CHALLENGES OF TEACHING ACCOUNTING INFORMATION SYSTEMS

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ABSTRACT

With SOX, HIPPA and similar laws being enacted by the government it is becoming increasingly important for accounting students to understand data processing systems. They need to learn data, processes and how data flows between departments, systems etc to generate compliance reports. This expertise is provided by accounting information course (AIS) by the universities. This is a hybrid course which takes contexts from many disciplines, notably information systems and accounting. However teaching AIS course is a challenge. Based on our experience we provide some insights hat maybe useful for professors planning to teach AIS course.

INTRODUCTION

As corporate scrutiny intensifies it is becoming mandatory for accounting students to have indepth knowledge of accounting "processes" within an organization. In addition, many large accounting firms are becoming service companies providing "full" services including risk mitigation, forensics and compliance. According to Ernst & Young, "Enterprise governance, risk and compliance (GRC) represents the actions that an organization takes to achieve its performance objectives and manage risk." In addition, they stress that an organization cannot survive without information and support systems. According to Deloitte Inc., another service oriented accounting firm, "Emerging technologies impact how clients are served, how employees communicate and how companies market. They also shape security and privacy risks and solutions" implying knowledge of emerging technology is becoming essential for accountants. AICPA report emphasizes the role of IT, ".. because technology plays such a vital role in business success, the CPA increasingly is called upon to assess and explain its impact on the management of financial information. It is clear that future accounting student must learn information systems. Universities are meeting these demands by including accounting information system (AIS) as part of their accounting curriculum. AIS course should help students learn and identify "processes" as data and documents move through the accounting systems. It is important to teach critical thinking, IT leveraging and life long learning to accounting students. Bolt-Lee and Foster (2003), however, reported that entry level accountants are not well prepared, especially in the areas of changing technology. The question becomes what should an AIS course include and how it should be taught? This paper presents pedagogy used to teach accounting students and resulting challenges. We provide insights for instructors who are or maybe interested in teaching this course. The next section describes the AIS course and the following section compares the delivery modes and the experiment.

ACCOUNTING INFORMATION SYSTEMS (AIS)

AIS is defined as a course that, "...combines the study and practice of accounting with the design, implementation, and monitoring of information systems. Such systems use modern information technology resources together with traditional accounting controls and methods to provide users the financial information necessary to manage their organizations" (Henson, 2006). AIS course, for an accountant it is an accounting course with IT application and for an MIS educator it is an IT course with accounting applications (Romney; Cherrington & Denna, 1976). It is important to

find common ground between the two. Many accounting texts have identified AIS related topics that should be covered in an AIS course. Given MIS, Accounting requirements and AICPA requirements, the AIS course at a mid western university, developed following learning objectives:

- Identify the primary methods of collecting and processing data about an organization
- Illustrate the use of a database management system
- Identify and illustrate system development and documentation techniques
- Explain computer based information systems control
- Understand and illustrate the use of accounting forensics in a fraud situations
- Identify system development and system analysis techniques
- Understand the XBRL importance

As evidenced by the course objective, AIS includes information systems with accounting applications. This course is a *a*typical accounting course since there is no number crunching and in many cases outcomes maybe approximates (or many) rather than absolutes. In addition to knowledge of accounting and information technology (IT), the AIS course requires competency in several software. At a minimum it would require following software competencies:

- Database
- Accounting software
- Graphic software

Since many students do not have IT background they need to develop three competencies related to each of these software:

- Develop problem solving skills
- Learn software
- Apply it to accounting applications

Next section describes the AIS course experiment at the university and discusses desirable competencies that will prepare students for a successful AIS course.

The AIS Course Experiment

The AIS course is taught both in class and online. The current course covers following major topical areas in the context of AICPA core competencies:

- Decision Modeling:
- Risk Analysis
- Leveraging technology
- Measurement
- Reporting

Teaching Pedagogies:

In addition to traditional methods, we are using following pedagogies in this course.

- role playing
- cases
- videos

Many authors (Cronin_Jones, 2000; Gangel, 2009,Blanter, 2009, Blanter et. al, 1997) have recommended role-playing as a viable teaching pedagogy. While stressing the importance of role

playing, Blanter et al (1997), summarized, ".. it (role playing) can help them (students) become more interested and involved, not only learning about the material, but learning also to integrate the knowledge in action, by addressing problems, exploring alternatives, and seeking novel and creative solutions". Accounting forensic is taught using role playing.

ANALYSIS AND RESULTS

We found that accounting students have a different mindset and are looking for "exact" numbers and answers. However information systems is not an exact science. There can be many correct feasible answers for the same problem. This creates problems and many students lose interest. To avoid this we recommend using use cases, videos and role playing. In fact some concepts are better taught by role playing and some by using case studies. We propose following pedagogy for the following major topical areas. These areas are based on the AICPA core competencies:

- Decision Modeling: use case analysis
- Risk Analysis: use role playing
- Leveraging technology: use cases
- Measurement: Videos and demonstration
- Reporting: hands on experience

The above pedagogy is based on our experience. We found a mix of cases, video, role playing, lab sessions keep students interested in the course and at the same time makes learning feasible. Every professor, of course, will have to customize the above approach for their environment. We are continually improving the AIS course. Next we plan to incorporate XBRL in the course and use lab for this purpose. We did find that complexity of database normalization can be quite challenging for students and we recommend to avoid those concepts.

CONCLUSION

Advances in information technology are automating accounting systems, reports and management support systems. In addition, more and more computer-based frauds are committed. It is important for accounting students to understand digital accounting processes, data management, automated reporting, digital fraud and accounting forensics. Many functional areas have come under scrutiny for fraud, embezzlement of funds, information gaps, etc., and many are committed to using information technologies to solve them. AIS course should help student understand how data and documents move and how controls can be placed in the process to mitigate risks. This paper is an attempt in that direction.

REFERENCES

Provided on request