

Information Technology Skills Development for Accounting Graduates: Intervening Conditions

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Abstract

This paper discusses the findings on factors perceived to mitigate educators from incorporating IT skills in their taught unit(s). The factors are discussed under three main categories, which are academic staff-based barriers, environmental-based barriers and student-based barriers.

These barriers should be considered in order to encourage the integration initiatives and its successful implementation. These findings make significant contribution towards enhancing IT skills development and innovation in accounting education.

Keywords: Accounting education, Information technology skill, Grounded theory, Barrier

1. Introduction

Traditional technical accounting skills are essential, yet no longer the main skill set for emerging accountants. New skills, such as soft skills include verbal and written communications, interpersonal, relationship building and leadership as well as hard include Information Technology (IT) proficiency and the ability to understand, design and communicate new accounting systems using the latest technologies become the predominant skills for modern accountants.

The issue of developing IT skills in accounting education has been a progressing alarm of many parties including professionals, educational bodies as well as accounting educators all over the worlds (AAA, 1986; AECC, 1990; IFAC, 1995, 2003; Salleh, 2000; Chang & Hwang, 2003; Ahmed, 2003; Lin et al., 2005, Jones & Abraham, 2007). The literature suggests that the skills are still below the minimum expectation outlined by the educational bodies such as IFAC (IFAC, 1995, 2003, 2007) as well as professionals such as AICPA (Chang & Hwang, 2003; Ahmed, 2003; Lin et al., 2005, Jones & Abraham, 2007). This issue has motivated this study to explore the factors that intervene educators from integrating IT skill in their taught unit(s).

2. Background Study and Literature Review

Progressive initiatives and efforts to strengthen IT integration in accounting education have been revealed in the literature. For example, Collier et al. (1990), Crawford & Barr (1998) and Salleh (2000) discuss alternative uses of computer in accounting education. There are professional accounting bodies and academic organisation such as BAA-SIG accounting education (Note 1), BAAEC (1996) (Note 2), Dearing (1997), and QAA (2000a, 2000b, 2000c) in the case of UK as well as IFAC (1995a, 2003, 2007), an international organisation that encourage and

provide some guidance on IT skills development for accounting graduates. There are also some educators (these included, but not limited to Marriot, 1992; Marriot et al., 1999; Sangster, 1992, 1995a, 1995b; Sangster & Mulligan, 1997; Larres & Radcliffe, 2000; Salleh, 2000; Larres et al., 2003, Broad et al., 2004) who report on their actual experience in integrating IT into their accounting units taught.

Despite these motivated and rigorous efforts, the provision of IT in university teaching and learning of accounting is still lacking compared to the minimum requirement encouraged by professional bodies (Albrecht & Sack, 2000; Ahmed, 2003; Chang & Hwang, 2003; Lin et al., 2005, Jones & Abraham, 2007). For example, in the case of the UK's universities, research by Ahmed (2003) shows low levels of IT/IS skills/knowledge (competency) integration in the accounting degree programmes. Thus, it is important to investigate the factors that influence the IT skills development in the degree programme.

2.1 Key Success and Failure Factors

Many existing studies have identified several key success and failure factors of the implementation of IT integration in accounting curricula. Some of the key success factors are identification of the right skills to develop (IFAC, 1995b; Lyons, 1998), high interest and commitment from the most senior policy makers (IFAC, 1995b; Lyons, 1997), clear communication of requirements (IFAC, 1995b; Aisbitt and Sangster, 2005), usage of commercial software (IFAC, 1995b; Aisbitt and Sangster, 2005), team commitment (IFAC, 1995b; Aisbitt and Sangster, 2005), strong evaluation and feedback instruments (IFAC, 1995b; Aisbitt and Sangster, 2005), adoption of integration across curriculum approaches (IFAC, 1995b), meaningful subject areas (Gazely and Pybus, 1997; Aisbitt and Sangster, 2005), interest and attitude of academics towards IT skills (Gazely and Pybus, 1997), the optimum benefits of IT (Sangster, 1992; Lyon, 1997).

There are also some key failure factors mentioned in the literature. For example, factors related to staff resistance to the innovation. Acceptance that integration is desirable and a willingness to experiment are two major staff sources of resistance related to IT integration (Sangster, 1992). Among the issues include conflicting demand on staff time, unacceptable learning methods to students, unwillingness to accept other than traditional teaching methods and so forth. Staff time is considered as a true constraint (Sangster, 1992). It is also argued that long-serving members of staff are unlikely to change their teaching approach of their own preference, and more recent members of staff who have come through the research route without any business experience may have limited knowledge of the practical aspects of accounting and IT. The attitude that IT skills are somehow not appropriate to any great extent in a degree course causes difficulties for educators who want to see graduates achieve a decent level of IT skill.

Another problem is related to resources. Although IT related modules are highly favoured by the accounting and finance students, they are not offered or offered only to a restricted number of students, because of limited resources both in terms of staff and infrastructure (Gazely and Pybus, 1997). Aisbitt and Sangster (2005) address the technology infrastructure problems such as software incompatibility, access problems and technical support as the main problems experienced in integrating Internet-based on-line assessment.

Besides those, some other contributing key failure factors are an overcrowded accounting academic programmes and lack of institutional support (Long and MacGregor, 1996; Baker and White Jr., 1999; Allen, 2000), a number of extant educational issues and beliefs, such as change resistance, dominant use of scientific methods in accounting education, which trains rather than educates, and passive knowledge acquisition (Kelly et al., 1999).

3. Research Objective and Research Question

The above issues have motivated this research, which seek to appreciate the process of developing IT skills through accounting courses taught in one of traditional university in UK. One major research question is what are the issues preventing educators from incorporating IT skills in their teaching?

4. Research Methodology

This is an exploratory study informed by an interpretive enquiry tradition with the adoption of the grounded theory (Strauss and Corbin, 1998) as the predominant approach in the research process. The grounded theory approach is used because of the nature of the subject enquiry, which investigate the process phenomena of IT skills development. According to Creswell (1998) this type of study, which observes how the people act and react, take actions or engage in process in response to phenomena is greatly benefited from grounded theory approach. Furthermore, majority of the studies are informed by quantitative studies based on the use of questionnaire as a main instrument. While it can be used for example to detect variations between the elements under investigation such as year of study, courses followed and university attended (Marriott et al., 1999), identify the gap (Ahmed, 2003; Lin et al., 2005), it does not allow for an analysis of why such differences and gap emerged. This issue can be tackled and explored

through uses of multi-method qualitative study such as focus group, interviews and observations, which would enable such insights to be gained (Marriott et al., 1999).

4.1 Data Collection

Data were collected using multiple qualitative approaches, including interviews, focus groups, observations and document reviews, focusing respondents in one traditional university in the UK and involving one big four accounting firm. The methods were utilised, as they are better ways of gaining insight in trying to understand the issues. The focus groups were used to collect data from students and the personal interviews were employed to gather data from educators and practitioners. Documents reviews and observations were great data collection instruments, which were used to compliment the focus groups and interviews.

Data collection has been progressively conducted since May 2004 begins with reviewing documents and attending meeting of Under Graduate Education Committee (UGEC). In the time span several documents were reviewed such as students' handbooks, course outline of the Accounting and Finance Degree Programme and job application forms of various organisations. Three focus groups were formed consisting of six to ten students. Two sessions of focus groups were conducted for each group and attended by three to five students per session. The first session was conducted in October 2004 and another session was held in April 2005 for the purpose of validating the data from the first session and seeking for further clarification as well as additional information. Forty interviews in total were conducted with eighteen academic staff, three supporting staff, five practitioners including two who involved with graduates recruitment, seven alumni graduated from 2001-2005 and two students. For a more rigorous comparative analysis, three of the interviews were conducted with academic staffs from School of Education and School of Engineering Science.

This helped to understand the phenomena in a broader scope. Besides that, a number of observations were made in some classes and informal discussions with students and educators, which complement the understanding on data, gathered in the formal interviews and documents reviews.

5. Intervening Conditions: Perceived Barriers to Integration

From the data, some factors emerged and were perceived as mitigating the IT skills development process; these were categorised as perceived barriers to integration. All of them were considered as internal issues since they were raised by internal sources, which are under the control of the school that offer the accounting programme. Most of the factors seem more related to the educators compared to other parties. The issues are divided into three subcategories, academic staff-based barriers, environmental-based barriers and student-based barriers.

The barriers are further discussed in the following subsections.

5.1 Academic Staff-based Barriers

A few issues related to staff appeared to slow down and in some cases stop the integration process. Among these issues was lack of personal interest among the academic staff in changing their teaching approaches, including using IT. This issue became a major barrier to the development of IT skills for students through the teaching process.

Next, most educators had a lack of knowledge regarding which skills to develop and which IT packages were available for introduction to students in higher education. Although some of them had been introduced to or had come across a package, they were not familiar with using it as exemplified by the following quotation:

"...But I think the bottle neck that will prevent me from integrating more IT skills would be not knowing what further IT skills I could develop, secondly, not knowing what other IT applications are out there erm and learning about them and integrating them."

[Accounting Educator B]

Consequently, they were not keen to introduce the package in their taught units. The situation was worse when these particular educators also had no interest in using IT, as they would make no effort to learn it. A few educators belong to this group and being acknowledged by their colleagues as representative in the below quotation:

"...But the main hindrance there would be, the member of staff teach, [name of member of staff] who you speak to, erm is not the most IT aware person. And so it is very unlikely that, that member of staff would want to integrate IT because he just didn't feel comfortable with it."

[Accounting Educator B]

Last but not least, there was the issue of age profile. Soon-to-retire academic staffs were perceived as another barrier to IT skills integration. Considering that this group was not familiar with IT, it might be hard for them to see the benefits of it or to pursue the knowledge and skills to be able to integrate it into their teaching. As, they were going

to retire soon, such changes offered them no reward. Thus, these mixed issues mediated and even sometimes prevented initiatives to incorporate IT into the teaching process. This situation was made to look worse when the educators from the other two schools (School of Education and School of Engineering Science) found that almost all of their staffs were interested in IT innovation, had a reasonable amount of IT knowledge regardless of their age profile and included IT in their teaching.

The next issues to consider are the barriers related to the environment.

5.2 Environmental-based Barriers

Environmental-based barriers included issues related to the type of university, time, syllabus constraints and cost, which were all considered as situated within the internal boundaries of the phenomena. Educators had to divide their time over many tasks, including research, teaching and administrative jobs. The issue was perceived as creating problems since the tasks had different weights concerning promotion. For instance, in a traditional university, research-based activities, including applying for grants and research supervision were considered as highly recognisable tasks, whether this was stated or not. They were culturally built into the academic environment of the traditional university. Thus, this situation created tension for educators, as they had problems managing and allocating their time between tasks, finally ending up with little or no time spent on teaching innovation, including integrating IT. They normally chose to allocate time for research because it was a priority and made a recognisable contribution towards promotion, compared to teaching innovation. Besides time pressures to fulfil various tasks, educators were also faced with time pressure to complete the syllabus.

Many educators raised the issue of the tight nature of the syllabus as a factor that prevented them from including IT-based activities in their teaching as responded by one of the educators as follows:

“The current syllabus is very intensive. There is no space in the current syllabus, it is packed enough to fit with other content of skill-based”

[Accounting Educator T]

In addition, some of the syllabus required educators to be always alert to changes, such as in pronouncements on accounting standards, which impacted the content of the syllabus. The substantial time spent monitoring such changes and updating the contents of the syllabus prevented them from making other changes in teaching, including developing transferable skills such as IT skills.

Some educators also perceived that cost was another factor preventing them from integrating IT in their teaching. Developing skills in using particular software meant some investments had to be made to acquire software, and that meant an extra cost to the school or department. Moreover, they were uncertain as to whether the budget would allow it, especially when the use of the software would be limited to a few hours of teaching. This perception of cost in terms of the extra amounts to be incurred and the uncertainty regarding budget allocation became a barrier for some educators to incorporating IT into their teaching.

The next issue to be considered is the barriers to development, which were related to students.

5.3 Student-based Barriers

There were two factors relating to students that discouraged educators from using IT or developing IT skills in their teaching. One of the factors was low participation of students in IT-based activities. For example, many students did not take advantage of the initiative and access course documents provided through the online Blackboard system. Some educators also experienced low participation from students in terms of completing IT-based class exercises. Only a few students showed interest by trying to complete them. These situations were frustrating for some educators and discouraged them from making further IT innovation in their teaching.

Another barrier associated with students was the belief that students already possessed or should possess IT skills gained from their previous formal or informal learning experience. Thus, the educators assumed there was no need to develop the skills again in higher education programme, to avoid repetition. Furthermore, some of them believed that it was more the responsibility of students to develop the skills by themselves or wait until they had job training. These perceptions actually prevented educators from taking initiatives regarding IT skills development.

It emerged that lack of personal motivation and interest in IT among academic staffs was the biggest hurdle or impeding factor. The rest were considered as minor or side issues, which could be moderated or eliminated once the educators had a strong interest in IT. At the moment, the combined force of the various factors has a great impact on the process of developing IT in teaching.

This section has elaborated the contextual conditions, which have acted as obstacles that restrain or limit educators' initiative to incorporate IT in teaching and learning. Motivation and interest of individual educators perceived to be

the most hindrance factor which influence initiative towards teaching innovations as illustrated in the quotation below:

“Erm it does come down to the motivation of the individual unit coordinator and the willingness of that person to integrate it.”

[Accounting Educator B]

6. Conclusion

This study attempts to understand the process of developing and enhancing IT skills for accounting graduates through interpretive approach using grounded theory analysis. The emerging substantive theory suggests that educator-related factors such as educators' interest, knowledge, skills and age profile, environmental-related issues including, traditional type university, research priority, tight and academic-based syllabus as well as cost constraint and student-related factors such as inactive participation of students' in IT-based activities and perception on IT skill-equipped students have moderated and sometimes prevented educators from IT skills inclusion in teaching and learning process.

This study makes significant contributions in accounting education development in terms of intervening factors that should be tackled in order to improve IT skills enhancement and innovation in accounting degree programme. Besides the discouraging issues related to environment and students, the issues related to educators should be the major focus as they are the key drivers in teaching innovation.

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Notes

Note 1. Accounting Education Special interest group is established under British Accounting Association to undertake activities such as organising conference, publishing proceeding in the overall aim of enhancing the educational base of accounting practice which includes greater awareness of IT development. [Online] Available: http://www.shef.ac.uk/~baa/sigs/accounting_education/accounting_education_sig.htm(May 5, 2005)

Note 2. In 2001, BAAEC is abolished. However, its contribution in encouraging the IT skills integration in curriculum through accreditation process is highly acknowledged.