



Integrating ICT skills and tax software in tax education

A survey of Malaysian tax practitioners' perspectives

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Abstract

Purpose – This study aims to examine the ICT skills needed by a fresh accounting graduate when first joining a tax firm; to find out usage of electronic tax (e-tax) applications in tax practice; to assess the rating of senior tax practitioners on fresh graduates' ICT and e-tax applications skills; and to solicit tax practitioners' opinion regarding integrating ICT skills and tax software into a tax course.

Design/methodology/approach – An online survey method was used to collect the data. An online survey was distributed to 385 tax practitioners who worked in the accounting/tax firms that participated in the university's internship programs. A total of 112 usable questionnaires were analyzed.

Findings – The survey found that the three most important ICT skills with which fresh graduates should be familiar before graduating were spreadsheet software, word-processing software, and e-mail. The result shows that the usage of e-tax applications is still not pervasive in tax practice. Overall, senior tax practitioners rated fresh accounting graduates' ICT skills as "average". Both senior (75 percent) and junior (73.7 percent) tax practitioners agreed that ICT skills and tax software should be integrated in the tax course offered by the universities.

Practical implications – This study has provided insights to policy makers and tax educators to revamp the existing tax curriculum, and to introduce learning tax software in classes, and to place more emphasis in imparting ICT skills in tax education.

Originality/value – Scholarly study on tax education and ICT is scant. Little is known about whether the existing tax education is adequate in meeting the needs of the employers in the job market. This paper has emerged to fill a knowledge gap.

Keywords Communication technologies, Skills, Accountancy, Computer software, Taxes, Malaysia

Paper type Research paper

Introduction

To date, the use of information communication technologies (ICT) is prominent in business and tax settings. Notably, tax authorities around the world are using electronic tax administration systems to interact with taxpaying public in tax collection, administration and compliance settings. Hence, it was argued that it is crucial for fresh accounting graduates to be computer and ICT literate in order to meet the demand of the business environment (Engelbrecht, 2005; Meade, 2002; Rubin, 1999).



Tax education is one of the important elements in accounting education. However, several studies uncovered that the current tax curriculum has failed to equip future accounting graduates with the necessary tax knowledge and technical skills to perform competently in accounting and tax practice (Howieson, 2003; Lai, 2008; Miller and Woods, 2000; Ott and Donnelly, 1999; Tan and Veal, 2005). Tax practitioners in the USA asserted that fresh graduates should be equipped with a high level of technical skill, associated with strong non-technical skill (Rubin, 1999). Especially, in the era of ICT, each fresh graduate should possess adequate computing or ICT skills (Engelbrecht, 2005; Greenstein and McKee, 2004; Stoner, 1999).

In the developed countries, several studies have been conducted to gather and analyze the views of tax practitioners and tax educators with regards to tax education. For example, in the US (Hite and Hasseldine, 2001; Schwartz and Stout, 2001), the UK (Craner and Lymer, 1999; Miller and Woods, 2000), Australia (Juchau and Neale, 2001) and New Zealand (Tan and Veal, 2005). Schwartz and Stout (2001) found that in the US, the level of preparedness of entry-level graduates in the accounting and tax practice to be marginal. They argued that most of the fresh graduates were not well prepared in the area of taxation when they first joined tax firms. Miller and Woods (2000) and Tan and Veal (2005) also found that the tax coverage taught in the UK New Zealand failed to equip fresh graduates with the necessary skills needed in tax practice. Juchau and Neale (2001) argued that tax education should address the education needs of accounting professionals and impart knowledge and skills to meet the demand and conditions of accounting practice in the new millennium. In essence, tax educators and practitioners have the same opinion that accounting graduates should possess adequate tax knowledge before joining any accounting and tax firms.

In contrast, very little studies had been carried out to examine tax education and ICT from the developing nation like Malaysia. At the time of this study, little is known if upon graduation, fresh accounting graduates are well equipped with the relevant ICT skills needed in tax practice. There is a need to examine whether the existing content coverage of tax courses are adequate in preparing accounting students for tax practice in the era of ICT. This is important to ensure that accounting students are well trained on campus to get ready for the rapid changes in the business environment, in order to be competent and productive at work. Hence, this study aims to fill up a knowledge gap.

Research objectives

This study aims to identify the types of computing and ICT skills a fresh accounting graduate needs to acquire prior to graduation, to find out usage of electronic tax (e-tax) applications in tax practice; to assess the rating of senior tax practitioners on ICT and e-tax applications skills of a fresh graduate; and to solicit tax practitioners' opinion on integrating ICT skills and tax software in tax course on campus.

Literature review

About 25 years ago, Bhaskar and Kaye (1985) asserted that the impact of ICT in the daily life of individuals was undeniable and it would affect accounting education. However, to date, the notion of integrating ICT knowledge and skills into all areas of accounting education, including tax education, remained insufficient. In line with Bhaskar and Kaye (1985), Borthick and Clark (1987) also called for the integration of computers into accounting education to improve students' learning and to reduce

instruction time and cost. In addition, the use of technology can assist in providing students with appropriate ICT competencies, as ICT has drastically changed the accounting profession as well change the way businesses are conducted (Jordan, 1999). The success of accounting graduates depends on their computing/ICT skills – as such, skills are useful to become knowledge workers.

In September 2001, the International Federation of Accountants (IFAC) Education Committee issued an Exposure Draft, IEG-1. It stated that “Information technology (IT) is pervasive in the world of business. Being knowledgeable in this technology is an imperative for the professional accountant” (IFAC, 2001, p. 5). Pragmatically, accounting/tax education needs to integrate technological changes to stay relevant. Accounting that includes tax education is described as outdated, obsolete and in need of urgent modification as it is failing to keep up with these changes (Albrecht and Sack, 2000).

For tax education to stay abreast with the dynamic business environment, tax courses must be able to keep up with the changes in technology (Meade, 2002). As such, active learning methods should be used in delivering tax subjects. For example, the use of computer-based instruction (CBI) can promote independent learning among students in inculcating lifelong learning skills. Larres and Radcliffe (2000) examined the impact of CBI tax software on a professionally-accredited undergraduate taxation course in the UK. They found that CBI to be an effective and interesting learning tool in achieving the designated learning outcome. However, they also noted that students commented that tax software contained insufficient technical details and was inadequate as a delivery medium for theoretical and conceptual materials.

Baker and White (1999) conducted a study to determine the current usage of the internet in accounting courses. The survey was sent to the accounting departments' chairpersons in the US i.e. the head of department. They were asked to distribute the questionnaires to the professors and lecturers in the accounting department. The results showed that professors and lecturers in undergraduate accounting information systems and graduate auditing courses mostly required access to the internet. Interestingly, tax educators were primarily interested in requiring students to access the Inland Revenue Service (IRS) web site to keep abreast on recent developments in tax policy and law.

Undoubtedly, the impact of ICT has required students to possess adequate computing skills. Stoner (1999) conducted a study to elicit the necessary ICT skills accounting students should have upon their entry to higher education. Stoner (1999) found using e-mail and the internet were the most common computing skills possessed by students. However, the study also revealed that students possessed inadequate skills in using spreadsheet and word processing software. As such, Stoner (1999) suggested that accounting educators should integrate the ICT skills i.e. spreadsheets and word processing software in teaching core subjects, such as finance, accounting and taxation as these were the essential “toolbox” skills for future accountants.

In the USA, Burnett (2003) surveyed employers and accounting practitioners to ascertain which skills were important for new accounting graduates, and which educational innovations were effective. The findings showed spreadsheet software, Windows, and word processing software were the top three important technology skills for new accounting hires to possess. On top of that, critical thinking and communication skills were found to be the most important soft skills new accounting

graduates should possess. These findings were in support of the AECC's Position Statement Number One (AECC, 1990). Both employees and accounting practitioners agreed that an internship was the best methods to promote active learning and exposing students to the business world.

Further, Marriott *et al.* (2004) examined the use of the internet in accounting education from the students' perspective. Marriot *et al.* (2004) used mix method to seek students' views on potential applications of the internet in education. Based on the quantitative study, the finding showed that there was a significant increase in students' reported voluntary use of the internet and e-mail. However, the qualitative study showed that students refused to consider being taught via the internet i.e. e-learning as they preferred the teacher-centred teaching and learning approach. The finding somewhat suggested that the success of virtual learning i.e. e-learning is greatly dependent on student's acceptance and willingness to participant.

Engelbrecht (2005) evaluated the implementation of an e-learning Master's Program in Taxation in South Africa. The study focused on three criteria: the usage of technology as well as the design and flexibility of the tax program. An online survey was conducted and sent to first and second year students. Based on the results, it showed that students were positive about the use of technology but they were reluctant to take responsibility for their own learning. The students argued that the use of e-learning would create a lack of interaction between students and teachers. Therefore, the students preferred a teacher-centred teaching and learning approach.

In a different study, Lai (2008) examined the state of technology readiness and level of internet self-efficacy of professional accounting students in Malaysia. The results revealed that professional accounting students were neither techno-ready nor highly techno-resistant. In general, these professional accounting students had a moderate level of internet self-efficacy and computing experience. Therefore, the educators should be more innovative in integrating ICT effectively in teaching and learning.

Tax educators were also urged to promote the use of tax software among students in preparing tax returns. For example, Dresnack and Briggs (2002) contended that in order to enable tax education to correspond with the dynamic business environment, accounting graduates should be taught computerised tax skill especially in filing tax return electronically. According to Greenstein and McKee (2004) as well as Lin *et al.* (2005), the ability to use tax software was one of important computing skills perceived by the accounting students and professionals.

A body of literature suggests that with the increase of economic globalization and the advancement of ICT, tax education should be redesigned; the curriculum content and pedagogy should develop knowledge and skills in order to meet the needs of professionals in the ever-changing business environment. For instance, increasing students' abilities in learning computing and ICT skills, communication proficiency and expanding the knowledge and skill components in the tax curriculum have been suggested for accounting education including tax education reform (AECC, 1990; Albrecht and Sack, 2000; Baharun *et al.*, 2006; Lin *et al.*, 2005; Tan and Veal, 2005). It is argued that today's tax accountants should possess a broad set of skill and knowledge to be successful and competitive in the work environment. Particularly, with the rapid advancement in ICT, integration of knowledge of various disciplines is important to broaden accounting graduates' mindset and knowledge base (Lin, 2008). This would

enable them to become lifelong learners' and to continually upgrade their knowledge in meeting the challenges from the constantly changing business environment.

Collectively, literature review found many scholars have pointed out that tax education is inadequate and has room for improvement (see Meade, 2002; Rubin, 1999; Tan and Veal, 2005). With the advancement of ICT and globalization, taxation issues have become more complex. Taxpayers are using electronic filing system to prepare and submit tax returns via the internet. Undoubtedly, tax accountants who possessed adequate ICT skills are greatly in demand by the accounting profession and marketplace. Therefore, tax education should be revamped to foster the greater use of technology-enhanced delivery modes and to encourage collaboration between tax academics and practitioners (Meade, 2002; Rubin, 1999; Schnee, 2002). Studies such as Tan and Veal (2005), Engelbrecht (2005), Lin *et al.* (2005) and Greenstein and McKee (2004) have asserted that tax knowledge and ICT skills should be integrated in tax courses to nurture students in becoming lifelong learners and to promote tax compliance (Eriksen and Fallan, 1996; Kassipillai *et al.*, 2003).

Research methodology

The population in this study comprises of tax practitioners. Tax practitioners' views are considered important and appropriate as they have a general idea of the level of tax knowledge and ICT ability that a fresh graduate should possess before these graduates join any accounting and tax practice. Marshall *et al.* (1998, p. 1268) stated that "tax practitioners or tax agents can be individual, business structures and professional groups who provide a broad range of tax services for their clients. They asserted that tax practitioners can be viewed in two perspectives:

- (1) individuals who possess professional qualification working in tax practice; and
- (2) unqualified or non-registered individuals carrying out tax work in audit/tax firms on behalf of registered tax practitioners.

This study focused on tax practitioners who work in tax practice, regardless of whether they are qualified accountants or unqualified individuals, such as trainees or those in internship or practical training programs.

For the purpose of this study, tax practitioners were divided into two groups. The classifications of groups were made based on job positions or titles during the study:

- top management (tax director/partner/proprietor);
- manager/supervisor;
- senior staff (tax associate/assistant); and
- junior/new staff (tax associate/assistant).

The first group was the top management (tax directors/tax partners/proprietors or tax managers/supervisors); they were grouped as "senior tax practitioners". The second group was "junior tax practitioners", which comprised seniors tax associates, tax assistants and fresh graduates or newly hired working in tax firms.

This study used internet or online survey to collect data. An online survey was used as it could be completed within a limited time frame and it is hassle free for the respondents to take part in the survey (Cooper and Schindler, 2006; Zikmund, 2000).

Furthermore, online survey is more interactive and would increase respondents' participation in answering the questionnaire (Zikmund, 2000).

The software used to prepare the questionnaire was based on the Perseus Survey Solutions System, a complete survey management software application currently used and managed by the University's Research Management Institute where researchers worked. Permission to use the Perseus online system was obtained in writing.

Two sets of questionnaires were designed: Set 1 was administered on senior tax practitioners (i.e. tax directors, partners, proprietors and managerial and supervisory groups) and Set 2 was directed at junior tax practitioners (i.e. tax associates, tax assistants and fresh graduate or new hired groups). Each set of the questionnaire consisted of three sections: Section A, B, and C.

Section A of Set 1 of the questionnaire was aimed at gathering background information of the senior tax practitioners, such as age, gender, job position, working tenure, experience working in tax practice, highest academic qualification and staff under supervision. In Section B, a list of computing/ICT skills were drawn to measure respondents' views on the importance of each of the computing/ICT skill that a fresh graduate would need to acquire before joining any audit/tax firms. Section C was constructed to solicit senior tax practitioners' level of satisfaction with the level of computing/ICT skills and tax software/tax technology knowledge of any given fresh graduate when they first joining an accounting or tax firm. The variables were measured based on a five-point Likert scale ranging from (1) very good to (5) very poor. One question was designed to solicit tax practitioners' opinion whether tax software or ICT skills ought to be taught in tax courses offered by universities.

In turn, Set 2 of the questionnaire was designed for the junior tax practitioners group. Section A aimed to gather background information of the respondents. The questions in Section B of the Set 2 questionnaire are similar to Set 1. However, Section C was designed specifically to examine junior tax practitioners' opinion whether tax software ought to be taught in the tax courses offered by universities.

In order to test content validity and ease of understanding as well as time taken to complete the questionnaire, a pre-test was conducted on twenty tax practitioners. The respondents were required to complete the questionnaire; and comment on the time taken, difficulty in understanding the questions, sequencing, and clarity of instructions. No major adjustments were made prior to distributing the questionnaires except for a few minor rewording and formatting.

The main study was carried out over a period of eight weeks starting from 5 October 2009 to 30 November 2009. The target sample was chosen randomly based on the list of accounting/tax firms obtained from the coordinator in charge of internship or practical training program of the university that researcher work, namely, Universiti Teknologi MARA (UiTM), Melaka campus. In respect of sampling method, this study used cluster sampling method in selecting the sample, all accounting/tax firms located in city of Kuala Lumpur, central and southern region of Malaysia were chosen as majority of final year accounting students were doing their internship in these firms.

Several phone calls were made to target respondents to seek their permission and to obtain their e-mail addresses. Then, the Uniform Resource Locators (URL) of the online survey was e-mailed to 385 target respondents working in accounting/tax firms. The target respondents were invited to participate in the survey by visiting

the survey's URL. Two follow-ups were made in the third and sixth week through e-mails and phone calls to remind respondents to take part in the online survey. In total, 165 responses were collected - 53 questionnaires were partially completed and thus, discarded. Hence, 112 usable responses were collected and the effective response rate was 29.09 percent (112/385). Note that the response rate was rather low, nonetheless, it compared well with online survey conducted by McKerchar (2005) in Australia where her survey of Australian tax practitioners using online survey, was only 1 percent.

Data analysis

Out of 112 respondents, 36 respondents (32.14 percent) were those in top management; they were either the managers or supervisors in their tax firms. In this study, they were categorized as the "senior tax practitioners" group. Meanwhile, 76 respondents (67.86 percent) were tax associates or assistants or trainees. In this study, they were categorized as the "junior tax practitioners" group.

Table I presents the respondents' profile of the "senior tax practitioners" group. Out of 36 respondents, 44.4 percent were tax directors/partners/proprietors, whilst 55.6 percent were tax managers/supervisors. Half (50 percent) of the respondents were males and the other half (50 percent) were females. Most of the respondents were 40 years old and above. In terms of work experience in tax practice, about 50 percent of the respondents have been in tax practice for more than 10 years. These experienced respondents were the right persons to assess the level of conceptual knowledge and technical ability required by fresh accounting graduates. Meanwhile, 66.7 percent of the respondents have been working for more than six years. With reference to education background, 47.2 percent had bachelor degrees and 41.7 percent held professional qualifications i.e. Malaysian Institute of Accountants (MIA), Association of Chartered Certified Accountants (ACCA) and Malaysian Institute of Certified Public Accountants (MICPA). In terms of supervision, most of the respondents had only one to five staff under his/her supervision. Majority of the senior had one or two new hires or fresh graduates under their supervision, and just 22.2 percent supervised more than five junior staff.

Table II shows that 46.1 percent of the respondents were senior tax associates or tax assistants, 38.1 percent were tax associates or assistants and 15.8 percent held other positions such as practical trainees and account executives. Almost 90 percent of the respondents were female, just 10 percent were male. 57.9 percent of the respondents were aged between 21 to 25 years old, 39.5 percent were between 26 to 30 years old and only 2.6 percent were between 31-35 years old. In terms of academic background, 72.4 percent held accounting degree from local universities, 7.9 percent held accounting degree from overseas, 3.9 percent held non-accounting degree from local university and overseas (i.e. finance, marketing and economics) and 15.8 percent possessed professional qualification (i.e. ACCA, MICPA and MIA).

When asked about their portfolio, the majority of the junior tax practitioners indicated that they handled corporate taxation (81.6 percent) and personal taxation (48.7 percent). Some also handle tax advisory (19.7 percent) and international taxation (5.3 percent). Notably, tax advisory, international taxation and indirect taxation were considered as consultancy services and this would require more experiences and skill than any for junior tax practitioners to handle.

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Particular	Frequency	%
<i>Job position</i>		
Tax directors/partners/proprietors	16	44.4
Tax managers/supervisors	20	55.6
<i>Gender</i>		
Male	18	50.0
Female	18	50.0
<i>Age</i>		
31-35 years	14	38.9
36-40 years	7	19.4
> 40 years	15	41.7
<i>Working tenure in current firm</i>		
1-2 years	2	5.5
3-4 years	5	13.9
5-6 years	5	13.9
> 6 years	24	66.7
<i>Experience in tax practice</i>		
1-3 years	1	2.8
4-6 years	5	13.9
7-9 years	12	33.3
> 10 years	18	50.0
<i>Education background</i>		
Bachelor's degree	17	47.2
Master's degree	4	11.1
Professional qualifications	15	41.7
<i>Supervision</i>		
1-5 persons	15	41.7
6-10 persons	8	22.3
11-15 persons	7	19.4
16-20 persons	3	8.3
> 20 persons	3	8.3
<i>Fresh graduates under supervision</i>		
1-2 persons	19	52.8
3-4 persons	9	25.0
> 5 persons	8	22.2
Total	36	100.0

Table I.
Respondents' profile –
senior tax practitioners

Most important computing and ICT skills a fresh accounting graduate should acquire

The survey found both junior and senior tax practitioners indicated that the three most important computing or ICT skills an accounting fresh graduate should acquire before joining any accounting/tax firm are spreadsheet software, word processing software and e-mail (see Table III). These findings support Burnett (2003) that spreadsheet software, Windows and word processing software were the top three important skills for new hires. In tax practice, these computing skills are essential "toolbox" skill. To date, globally as well as in Malaysia, most of the tax firms use spreadsheet software to prepare tax computation and word processing software to prepare correspondence

Particular	Frequency	%	Integrating ICT skills and tax software
<i>Job position</i>			
Senior tax associate/assistant	35	46.1	
Tax associate/assistant	29	38.1	
Others	12	15.8	
<i>Gender</i>			
Male	8	10.5	
Female	68	89.5	
<i>Age</i>			
21-25 years	44	57.9	
26-30 years	30	39.5	
31-35 years	2	2.6	
<i>Working tenure in current firm</i>			
1-2 years	45	59.2	
3-4 years	25	32.9	
5-6 years	5	6.6	
> 6 years	1	1.3	
<i>Education background</i>			
Accounting degree from local university	55	72.4	
Accounting degree from overseas	6	7.9	
Non-accounting degree from local university	2	2.6	
Non-accounting degree from overseas	1	1.3	
Professional qualifications	12	15.8	
Total	76	100.0	

Table II.
Respondents' profile – junior tax practitioners

Computing/ICT skills	<i>Mean scores *</i>			
	Senior tax practitioners	Rank	Junior tax practitioners	Rank
Spreadsheet software, i.e. MS Excel	4.56*	1	4.50	1
Word-processing software, i.e. MS Word	4.42*	2	4.45	2
Presentation software, i.e. MS Power Point	3.28	8	3.45	6
Accounting information system	3.61*	6	3.36	7
Commercial tax software, i.e. Brasstax, YGL, Easy tax ^a	3.53*	7	3.20	8
File and directory management	3.78*	5	3.78	5
Worldwide web/internet skill	3.97*	4	4.14	4
E-mail	4.19*	3	4.32	3

Notes: *All variables were measured based on a scale of 1 (not important) to 5 (very important), and were significant at $p < 0.05$ or better; ^aAt the time of study, Brasstax, YGL and Easy tax are the names of tax software used in tax firms, whilst the big four accounting firms used their own in-house developed tax software

Table III.
Most important ICT skills a fresh accounting graduate should acquire on campus

with clients or tax authority. E-mails are an effective way of communication in the era of ICT.

With regard to tax software packages, both groups perceived acquisition of such skill as vital as compared to spreadsheet software, word processing software and

e-mail. Based on their studies, Greenstein and McKee (2004) and Lin *et al.* (2005) found that the ability to use tax software was one of the important computing skills perceived by the students and professionals. Furthermore, Dresnack and Briggs (2002) argued that accounting graduates ought to be taught computerized tax skill especially in filing tax return forms electronically. Therefore, it was not surprising that in this study both senior and junior tax practitioners indicate that Worldwide Web or internet skill is important as well. Hence, the ability to use the internet is really important in tax education in order to keep up with the advancement of ICT and current practices of the electronic tax administration system.

Senior tax practitioners' rating on fresh accounting graduates' ICT and e-tax applications skills

Section C of the questionnaire was designed to gauge senior tax practitioners' rating on fresh accounting graduates' ICT and e-tax applications skills. The results are presented in Figures 1 and 2 respectively. Most of the senior tax practitioners (44 percent) rated

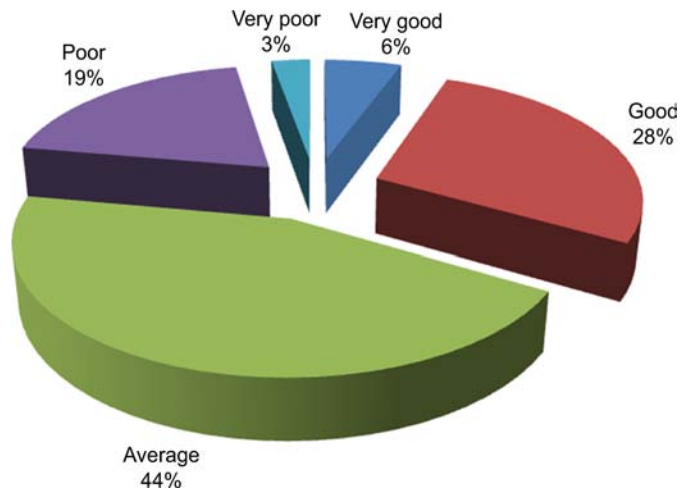


Figure 1.
Rating of senior tax practitioners on ICT skills of fresh accounting graduates

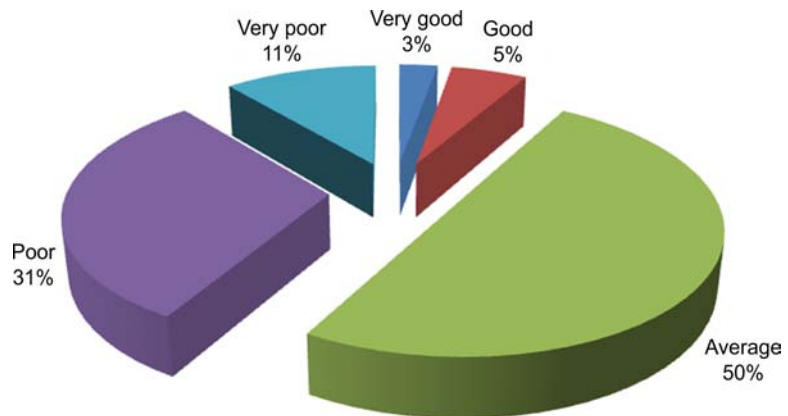


Figure 2.
Rating of senior tax practitioners on e-tax applications skills of fresh accounting graduates

fresh accounting graduates' ICT skills to be "average". About 28 percent indicated "good", and 19 percent indicated "very poor". In turn, the survey found about merely 5 percent of the senior tax practitioners rated fresh accounting graduates' e-tax applications skills to be "good". Nearly one-third (31 percent) rated "poor". About half rated "average". These results are not very encouraging as in the era of ICT, fresh accounting graduates must be ICT savvy in order to compete in the competitive job market (Engelbrecht, 2005).

Usage of electronic tax (e-tax) applications in tax practice

Since 2006, the Malaysian tax authorities had progressively offered several electronic tax applications, such as electronic filing (e-filing) of tax return, e-Payment and e-Registration for taxpayers and tax agents. The junior tax practitioners group were asked if they used electronic tax applications (i.e. e-filing, e-Payment, e-Registration) at work. The survey found a substantial majority of the junior tax practitioners had used e-filing to submit their client's tax returns be it personal (e-Form B and e-Form BE) or company taxation (e-Form C and e-Form R). Notably, about 35.5 percent of the respondents did not use any form electronic tax applications in tax practice yet (see Table IV).

Integrating ICT skills and tax software into tax course at tertiary levels

To date, in the tax arena, the use of ICT skills and tax software in preparing tax computation are pervasive. However, in Malaysia, at the time of study, tax educators are not incorporating ICT skills and tax software in tax education. We solicited tax practitioners' opinion if learning of ICT skills and tax software needed to be included in tax courses at tertiary levels. Table V presents the result. The result showed most senior and junior practitioners had the opinion that tax software should be incorporated. These results lend support to the notion that in harnessing the

Type of e-form	Usage (%)
e-Form B	46.1
e-Form BE	47.4
e-Form C	42.1
e-Form R	42.1
e-Registration	21.1
e-Estimate of tax payable for company	14.5
e-Payment	5.3
e-communication with IRBM (i.e. e-mail)	14.5
None of the above	35.5

Table IV.
Usage of e-tax applications in tax practice

Note: The percentage does not add up to 100 percent as it was based on the selection made by the respondents, i.e. respondents were allowed to tick more than one item

	Senior tax practitioners	Junior tax practitioners
Yes (%)	75	73.7
No (%)	25	26.3

Table V.
Tax practitioners' opinion on integrating ICT skills and tax software into tax course

advancement of ICT, any fresh accounting graduate should have hands-on experience in using e-tax application or tax software, so as to keep abreast with the current development and changes in tax profession.

Implications of study

The findings of this study have implications to the top management of those in higher education in Malaysia, academics and the relevant authorities on tax education in the era of ICT. First of all, it has provided an insight to the top management of those in higher education in Malaysia to incorporate tax software application in tax courses at universities. Based on the survey, the tax practitioners were in favour of including tax software as part of the syllabus. As the Malaysian tax authorities had embraced an electronic tax administration system by using e-filing, e-estimate and e-payment, it is important to prepare and expose all accounting graduates, who are being prepared to work in tax practice to the use of commercial tax software before graduating. Thus, it is imperative to introduce tax software to undergraduates at tertiary levels.

Second, in relation to the tax topics covered in the tax courses, universities should emphasize more on conceptual knowledge rather than focusing on technical ability, i.e. tax computations. Consequently, by having more understanding on the basic principles and concepts of Malaysian taxation and other related topics, accounting graduates would be able to develop their technical ability through practice and at work. Undoubtedly, tax educators play a significant role by using appropriate method of teaching and learning in delivering tax courses to equip the future workforce.

Third, in order to become “knowledge workers”, accounting graduates should be computer and ICT literate. Pragmatically, accounting graduates should possess the necessary computing and ICT skills to meet the demand and challenges in the business environment. The study revealed that the most important computing or ICT skills an accounting graduate should be familiar with are spreadsheet software, word processing software and e-mail. This is because these computing skills make up the essential “toolbox” that is used daily in a tax firm. The universities and tax educators should incorporate these skills to ensure that accounting graduates are familiar with the skills needed when they enter the job market.

Finally, this study has also provided the tax authority, tax educators and tax practitioners with an insight to make a concerted effort in preparing accounting graduates to survive and thrive in the accounting profession. This could be achieved through designing programs and career paths in tax and accounting profession that are attractive to students. Notably, the Volunteer Income Tax Assistance (VITA) is provided in the US where students are involved in handling tax matters and preparing tax computations for taxpayers with the aid of tax educators and tax authority in the US. The objectives of this VITA program is primarily to expose the students to technology and hands-on e-tax preparation skills (Clovey, 2008; Long and Kocakulah, 2007). It is suggested the Malaysian tax authorities and tax educator should train final year accounting undergraduate (future accountants) to apply their tax knowledge and technical ability developed during their study in the tax filing season on campus, as the VITA program.

Conclusion

In the era of ICT, accounting graduates should possess adequate knowledge and skills in order to meet the demands and challenges of the business world. In respect to tax

education, accounting graduates should have a strong fundamental understanding of Malaysian taxation. Whilst, to become a “knowledge worker”, adequate computing and ICT skills are essential; these skills are also an added value in order to compete in the job market. Therefore, the current tax education should be cognizant of the ever-changing business environment and should comprise a balanced combination of technical and non-technical skills in the tax courses.

This study has merit as it provides useful data for Malaysian tax educators on how tax practitioners in a developing nation respond, it also provides important insights for tax educators in other developed and developing countries, the need to examine what are taught and learned on campus are up to date and meet the needs of the practice.

This study has some limitations. First, the sample size was rather small. Second, it was a cross-sectional study; hence, the opinions of the respondents might change over time. Therefore, care should be taken in interpreting and generalizing the results. Future studies should be conducted on tax educators in Malaysia to find out their opinions and suggestions for tax education in the era of ICT.

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