Using SAP Integration to Enhance Student Learning of Financial Accounting Concepts

Bob Haverland
Lorraine Gardiner
Dalton State College
Agenda

• Overview
• SAP UA Materials Integration
• Pedagogy details
• Future research
• Discussion
Introductory financial accounting course (ACCT 2101)

- Required for all BBA majors
- Multiple sections (3-5)
  - Common learning objectives
  - Common textbook
  - Collaborative coordination
  - No common exams
Approach to Course Learning Objectives

• Focus on accounting fundamentals
• Performance measured with Chapter 1-5 exam results
• Course sections cover an additional 5-6 chapters
  • Devoted to specific topics
  • Build on the basics
SAP GBI AIS Curriculum

- Process-based activities with accounting-related focus
  - Journal entries
  - Procure to pay
  - Order to cash
  - Segregation of duties
- Journal entries materials chosen for ACCT 2101
- Closely tied to topics in Chapters 1-4

SAP GBI AIS Curriculum – Activities for Journal Entries

- Examine chart of accounts
- Enter beginning account balances
- Analyze business transactions
- Make transactional entries
- Analyze adjusting entries
- Make adjusting entries
- Display trial balance
- Simulate closing the books

Objectives for SAP Integration into ACCT 2101

- Increase student performance on course learning objectives
- Improve students’ career opportunities with SAP exposure
Pedagogical Objectives for SAP Integration

• Resolve obstacles and technical issues related to SAP software use
• Provide materials supporting success on SAP assignment work outside class
• Develop in-class team analysis and preparation activities
• Coordinate SAP assignments with textbook content and homework assignments
Course Learning Objectives

1. Articulate the use and users of accounting information
2. Understand and apply basic accounting theory, terminology, and GAAP
3. Apply analytical and computational skills to accounting problems
4. Analyze business transactions using the accounting equation
   \[ A = L + E \]
5. Prepare a basic set of financial statements
6. Understand and perform steps in the accounting cycle
7. Identify the characteristics of the different forms of business organizations
8. Account for assets, liabilities, and equity of service and merchandising firms
Chapters 1-2

Textbook Chapters 3 - 4

Activities Used in ACCT 2101

- Examine chart of accounts
- Enter beginning account balances
- Analyze business transactions
- Make transactional entries
- Analyze adjusting entries
- Make adjusting entries
- Display trial balance
- Use SAP adjusted trial balance to prepare financial statements

Evolution of SAP Materials Integration

- Inputs for improvements each semester
  - Student survey
  - Student emails and comments

- Spring 2017 Kickoff
  - No graded assignment
  - In-class lab during finals week (2-person teams)
  - Tasks
    - Enter beginning account balances
    - Make transaction and adjusting entries (values provided by instructor)
Evolution of SAP Materials Integration (2017-2018)

- Fall 2017
  - Graded individual assignment (outside class)
  - Timing: after Chapter 5, in 1st half of semester
  - Same tasks as Spring 2017

Spring 2018 additions
- More support materials, including voice-over slides
- Analysis of transactions and adjusting entries (in teams)

- Fall 2018 & Spring 2019
  - SAP assignment performed in four phases
  - Faculty feedback after each phase
  - Phases 1-3 in 1st half of semester
    - Phase 1 (after Chapters 1 & 2)
    - Phase 2 (after Chapter 4)
    - Phase 3 (after Phase 2)
  - Phase 4 (part of final exam)
Student Survey

- **Purpose**: Provide input for course improvement
- **Administered**: Fall 2017 - Fall 2018
- **7-point Likert scale**
  - Strongly Disagree ... Strongly Agree
  - Neither as midpoint
Survey Results 1: Reinforce Course Learning Objectives
Survey Results 2: Successful Independent SAP Entries

Clear SAP Instructions

Would Prefer Proctored Lab

Would Prefer Independent Work
Survey Results 3: Use of In-Class Student Teams

Can Explain Assignment

Teamwork Enhanced Experience
Survey Results 4: Journal Entries without Textbook Aids

- **Successful Trans. Entries**
  - Fall 2017: Agree: 100%, Disagree: 0%, Neither: 0%
  - Spring 2018: Agree: 90%, Disagree: 10%, Neither: 0%
  - Fall 2018: Agree: 80%, Disagree: 20%, Neither: 0%

- **Successful Adj. Entries**
  - Fall 2017: Agree: 100%, Disagree: 0%, Neither: 0%
  - Spring 2018: Agree: 90%, Disagree: 10%, Neither: 0%
  - Fall 2018: Agree: 80%, Disagree: 20%, Neither: 0%

- **Assignment Overly Complex**
  - Fall 2017: Agree: 50%, Disagree: 50%, Neither: 0%
  - Spring 2018: Agree: 50%, Disagree: 50%, Neither: 0%
  - Fall 2018: Agree: 50%, Disagree: 50%, Neither: 0%
Survey Results 5: Assignment Coordination with Textbook

**Comfort with Software in General**

- **Fall 2017**
  - Agree: 20%
  - Disagree: 60%
  - Neither: 20%
- **Spring 2018**
  - Agree: 30%
  - Disagree: 50%
  - Neither: 20%
- **Fall 2018**
  - Agree: 40%
  - Disagree: 40%
  - Neither: 20%

**Complete Entries First in Excel**

- **Fall 2017**
  - Agree: 40%
  - Disagree: 40%
  - Neither: 20%
- **Spring 2018**
  - Agree: 30%
  - Disagree: 50%
  - Neither: 20%
- **Fall 2018**
  - Agree: 35%
  - Disagree: 45%
  - Neither: 20%
Survey Results 6: Resolving Obstacles and Technical Issues
Survey Results 7: Introduce SAP for Career Opportunities

- **Good Idea to Use SAP in Course**
- **Knowing SAP Useful to Career**
- **Include SAP Assign. on Resume**
- **Look Forward to More SAP Assign.**
Phases (Instructor Feedback After Each Phase)

Phase 1
- Perform authentication and initial navigation
- Review chart of accounts
- Enter beginning balances outside class

Phase 2
- Analyze business transactions and events (in-class teams)
- Make transactional entries outside class

Phase 3
- Analyze adjusting entries in class (teams)
- Make adjusting entries outside class

Phase 4
- Prepare financial statements from SAP adjusted trial balance (final exam)
SAP Activity Coordination Across Sections

• 18 sections taught Spring 2017 – Spring 2019
  • 11 sections taught by Bob
  • 7 sections taught by other faculty
  • 14 sections included the SAP activities

• Bob coordinates the SAP integration across sections
  • Startup faculty meetings
  • Instructional material sharing
  • Proctoring for in-class activities
Future Research

- Fall 2019
  - Change SAP assignment timing
  - Begin measurement of impact on student learning
Discussion

• Questions?
• Comments?