

A Review of E-Accounting Education for Undergraduate Accounting Degrees

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Abstract

The aim of this study was to investigate the level and content of e-business education provided in accounting study plan. Content analysis was performed for course outline for accounting application on computers and accounting information systems based on four dimensions: prerequisite, status, course description and topic coverage. An analysis of 21 syllabi of accounting application on computers and accounting information systems revealed that little attention has been provided to e-accounting education to undergraduate students. The results showed inconsistent content of course outline for the accounting application on computers among universities. Whereas the results indicated that level of agreement of the content of accounting information systems is higher than the previous module. The study recommended the necessity of linking between professional bodies and university education in order to retain accounting department survival.

Keywords: accounting education, syllabi, accounting information system, accounting application on computers, content analysis, undergraduate degree, course outline, curricula

1. Introduction

Recent years have seen a rapid growth in the importance of electronic-business (e-business) as the internet increasingly offers a cheaper way of doing business (Glover et al., 2001). Therefore, number of studies highlighted the necessity of integrating technological changes and developments with business environment into accounting education (i.e., Chang & Hwang, 2003; David et al., 2003; Coe, 2006). Celsi and Wolfinbarger (2010) highlighted that business school should integrate e-commerce and technology issues throughout the curriculum.

In turn, universities are expected to fulfill the demands of both business and prospective students to produce graduates with competitive knowledge and skills (Fallows & Steven, 2000; Gammi & Kirkham, 2008). This leads to continuous needs and calls for accounting educators to modify their study plan to keep it up to date with the technological changes in the business world. However, despite the increasing importance of e-business and the appearance of new majors in business school; management information system and e-business, e-accounting has received a very little attention in accounting education in Jordanian universities.

The current study shed lights over the gap in previous studies by analyzing the extent and the content of e-accounting courses taught as a standalone module within bachelor degree in accounting by conducting content analysis for 21 syllabi covering accounting information systems and accounting application on computers.

The remaining of the study consists of the following. Section 2 describes background of the study and reviews previous study. Section 3 outlines the methodology used and data collection process. Section 4 presents a discussion of the main results. The final section summarizes, concludes and provides implication of the study.

2. Background and Literature Review

Accounting education has been changed from a knowledge-based education to a process-oriented program. They hope to effect changes to result in improved intellectual, interpersonal skills, and a better understanding of the broad picture in a business (Doost, 1999). Albrecht and Sack (2000) pointed out that accounting education should change to add value to our students and the community. In universities context, Steadman and Green (1995) stated that changes in accounting curricula must be supported by the accounting and non-accounting

faculty of the college or division in order to prepare graduates for articulating goals and strategies in the business world. Marriott (2004) discussed the use of information technology in accounting education to address some of the challenges facing accounting profession. Alternative professional organizations have called for IT competent graduates and have voiced concerns over whether accounting education effectively and efficiently prepare accountants to meet the challenges (AAA, 1986; AECC, 1990; IFAC, 1995). They acknowledge the need for greater development of IT skills in accounting undergraduate degrees.

Alternative previous studies have addressed the importance of information technology in accounting education (Albrechi & Sack, 2000; David et al., 2003; Chang & Hwang, 2003; Rezaee et al., 2005; Rezaee et al., 2006; Kotb & Roberts, 2011). For example, Albrechi and Sack (2000) highlighted that accounting curriculums are not adequately covered the impact of technology on business education. David et al. (2003) ranked e-commerce module as one of the most important technological changes for the curriculum design in accounting program. Chang and Hwang (2003) indicated that very few information technology (IT) topics are covered in the accounting curriculum, even though most of accounting instructors recognize the value of IT in accounting. Rezaee et al. (2005) documented that relies on the views of academicians and practitioners' e-commerce education is an important topic in teaching accounting for student. Rezaee et al. (2006) revealed that accounting program offers e-commerce courses emphasizing a wide range of skills, perspective, teaching methods and cognitive content which should help accounting educators in preparing students for the challenges waiting them in their future career. In a recent study of Kotb and Roberts (2011), they found that e-business is briefly covered in the undergraduate accounting degree in their content analysis of 119 syllabi for bachelor degree in accounting for universities of the UK and the Republic of Ireland.

However, Senik and Broad (2008) discussed the main factors affect the development of IT skills in the accounting program and concluded that educators' personal motivation and interest is the major factor influencing the IT skills development initiatives in teaching.

3. Research Design

The present study focusses on e-business education within bachelor degree in accounting taught as a standalone module. Therefore, the syllabi of accounting information system and accounting application on computers were reviewed and analyzed in order to explore the extent and content of e-accounting in teaching for undergraduate level.

In doing so, the websites of all universities (10 public universities, 14 private universities and 2 regional universities) were checked to explore whether these universities offer bachelor degree in accounting or not (MOHE, 2013). The study curricula for each university were reviewed to check if accounting information system and accounting application on computers modules taught for the bachelor degree. Then, the syllabi of these courses were downloaded if they are publically available. This phase yielded 7 outlines (4 accounting information systems and 3 accounting applications on computers). Further, a request for all required syllabi was sent via emails to all universities with an accounting department, A total of 14 syllabi were received (7 AIS, and 7 accounting application on computers). A second request was performed via telephone calls 3 weeks later from the first request for the not responded universities. This phase results in response of 5 universities were neither accounting information system nor accounting applications on computers courses were offered in their study plan. And also other two universities presented no accounting application of computers module in their curricula. Thus, the final sample consists of 21 syllabi from 13 universities, comprising 11 accounting information systems and 10 accounting application on computers. Table 1 presents the data collection process.

Table 1. Data collection process

| | Accounting Information System | | Accounting Application on Computers | | Total | Percentage |
|--------------------|-------------------------------|------------|-------------------------------------|------------|-------|------------|
| | No. | Percentage | No. | Percentage | | |
| Module offered | 11 | 42.3% | 10 | 38.5% | 21 | 40.4% |
| Module not offered | 5 | 19.2% | 7 | 26.9% | 12 | 23.1% |
| No response | 10 | 38.5% | 9 | 34.6% | 19 | 36.5% |
| Total | 26 | | 26 | | 52 | 100% |

It appears from the above table that 40.4% of the universities in Jordan offer e-accounting courses at the undergraduate level. And 23.1% of the universities do not offer e-accounting in their study plan.

Before presenting the results, it is worth to indicate that all universities with bachelor degree in accounting require 75 compulsory credit hours in accounting. It is appeared in all study plans for first degree in accounting, number of e-accounting courses varies from 1–2 among universities (4%–8%). This indicates that e-accounting education is still under the required level in universities which does not meet the integration of technological changes in accounting education.

Consistent with Rezaee et al. (2006) and Kotb and Roberts (2011) content analysis was performed for the collected syllabi based on four dimensions: prerequisite, status (core or optional), course description and topic coverage. The results are discussed in the next section.

4. Discussion of the Results

This section of the study presents the results of content analysis based on four dimensions: prerequisite, status (core or optional), course description and topic coverage. First of all, it is worth to mention that duration of bachelor degree in accounting for both public and private universities in Jordan is four years.

4.1 Prerequisite

The accounting application on computers course quite consistent in their specification of prerequisites, 90% of the analyzed syllabi required background in computer application and financial accounting before registered in this course. Only 10% of the syllabi required advanced accounting as a prerequisite of this course. For accounting information system module, 81.8% of the available syllabi show that the prerequisite of this module is accounting application on computer, only the prerequisite of one university is course related to management information system and another university the prerequisite for its module is financial information system.

4.2 Status

80% of accounting application on computers courses is core, which implies the importance of this module in the study plan for graduate level. 90% of all the available syllabi of accounting information system indicate that this course is compulsory course in study plan for undergraduate level.

4.3 Course Description

I first reviewed each of the 10 syllabi for course descriptions and learning objective. Table 2 provides objectives and minor description were identified in the syllabi of accounting application on computer. These descriptions are: (1) Transferring from manual system to computerized system; (2) Using MS Excel in accounting application; (3) Improving student skills in using accounting programs; (4) Introducing students to an integrated computerized accounting system.

Table 2. Course description—accounting application on computers

| | No. | Percentage |
|--|-----|------------|
| Transferring from manual system to computerized system | 7 | 70% |
| Using MS Excel in accounting application | 6 | 60% |
| Improving student skills in using accounting programs | 6 | 60% |
| Introducing students to an integrated computerized accounting system | 3 | 30% |
| Improving students' skills and knowledge in computer | 5 | 50% |

In general the Table 2 shows variation in the objective among universities. The above table shows that 70% of analyzed syllabi agreed on the objective of transferring students from manual system to computerized system as main course description

Table 3 offers the minor description of the available syllabi of accounting information system.

Table 3. Course description—accounting information system

| | No. | Percentage |
|---|-----|------------|
| Emphasize practical application of AIS concepts | 10 | 90.9% |
| Raise understanding and using information technologies | 6 | 54.5% |
| Cover internal control system | 7 | 63.6% |
| Provide information about computer crime and emerging issues | 4 | 36.4% |
| Design business process and represent them with documentation tools | 3 | 27.3% |
| understanding of the related concepts of transactions cycles | 7 | 54.5% |

The above table presents that 90.9% of the syllabi contain information related to practical application of AIS concepts among universities. And the least agreement related to the objective of designing business process and representing them with documentation tools.

4.4 Topic Coverage

The content of accounting application on computers and accounting information system syllabi were also examined. Table 4 lists all the most common topics for accounting application on computers.

Table 4. Topic coverage—accounting application on computers

| | No. | Percentage |
|---|-----|------------|
| Introduction to MS Excel | 6 | 60% |
| Chart of accounts | 3 | 30% |
| Application for preparing financial statements | 5 | 50% |
| Application for depreciation assets | 5 | 50% |
| Application for payroll system | 4 | 40% |
| Application for loan amortization | 5 | 50% |
| Application for time value of money | 5 | 50% |
| Application for financial statement analysis | 7 | 70% |
| Design and work with application for budget | 4 | 40% |
| Sales and receivable applications | 6 | 60% |
| Payable and purchase applications | 6 | 60% |
| Introduction to computerized accounting program | 4 | 40% |
| Using QuickBooks Pro in teaching | 2 | 20% |
| Using Easy soft in teaching | 2 | 20% |

It can be concluded from the above table that the typical course contains considerably fewer topics, this partially related to the style of the syllabi. That is most of the syllabi focused on accounting application on computers. This results due to the fact that most of syllabi concentrate on transferring from manual system to computer system. This result is inconsistent with Razaee et al. (2006) and Kotb and Roberts (2011) who found large number of topics described in their modules. Table 4 indicates that the highest coverage related to application for financial statement analysis.

Table 5. Topic coverage—accounting information system

| | No. | Percentage |
|---|-----|------------|
| Accounting information system an overview | 11 | 100% |
| Overview of transaction processing and enterprise resource planning systems | 10 | 90.9% |
| Systems documentation techniques | 9 | 81.8% |
| Relational databases | 10 | 90.9% |
| Computer fraud and abuse techniques | 4 | 36.4% |
| Control and accounting information system | 10 | 90.9% |
| The revenue cycle | 9 | 81.8% |
| The expenditure cycle | 8 | 72.7% |
| The production cycle | 5 | 45.5% |
| General ledger and reporting cycle | 4 | 36.4% |
| The human resources management and patrol cycle | 4 | 36.4% |
| Database design | 6 | 54.5% |
| Accounting on the internet | 4 | 36.4% |

It appears from the above table that 7 topics have been repeated in several university syllabi for accounting informant system, these topics are: (1) Accounting information system an overview, (2) overview of transaction processing and enterprise resource planning systems, (3) systems documentation techniques, (4) relational databases, (5) control and accounting information system, (6) the revenue cycle, (7) the expenditure cycle.

Overall, the level of agreement over the content of topics for accounting information system is higher than that was found in accounting application on computer. This due to the fact that 91% of the available course outlines use the textbook of accounting information system related to Romney and Steinbart.

While these courses include a number of e-accounting related topics, there is a very general aspect of e-accounting. All the syllabi show a very limited diversity of e-accounting within the course outline of accounting information system.

5. Conclusion and Implications

The objective of this study was to review the course description and content of e-accounting courses taught within bachelor degree in accounting. The results of content analysis revealed that e-accounting models are briefly covered in the study plan of accounting for undergraduate level. Only 1 or 2 courses at maximum were taught as a standalone module in accounting curricula.

The results of content analysis of accounting application on computer and accounting information system showed that the level of agreement of the course description and coverage of topics over accounting information system is higher than accounting application on computers. The analysis of the available syllabi of accounting application on computers revealed that each university teaches this module using alternative accounting system and distinctly different materials. That is, non-standardization of syllabi is another important problem. Because there is no obligation in the designing of the course outline that business schools' use can consist of different courses.

Although most universities teach e-accounting courses in its curricula, most schools have not paid attention to upgrading their classroom environment. Therefore, future studies should address the relevant atmosphere to teach e-accounting courses in our universities.

Despite the fact that internet is fundamentally change the way in which organizations operate their business and the reaction of accounting program in adopting e-accounting education in their study plan, almost all the syllabi exclude programming and internet security standards from its content. It is clearly appeared that changes in accounting education are slowly than the changes taking place in the business environment (Johnson et al., 2003). Therefore, it is important to link universities with professional bodies in Jordan such as Jordan Association of Certified Public Accountants to keep our students up to date with changes taking place in marketplace. University education curricula can be viewed as vehicles where updated knowledge is delivered in order to keep

our students competing the in the business environment (Naidoo, 2003; Grayson, 2004).

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