-cost customized learning materials.

B. Improve student retention, performance, and preparation for the next ITEC level by providing customized learning material to meet student learning needs.

C. Improve learning engagement by training students in the usage of the library system such as MERLOT, Galileo, USG libraries, and the Lynda.com.

Statement of Transformation

Overview of the Transformation

Since the 1970s, textbooks have progressively increased in cost. In fact, textbook prices have risen faster than costs in other sectors. For instance, textbook cost since the 1970s has increased 812% compared to medical services' increase of 575%, new home costs by 325%, and consumer price index by 250% (Zook, 2017). When comparing majors with the most expensive books, an article by Robert Tolmach (2016) listed Computer Science major as number 11 in the list out of 31 majors, while Business (Economics) is number 1. The sad news is that editions of computer textbooks can go out of date quite quickly, and books in these fields (science/social science books), which are usually most expensive new, "retain proportionally the least amount of their original price" according to a 2015 article by Kopf.

ITEC 2201, a required introductory level information system (IS) course for IT major students, has an expensive textbook that costs around \$178.55. BUSA 3100, an equivalent MIS course required for students in the School of Business, has a textbook that costs around \$250.00. Due to the high cost of the textbook materials, we have observed that students are having financial difficulties paying for textbooks materials and often delay their purchases of the materials until later in the semester, which can significantly affect the students progress in class. A 2017 survey conducted by Wakefield Research among "1000 students from four-year colleges" (McKenzie 2017) indicated that such delay of accessing the needed textbook materials severely hindered students' learning progress and performance in the class. In our case, about 30% to 40% of students received D, F, W was due to those students' delay in accessing the textbook materials. Our goal is to see a decrease from 30% to 40% of students receiving such grades, especially because ITEC 2201 is the sole prerequisite for upper-level courses such as Information Security, Introduction to Database, Introduction to Network, and System Analysis and Design. It is imperative that we, as instructors on record, remove all possible barriers to students' academic performance in order to ensure success in their IT career.

Another important reason for the need for the project is that 40% to 50% of chapter contents in a traditional textbook cannot be covered in class because they are either too much for students to learn in one semester, lack the depth that is needed to meet the course objectives, or irrelevant to the level of the courses that are taught. For example, in ITEC 2201, the textbook has gone through four rounds of revisions over the past five years. Still, 46% of the latest edition of the textbook contents are left unused for the course as of Spring 2019. The same case happens in BUSA 3100 as well. Among a total of 14 chapters, almost half of textbook contents are not covered by the end of a semester. For those chapters that are used in the course, there is often a lack of depth in coverage that is required and essential to prepare students for the upper level IT courses.

Overall, we need textbook and materials for our introduction to IS/MIS course that are customized, engaging, and inexpensive.

Project's transformative impact on the course and department

Due to the availability of many free Introduction to IS/MIS learning resources, the investigators of this proposal feel those expensive traditional textbooks can be completely replaced by free online materials. Through the efforts of a team of committed experts, the existing required materials can be appropriately selected, organized, customized, and revised. The source of online materials will be chosen from MERLOT; Galileo; USG libraries; GGC's online subscriptions from an academic database such as ACM; IEEE; online education website such as Lynda.com; and digital libraries such as Books 24x7, to name a few. In addition, open source ERP software and freeware (some of those are free to our students due to the academic licenses offered by the vendors) will be used to support the students' hands-on and experiential-learning needs in those IS/MIS introduction courses. Ultimately, with the combination of those materials and software, we are confident that our project will help students get a much holistic learning experience.

The investigators of this proposal estimate that the transformation will affect over 300 students in ~15 sections of ITEC 2201 course and 60 students in 2 sections of BUSA 3100 courses by the end of the project. In addition, the team will make the revised textbook and accompanying materials available to 5 full-time and 1 part-time ITEC faculty, as well as USG faculty members who can access the transformed textbook through the ALG repository. Materials will also be made available to the faculty outside of USG through the GGC Wiki website. It is expected that the course materials provided by the team will be accessible by typing "ITEC 2201 or Introduction to Information System" through any internet search engine. The anticipated result is that students and faculty outside of GGC will be able to access such materials by typing these keywords in any search engine.

Students will not be required to purchase an expensive textbook; instead, they will be able to obtain high-quality reading and hands-on materials as well as applicable multimedia (video) learning contents to facilitate learning in ITEC 2201 at no cost to them. For BUSA 3100, after implementation of this project, we estimate a maximum \$120 fee could still remain for students to purchase a proprietary online Excel training software that is currently required in that specific course. Part of our plans will be to develop, evaluate, and disseminate the use of a free alternative training material/software to accompany the BUSA 3100 materials. We hope to submit a proposal for such a project

in ALG's next proposal round. The transformation will hopefully empower the participating faculty to create engaging, active learning activities that could lead to better problem-solving skills development, retention, and overall student success.

Project's transformative impact on the institution

GGC as an open-access college that provides quality inexpensive higher education services to thousands of students and their families who cannot afford expensive tuition and fees. Offering free or reduced textbooks is critical to our students' success in light of the fact that 76% of our students receive some type of Financial Aid as of January 3, 2018, according to our financial aid office's report. However, the high textbook prices can still deter many students from accessing the quality education provided by GGC and achieving college success. This project removes students who want to major in IT completely from worries of paying the expensive textbook fee in order to take a crucial and mandatory IT course, ITEC 2201. It also minimizes the textbook financial burden for students who want to take BUSA 3100 for MIS major at the school of business. Finally, this project provides customized learning materials that not only meet the unique learning needs of our students but also help them better prepare for the upper level IT courses such as ITEC 3200 - Introduction to Database, ITEC 3350 - Digital Commerce, ITEC 3700 - Systems Analysis and Design.

Transformation Action Plan

The course includes the following major topics:

Chapter 1 - Introduction to Information Systems

Chapter 2 - Organizational Strategy, Competitive Advantage, and Information Systems

Chapter 3 - Information Security

Chapter 4 - Data and Knowledge Management (Big Data)

Chapter 5 - Business Intelligence and Data Analytics

Chapter 6 - Networks. Wireless and Cloud Computing

Chapter 7 - E-Business and Digital-Commerce

Chapter 8 - Enterprise Resource Planning (ERP), CRM, and SCM

Chapter 9 - Software Development Methodology and Project Management

Chapter 10 - Ethics and Privacy

Additional readings and other material dealing with hands-on, problem-solving learning materials (e.g., SAP, Excel, and Access exercises, simulation games) will be integrated into the course in order to increase student learning effectiveness. An outline of the activities and expectations for the students will be included in the Syllabi for ITEC 2201 and BUSA 3100. Each investigator is given a number of appropriate introduction to IS topics to search over online learning sources (e.g., MERLOT, Galileo, USG libraries, GGC's online subscriptions) to identify, review, and select relevant learning materials. Then, all those selected materials will be compiled together and go through a preliminary evaluation process to ensure their appropriateness to the course to be taught. The evaluation result would help the next step of updating the current instructional design, curriculum alignment, accessibility setup, etc.

Course and Syllabus Redesign Phase. The team will compile sources of materials, which will include e-books from MERLOT, GGC e-book library, etc.; relevant IS training videos (e.g., Excel, MySQL video training courses) from Lynda.com, YouTube, etc. and IS research articles from ACM, IEEE and the training ERP software from SAP online academic center. The GGC library will be asked to assist in creating a page of links and files that will be made available to the public on the Library's publicly-available page on the GGC website.

The compiled materials (revised textbook and supplemental materials) will be piloted to 5 sections of ITEC 2201 to be taught by Drs. Yi Ding, Yaqua Xu, and Madhushri Banerjee in fall 2019. The revised textbook will be piloted in the remaining 10 ITEC 2201 sections, taught by all three team members, in spring and summer 2020.

Team members' roles

Dr. Yi Ding will coordinate the project development activities. He will work with Drs. Madhushri Banerjee and Yaquan Xu to select the materials and in cooperating with other colleagues and the library in the development of activities and the implementation of the assessment plan.

All three personnel will act as subject matter experts and instructors of record. Topics taught in ITEC 2201 will be assigned to each member, and each will obtain open source, no-cost materials for the different topics. The assignments are:

- Dr. Yi Ding (ITEC 2201 course coordinator) will lead the development of Chapter 2, 3, 6, 10.
- Dr. Yaquan Xu (BUSA 3100 instructor) will lead the work on Chapter 5, 7 and 8.
- Dr. Madhushri Banerjee will lead the work on Chapter 4 and 9.
- Chapter 1 will require the collaborative contributions of all members of the team. The team members are acquainted with the materials in all of these areas and will have the opportunity to substantively contribute to each subject matter. Materials will be collected from online sources discussed in previous sections.

Plan for providing access

The team will work with the Library to link the materials to the suitable online sites. The team will publicize the availability of the materials to the School of Science and Technology faculty in fall 2019. Drs. Yi Ding, Yaqua Xu, and Madhushri Banerjee will be responsible for these activities.

During spring 2019, the team will begin collecting the materials and developing all of the hands-on activities. The materials will be posted on D2L and the GGC Wiki sites, which can be accessed by all ITEC faculty. Any new materials will also be accessible to the public through Galileo Open Learning Materials and the ALG repository.

Quantitative & Qualitative Measures

GOAL A: Improve the textbook affordability for ITEC 2201 and BUSA 3100 by replacing the current expensive traditional textbooks used in those courses with low to zero-cost customized learning material.

Qualitative Measure, Methods, and Tools

Use the Class Climate survey to collect students' feedback about the impact of no-cost materials on their course completion. We will ask such questions as, "How useful are the materials to the course completion?" "How important a role did the cost of the book play in your decision to enroll in the course?" A Likert scale (Strongly disagree to Strongly agree) will be used for such statements as: "Zero-cost of the textbook materials motivated me to better plan for the course taken", "Zero-cost of the textbook materials motivated me to complete the course goals on time."

Quantitative Measure, Methods, and Tools

- Use D2L tools to track the frequency of access and use.
- Monitor the number of ITEC 2201 and BUSA 3100 sections taught by team members and the number of students enrolled and completing the course.

Track the price of the textbooks utilized for the courses, the number of students participating in the project, and the eventual savings resulting from the project.

GOAL B: Improve student retention, performance, and preparation for the next ITEC level by providing customized learning material to meet student learning needs.

Qualitative Measure, Methods, and Tools

Require subject-based feedback on: (1) what can be improved; (2) what has worked well; and (3) highlight the most interesting topic or activities. Students will be asked to write a short report on addressing these questions. Dr. Ding already uses this journal format to successfully improve his student commitment to learning.

Quantitative Measure, Methods, and Tools

- Collect data on dropout, fail, and withdrawal rates in the experimental group (the classes where the transformation is implemented) versus the control group. The data will help gauge their level of preparedness.
- Use a questionnaire to gauge the perceived level of preparedness and increase in confidence.

GOAL C. Improve learning engagement by training students in the usage of the library system such as MERLOT, Galileo, USG libraries, and Lynda.com.

Qualitative Measure, Methods, and Tools

- Use student journals to ask about the topics they have studied through the library system.

Quantitative Measure, Methods, and Tools

Use the Class Climate survey to ask the frequency and duration of using the library system. The questionnaire will include questions such as: "How many times did you use the library system to prepare for class every week ... to prepare for a project?" "On average, how many hours per week did you use the library system for research ... for learning?"

Timeline

For implementation in Spring 2019 Semester

Spring 2019

3/31/2019

Complete a draft of the free text material with above listed 10 chapters and relevant complimentary study materials such as reading assignments, lecture notes, training video clips, hands-on labs, and homework assignments.

4/30/2019

Complete draft course level material development including newly designed syllabus, test banks, and the final exam.

5/20/2019

Develop a questionnaire to evaluate the impact of using the low to zero-cost text materials for ITEC 2201 and BUSA 3100.

Summer 2019

8/10/2019

Complete one pilot study with proposed low to zero cost text material on 2 sections during the summer 2019 semester, reaching ~40 students. Complete the assessment data collection. Complete the revision of the draft low to zero cost textbook material.

Fall 2019

12/15/2019

Complete the course offering in the fall semester in 8 sections, affecting 160 students. Complete the survey data collection. Complete student evaluation.

Spring 2020

Administer the transformed textbook in the final 8 sections that will reach 160 students. The questionnaires will be administered, data collected, and data analyzed. The final report will also be prepared. Any remaining funds will be used to partially cover expenses for a presentation at the AMCIS 2019 conference. The presentation's objective is to disseminate the findings of the project and encourage others to transform their syllabus into a no-cost-to-student textbook.

Budget

A. Type of Grant: Standard-Scale Transformation

B. Budget request: \$10,800

C. Budget Justification:

(1) Personnel: \$10,000

Funds are requested to compensate for the investigators' work and activities beyond normal teaching load in order to successfully complete the project. Each team member will receive ~\$3,333.33 each. The requested amount will cover each team member's pay and fringe benefits (FICA/SS, FICA Med, and Retirement). The team will be compensated for work related to their tasks:

- Dr. Yi Ding will coordinate the project and will serve as the lead in the development of Chapters 2, 3, 6, 10.
- Dr. Yaquan Xu will lead the work on Chapter 5, 7 and 8.
- Dr. Madhushri Banerjee will lead the work on Chapter 4 and 9.
- Chapter 1 will require the collaborative contributions of all members of the team.

(2) Travel expense: \$800

Funds are requested to cover the travel expenses of at least two team members' travel to the kick-off event. The fund will cover per diem, mileage, and hotel, and any other materials needed.

(3) Grant Total: \$10,800

Sustainability Plan

The project team remains committed to the project by continuing to review and revise the materials even after the project is over to ensure that the materials are current and meet the requirements of a quality information systems course. The project team also plans to sustain the project by disseminating the availability of the vetted course materials/resources to other faculty teaching the upper-level ITEC courses and business faculty teaching the equivalent MIS course. We will accomplish this by conducting presentations during the SST and SBA faculty meetings, as well as conversations with colleagues in the field.

The letter of support provides continued institutional support for the ITEC 2201 and BUSA 3100 project since it helps eliminate or reduces the cost for our students and provides better preparation for higher level IT courses.

Acknowledgment

Grant Acceptance

[Acknowledged] I understand and acknowledge that acceptance of Affordable Learning Georgia grant funding constitutes a commitment to comply with the required activities listed in the RFP and that my submitted proposal will serve as the statement of work that must be completed by my project team. I further understand and acknowledge that failure to complete the deliverables in the statement of work may result in termination of the agreement and funding.

January 3, 2019

1000 University Center Lane
Lawrenceville, GA 30043
Phone: 678-407-5602
www.ggc.edu

To: Grant Review Committee
Affordable Learning Georgia, University Systems of Georgia
Re: Textbook Transformation Grant

Dear Committee,

As Dean of the School of Science and Technology at Georgia Gwinnett College (GGC), I would like to give my full support to Drs. Yi Ding, Yaquan Xu, and Madhushri Banerjee's **Affordable Learning Georgia (ALG)** Textbook Transformation grant application, which also involves joint effort from Dr. Nannette Napier at school of business.

This project will develop no-cost learning materials for introductory Information Systems course -ITEC2201, a required core ITEC course for ITEC major and minor students at School of Science and Technology, and Management Information Systems - BUSA 3100, an important elective course for business majors, such as those in Management Information Systems (MIS) at the school of business.

The no-cost-to-student ITEC 2201 and low cost-to-student BUSA 3100 project will benefit over three hundred sixty GGC students every year. The result of this project will be an improvement in our students' retention, completion, and progression. In addition, the free resources will help improve the course's enrollment among non-IT majors such as MIS majors, where cyber security education plays an important role.

Once this project is completed, the no-cost learning materials will be maintained and made accessible to our students through our online course administration systems, such as GeorgiaVIEW Desire2Learn and GGC Wiki. Therefore, the efforts of this project will be sustained over the long term.

I sincerely hope that the ALG committee will consider the project for funding. If you have any questions, please do not hesitate to contact me.

Sincerely,



Dr. Thomas G. Mundie
Dean, School of Science and Technology
Georgia Gwinnett College



Textbook Transformation Grants, Round Thirteen
(Spring 2019 –Spring 2020)
Proposal Form and Narrative

APPLICANT, TEAM, AND SPONSOR INFORMATION

Institution(s)	Georgia Gwinnett College
Applicant Name	Yi Ding
Applicant Email	yding1@ggc.edu
Applicant Phone #	678-464-6931
Applicant Position/Title	Associate Professor of IT
Submitter Name	Cathy Hakes
Submitter Email	chakes@ggc.edu
Submitter Phone #	678-407-5875
Submitter Position	Executive Director, Office of Research and Sponsored Programs

Please provide the first/last names and email addresses of all team members within the proposed project. Include the applicant (Project Lead) in this list.

	Name	Email Address
Team Member 1	Yi Ding	yding1@ggc.edu
Team Member 2	Yaquan Xu	yxu@ggc.edu
Team Member 3	Madhushri Banerjee	mbanerje@ggc.edu

If you have any more team members to add, please enter their names and email addresses in the text box below.

Please provide the sponsor’s name, title, department, and institution. The sponsor is the provider of your Letter of Support.

Dr. Thomas Mundie, Dean, School of Science and Technology, Georgia Gwinnett College

PROJECT INFORMATION AND IMPACT DATA

Title of Grant Project	Development of Affordable Textbook for Introduction to Information Systems Course
Type of Grant	Standard-Scale Transformation / No-or-Low-Cost-to-Students Learning Materials

Requested Amount of Funding	\$10,800
Course Names and Course Numbers	Introduction to Information Systems, ITEC 2201 Management Information Systems, BUSA 3100
Final Semester of Project	Spring 2020
Average Number of Students Per Course Section Affected by Project	20
Average Number of Sections Affected by Project in One Academic Year	18
Total Number of Students Affected by Project in One Academic Year	360
Average Number of Students Affected per Summer Semester	40
Average Number of Students Affected per Fall Semester	160
Average Number of Students Affected per Spring Semester	160
Title/Author of Original Required Materials	Business Driven Technology by Paige Baltzan. Required for ITEC 2201, \$178.55 Principles of Information Systems by Stair Required for BUSA 3100, \$250
Original Total Cost Per Student	Cost: \$178.55 for ITEC 2201 student Cost: \$250 for BUSA 3100 student Total: \$428.55
Post-Project Cost Per Student	Cost: \$0 for ITEC 2201 student Cost: \$120 for BUSA 3100 student Total: \$120
Post-Project Savings Per Student	Saving: \$178.55 for ITEC 2201 student Saving: \$130 for BUSA 3100 student Total: \$308.55
Projected Total Annual Student Savings Per Academic Year	\$53,565 for ITEC 2201 student \$7,800 for BUSA 3100 student Total: \$61,365
Using OpenStax Textbook?	No

NARRATIVE SECTION

1. PROJECT GOALS

The goals of the project are to:

- A. Improve the textbook affordability for ITEC 2201 and BUSA 3100 by replacing the current expensive traditional textbooks used in those courses with low to zero-cost customized learning materials.
- B. Improve student retention, performance, and preparation for the next ITEC level by providing customized learning material to meet student learning needs.
- C. Improve learning engagement by training students in the usage of the library system such as MERLOT, Galileo, USG libraries, and the Lynda.com.

2. STATEMENT OF TRANSFORMATION

Overview of the Transformation

Since the 1970s, textbooks have progressively increased in cost. In fact, textbook prices have risen faster than costs in other sectors. For instance, textbook cost since the 1970s has increased 812% compared to medical services' increase of 575%, new home costs by 325%, and consumer price index by 250% (Zook, 2017). When comparing majors with the most expensive books, an article by Robert Tolmach (2016) listed Computer Science major as number 11 in the list out of 31 majors, while Business (Economics) is number 1. The sad news is that editions of computer textbooks can go out of date quite quickly, and books in these fields (science/social science books), which are usually most expensive new, “retain proportionally the **least amount of their original price**” according to a 2015 article by Kopf.

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Another important reason for the need for the project is that 40% to 50% of chapter contents in a traditional textbook cannot be covered in class because they are either too much for students to learn in one semester, lack the depth that is needed to meet the course objectives, or irrelevant to

the level of the courses that are taught. For example, in ITEC 2201, the textbook has gone through four rounds of revisions over the past five years. Still, 46% of the latest edition of the textbook contents are left unused for the course as of Spring 2019. The same case happens in BUSA 3100 as well. Among a total of 14 chapters, almost half of textbook contents are not covered by the end of a semester. For those chapters that are used in the course, there is often a lack of depth in coverage that is required and essential to prepare students for the upper level IT courses.

Overall, we need textbook and materials for our introduction to IS/MIS course that are customized, engaging, and inexpensive.

Project's transformative impact on the course and department

Due to the availability of many free Introduction to IS/MIS learning resources, the investigators of this proposal feel those expensive traditional textbooks can be completely replaced by free online materials. Through the efforts of a team of committed experts, the existing required materials can be appropriately selected, organized, customized, and revised. The source of online materials will be chosen from MERLOT; Galileo; USG libraries; GGC's online subscriptions from an academic database such as ACM; IEEE; online education website such as Lynda.com; and digital libraries such as Books 24x7, to name a few. In addition, open source ERP software and freeware (some of those are free to our students due to the academic licenses offered by the vendors) will be used to support the students' hands-on and experiential-learning needs in those IS/MIS introduction courses. Ultimately, with the combination of those materials and software, we are confident that our project will help students get a much holistic learning experience.

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3. TRANSFORMATION ACTION PLAN

The course includes the following major topics:

- Chapter 1 - Introduction to Information Systems
- Chapter 2 - Organizational Strategy, Competitive Advantage, and Information Systems
- Chapter 3 - Information Security
- Chapter 4 - Data and Knowledge Management (Big Data)
- Chapter 5 - Business Intelligence and Data Analytics
- Chapter 6 - Networks. Wireless and Cloud Computing
- Chapter 7 - E-Business and Digital-Commerce
- Chapter 8 - Enterprise Resource Planning (ERP), CRM, and SCM
- Chapter 9 - Software Development Methodology and Project Management
- Chapter 10 - Ethics and Privacy

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Course and Syllabus Redesign Phase. The team will compile sources of materials, which will include e-books from MERLOT, GGC e-book library, etc.; relevant IS training videos (e.g., Excel, MySQL video training courses) from Lynda.com, YouTube, etc. and IS research articles

from ACM, IEEE and the training ERP software from SAP online academic center. The GGC library will be asked to assist in creating a page of links and files that will be made available to the public on the Library's publicly-available page on the GGC website.

The compiled materials (revised textbook and supplemental materials) will be piloted to 5 sections of ITEC 2201 to be taught by Drs. Yi Ding, Yaqua Xu, and Madhushri Banerjee in fall 2019. The revised textbook will be piloted in the remaining 10 ITEC 2201 sections, taught by all three team members, in spring and summer 2020.

Team members' roles

Dr. Yi Ding will coordinate the project development activities. He will work with Drs. Madhushri Banerjee and Yaquan Xu to select the materials and in cooperating with other colleagues and the library in the development of activities and the implementation of the assessment plan.

All three personnel will act as subject matter experts and instructors of record. Topics taught in ITEC 2201 will be assigned to each member, and each will obtain open source, no-cost materials for the different topics. The assignments are:

- Dr. Yi Ding (ITEC 2201 course coordinator) will lead the development of Chapter 2, 3, 6, 10.
- Dr. Yaquan Xu (BUSA 3100 instructor) will lead the work on Chapter 5, 7 and 8.
- Dr. Madhushri Banerjee will lead the work on Chapter 4 and 9.
- Chapter 1 will require the collaborative contributions of all members of the team.

The team members are acquainted with the materials in all of these areas and will have the opportunity to substantively contribute to each subject matter. Materials will be collected from online sources discussed in previous sections.

Plan for providing access

The team will work with the Library to link the materials to the suitable online sites. The team will publicize the availability of the materials to the School of Science and Technology faculty in fall 2019. Drs. Yi Ding, Yaqua Xu, and Madhushri Banerjee will be responsible for these activities.

During spring 2019, the team will begin collecting the materials and developing all of the hands-on activities. The materials will be posted on D2L and the GGC Wiki sites, which can be accessed by all ITEC faculty. Any new materials will also be accessible to the public through Galileo Open Learning Materials and the ALG repository

4. QUANTITATIVE AND QUALITATIVE MEASURES

GOAL A: Improve the textbook affordability for ITEC 2201 and BUSA 3100 by replacing the current expensive traditional textbooks used in those courses with low to zero-cost customized learning material.

Qualitative Measure, Methods, and Tools

Use the Class Climate survey to collect students' feedback about the impact of no-cost materials on their course completion. We will ask such questions as, "How useful are the materials to the course completion?" "How important a role did the cost of the book play in your decision to enroll in the course?" A Likert scale (Strongly disagree to Strongly agree) will be used for such statements as: "Zero-cost of the textbook materials motivated me to better plan for the course taken", "Zero-cost of the textbook materials motivated me to complete the course goals on time."

Quantitative Measure, Methods, and Tools

- Use D2L tools to track the frequency of access and use.
- Monitor the number of ITEC 2201 and BUSA 3100 sections taught by team members and the number of students enrolled and completing the course.
- Track the price of the textbooks utilized for the courses, the number of students participating in the project, and the eventual savings resulting from the project.

GOAL B: Improve student retention, performance, and preparation for the next ITEC level by providing customized learning material to meet student learning needs.

Qualitative Measure, Methods, and Tools

Require subject-based feedback on: (1) what can be improved; (2) what has worked well; and (3) highlight the most interesting topic or activities. Students will be asked to write a short report on addressing these questions. Dr. Ding already uses this journal format to successfully improve his student commitment to learning.

Quantitative Measure, Methods, and Tools

- Collect data on dropout, fail, and withdrawal rates in the experimental group (the classes where the transformation is implemented) versus the control group. The data will help gauge their level of preparedness.
- Use a questionnaire to gauge the perceived level of preparedness and increase in confidence.

GOAL C. Improve learning engagement by training students in the usage of the library system such as MERLOT, Galileo, USG libraries, and Lynda.com.

Qualitative Measure, Methods, and Tools

Use student journals to ask about the topics they have studied through the library system.

Quantitative Measure, Methods, and Tools

Use the Class Climate survey to ask the frequency and duration of using the library system. The questionnaire will include questions such as: "How many times did you use the library system to prepare for class every week ... to prepare for a project?" "On average, how many hours per week did you use the library system for research ... for learning?"

5. TIMELINE

For implementation in Spring 2019 Semester

Spring 2019

3/31/2019

Complete a draft of the free text material with above listed 10 chapters and relevant complimentary study materials such as reading assignments, lecture notes, training video clips, hands-on labs, and homework assignments.

4/30/2019

Complete draft course level material development including newly designed syllabus, test banks, and the final exam.

5/20/2019

Develop a questionnaire to evaluate the impact of using the low to zero-cost text materials for ITEC 2201 and BUSA 3100.

Summer 2019

8/10/2019

Complete one pilot study with proposed low to zero cost text material on 2 sections during the summer 2019 semester, reaching ~40 students. Complete the assessment data collection. Complete the revision of the draft low to zero cost textbook material.

Fall 2019

12/15/2019

Complete the course offering in the fall semester in 8 sections, affecting 160 students. Complete the survey data collection. Complete student evaluation.

Spring 2020

Administer the transformed textbook in the final 8 sections that will reach 160 students. The questionnaires will be administered, data collected, and data analyzed. The final report will also be prepared. Any remaining funds will be used to partially cover expenses for a presentation at the AMCIS 2019 conference. The presentation's objective is to disseminate the findings of the project and encourage others to transform their syllabus into a no-cost-to-student textbook.

6. BUDGET

A. Type of Grant: Standard-Scale Transformation

B. Budget request: \$10,800

C. Budget Justification:

(1) Personnel: \$10,000

Funds are requested to compensate for the investigators' work and activities beyond normal teaching load in order to successfully complete the project. Each team member will receive ~\$3,333.33 each. The requested amount will cover each team member's pay and fringe benefits (FICA/SS, FICA Med, and Retirement). The team will be compensated for work related to their tasks:

- Dr. Yi Ding will coordinate the project and will serve as the lead in the development of Chapters 2, 3, 6, 10.
- Dr. Yaquan Xu will lead the work on Chapter 5, 7 and 8.
- Dr. Madhushri Banerjee will lead the work on Chapter 4 and 9.
- Chapter 1 will require the collaborative contributions of all members of the team.

(2) Travel expense: \$800

Funds are requested to cover the travel expenses of at least two team members' travel to the kick-off event. The fund will cover per diem, mileage, and hotel, and any other materials needed.

(3) Grant Total: \$10,800

7. SUSTAINABILITY PLAN

The project team remains committed to the project by continuing to review and revise the materials even after the project is over to ensure that the materials are current and meet the requirements of a quality information systems course. The project team also plans to sustain the project by disseminating the availability of the vetted course materials/resources to other faculty teaching the upper-level ITEC courses and business faculty teaching the equivalent MIS course. We will accomplish this by conducting presentations during the SST and SBA faculty meetings, as well as conversations with colleagues in the field.

The letter of support provides continued institutional support for the ITEC 2201 and BUSA 3100 project since it helps eliminate or reduces the cost for our students and provides better preparation for higher level IT courses.

8. REFERENCES

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