

Learning to Learn: Business professionals' perceptions of information literacy

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ABSTRACT

Tertiary educators face increasing constraints and pressures in designing and delivering their course material. Accordingly, educators need to not only equip students with content knowledge, but also the ability to continue their learning independently through information literacy. In trying to determine this balance in the accounting curriculum context, we asked 'what are business professionals' perceptions of 1) information literacy in their workplace? and 2) the importance of content knowledge compared to information literacy?'

This paper details the findings of a pilot study conducted with business professionals from both the government and private sectors. Interviews explored how professionals go about finding and using new information in their day-to-day work, how they see research, and how they see the importance of content knowledge compared to the skills and knowledge of finding and using information.

INTRODUCTION

How should we design university accounting curriculum? What content knowledge and processes should we focus on, particularly given the constraints of less contact time with students, concern about over-assessment practices and tightening university budgets? A general method of conducting basic business courses, such as accounting courses, is to require students to memorise rules and methods of calculations. However, is such a focus even possible in content and context rich areas, and is this focus in the best interest of students?

Williams contends that 'if students can learn how to find answers, then they are well prepared for a lifetime career' (1994 208). This idea incorporates a shift in focus in accounting from 'traditional information processing and stewardship functions to analysis and interpretation of information' (MacCallum 1997 19). Such a shift incorporates the inclusion of information literacy in the accounting curriculum. Information literacy is the ability to identify, locate, evaluate, organise and use information to 'address and help resolve personal, job related, or broader social issues and problems' (UNESCO, US National Commission on Libraries and Information Science *et al.* 2002). As such, it is an essential element for learning to learn (Bundy 2004).

Recent calls for a change in business education have been to redirect the focus from a technically oriented to a conceptually oriented and skills based curriculum (Tan & Veal 2005 28). The changing business environment requires effective use of information as described above. 'If knowledge is the commodity of the future', and business professionals are ideally placed to seize the opportunity to be main players (Howieson 2003 9), then what role can universities play in assisting their accounting students to achieve this potential?

Seeking to examine what content knowledge and skills should be included in university curricular has therefore raised the question 'what are business professionals' perceptions of the interaction between content knowledge and information literacy?' This paper reports on an exploratory study where business professionals were interviewed about their perceptions of information literacy, including how they go about finding and using information and the interaction between content knowledge and finding and using information.

Accounting curriculum

Howieson argues that we must move away from an approach where we teach a thorough knowledge of all the technical rules of business courses, for example accounting or tax. 'With the rate of change in business and business regulation it is simply becoming physically impossible to be an encyclopaedia of rules' (Howieson 2003 21). Practitioners strongly agree that general business skills are critical, however, they do not recommend a decrease in the focus on technical skills to meet that need, rather that both should be equally weighted (Rubin 1999 807).

Concept knowledge has been described as 'the mental processes ranging from simple recall or awareness to creative thinking or evaluation', whereas technical ability has been described as the 'skill in applying knowledge to specific problems.' (Tan & Veal 2005 33-34). It is of interest to note that if using these definitions, information literacy can be related to both concept knowledge *and* technical ability.

In relation to concept knowledge, Flesher *et al* state that learning could be more effective if concepts were 'embodied' in business courses along with the relevant rules and regulations (1986 55). Furthermore, Tan and Veal found that both accounting educators and practitioners indicated a higher level of conceptual understanding is required as compared to technical proficiency (2005 41).

Unfortunately, most academic disciplines are compartmentalised at universities to allow for manageable delivery. At one level, they need to be sliced into manageable and justifiable chunks so that they can be taught. At another level, 'the student (and academic) needs to understand how they fit into the mosaic of life' (Malthus & Laswad 2002 65). Therefore, while it is important to teach concepts, for a fuller understanding the concepts need to be related to the 'big picture' in order to provide context.

In 1975, Sommerfeld argued that in the business context it had become apparent that compliance with statutory rules is not enough. For example, tax advisors trained in 'how to' answers were not doing a good job with 'why' and 'how much' kinds of questions. Sommerfeld observed that:

All but the most trivial tax problems will be referred to a tax expert for solution. This means that all other persons [general business students] need to be educated in tax matters only to the extent which permits them to recognize every situation in which an expert should be consulted. Learning to recognize tax problems and opportunities requires a wholly different orientation from learning to solve them (Sommerfeld 1975 163-165).

We argue that Sommerfeld's observations in 1975 still hold true today.

Furthermore, Williams states 'the curriculum should focus on the process of learning, not just teaching answers' (1994 208). These aspects are incorporated in information literacy where people use information through critical thinking, analysis and synthesis in order to solve problems and make decisions (UNESCO, US National Commission on Libraries and Information Science *et al.* 2002; Bundy 2004).

The literature appears to support a growing awareness of the importance of information literacy education for students, particularly as information literacy is inextricably associated with information practices and critical thinking in the information and communication technology (ICT) environment (Bruce 2002 1; Bundy 2004). As Bruce contends, 'information literacy is conceivably the foundation for learning in our contemporary environment of continuous technological change...it is pivotal to the pursuit of lifelong learning, and central to achieving both personal empowerment and economic development' (Bruce 2002 1).

The literature cited above does not directly consider the importance of information literacy in the accounting profession. This omission led us to ask 'how do business professionals' perceive the importance of information literacy?'

RESEARCH METHODOLOGY

The objective of this study was to probe the opinions of business professionals regarding how they: 1) go about finding and using information in their day-to-day work; 2) see research; and 3) see the importance of content knowledge compared to the skills and knowledge involved in finding and using information, i.e. information literacy. Additionally, graduate concepts were explored. In particular, the qualities that professional's value in business graduates, how they think universities prepare business students in finding and using information for the workforce, and how they consider their own tertiary education prepared them for the workforce.

Semi-structured interviews were conducted with four business professionals. The interviews were transcribed verbatim and analysed using two frameworks: 1. comparison against six core information literacy standards (Bundy 2004); and 2. a qualitative, interpretive analysis of themes of similarity and difference.

The respondents were drawn from the private and government sector. Each sector was represented by two respondents, one of whom with less than five years experience ('junior') and the other with more than five years experience ('senior') (see Table 1).

Table 1: Grouping of Business Professionals.

	Private	Government
Less than five years experience	Junior Private - male	Junior Government - female
Greater than five years experience	Senior Private - male	Senior Government - male

There are some limitations to this study. First, the results are not intended to be representative of the general population due to the small scale nature of the study. Second, this study sought the personal perceptions of respondents with respect to their own work and to the level of knowledge and ability required of business graduates. As a result, the findings may not be generalisable to sectors outside to those in which the respondents work. Therefore, the study is intended to be exploratory in nature.

RESULTS OF ANALYSIS AGAINST INFORMATION LITERACY STANDARDS

The discussion of the business professionals was considered against an information literacy framework (Bundy 2004). This framework incorporates standards and learning outcomes that consist of the characteristics, attributes, processes, knowledge, skills, attitudes, beliefs and aspirations associated with the information literate person. Six core standards of the information literate person underpin the framework (Bundy 2004):

1. recognises the need for information and determines the nature and extent of the information needed;
2. finds needed information effectively and efficiently;
3. critically evaluates information and the information seeking process
4. manages information collected or generated;
5. applies prior and new information to construct new concepts or create new understandings; and
6. uses information with understanding and acknowledges cultural, ethical, economic, legal, and social issues surrounding the use of information.

These standards were used as a tool with which to compare and contrast business professionals' practice. It should be noted that breaking down this practice into the six standards is necessarily artificial, as information literacy does not occur in a discrete or linear fashion as might be suggested by the standards (Bundy 2004 8).

Standard 1: recognises the need for information and determines the nature and extent of the information needed

Not surprisingly, all respondents talked about conducting research using electronic databases in their daily work. Interestingly, their employers, whether government or private, had developed their own internal 'intranets' which consisted of sources of the potential information that employees may need to conduct their work, including web links and databases of previous advice to clients. All respondents discussed using internally generated databases as one of their first areas in locating information. They described using a range of information such as prior advices and reports, manuals, accounting standards, legislation, cases,

regulations and statistical information. Respondents also discussed using external databases, with one employer (government) providing employees with links to recommended external database sites.

Junior Government discussed the importance of using of diverse sources of information to inform her decisions, especially as a junior staff member. Thorough research would demonstrate to her manager that 'you're not just going to see the first thing and put in a recommendation'. She commented that utilisation of more senior people within the organisation was important, as these people are more knowledgeable. She saw these people as an important resource.

Senior Private indicated that using prior advice given by the organisation was important, as 'rather than re-invent the wheel in terms of some advice...we can basically leverage off that advice that's already been provided.' This illustrates how corporate information and knowledge is a commodity and how it needs to be managed and used efficiently.

Senior Government commented that founding and using information in his day-to-day work is 'one of those things that you do without thinking about how you do it', whereas Junior Private described a more systematic approach. His information searching was informed by a series of questions:

I generally have a good think about what sort of tools I would like to have available to me... [and] I don't know enough about this, where can I go to find this? I don't know enough about that, where can I go to find that?

It is of interest that this respondent recently completed an honours research paper, unlike the other respondents. This experience will be explored in detail later when making recommendations for accounting curriculum.

Standard 2: finds needed information effectively and efficiently

In the context of an audit, Junior Government described the importance of obtaining print information such as policies and procedures in order to inform questions to then ask the client. Without this background understanding any testing could be futile as you would not know what you are looking for or whether there is any missing information. She explained how time was critical and felt it was important not to waste time with clients on 'silly questions' that don't get the information required, as clients get annoyed and it takes too much time. Effective information use was important as it 'helps me to fast track or ask the right questions' and therefore makes her more efficient in her job.

Senior Private discussed relying upon email services in staying up-to-date, as he was more likely to read these than hard copy versions. Using the example of an analysis of foreign jurisdiction practice, Senior Government discussed in detail the process he went through in thoroughly determining the intent and purpose of the legislation. This process involved utilising a research assistant to find much of the information.

Standard 3: critically evaluates information and the information seeking process

Senior Private discussed how he gives different weight to different sources, for example the importance of the explanatory memorandum that accompanies new legislation which gives a guide as to 'the way the tax office is going to interpret it'. Private Junior discussed the process of finding a vast amount of material on a particular issue, proceeding to create a summary, then beginning a process of drilling down to specifics and filtering out irrelevant information. He stressed the importance of gaining information from the client regarding their industry in helping him decide the relevance of particular information.

Standard 4: manages information collected or generated

Most respondents discussed how they managed information collected and generated, whether it would be through note taking, meetings and collating reports and recommendations. As described earlier, their employers have established internal databases consisting of prior information generated by employees or relevant external source material. Therefore, employers perceive there is value in managing the information generated for later potential utilisation by employees.

Standard 5: applies prior and new information to construct new concepts or create new understandings

As described in Standard 2, Junior Government explained how she would find policies and then understand them. With this basis she would do further exploratory work whether by talking to the client or utilising other resources. From this collation, she would then analyse her findings and formulate recommendations.

Sometimes she would change her approach on a certain task, as her prior research would affect the way she would do something later or the questions she would then formulate.

Senior Private discussed how through research he was either trying to confirm or alter an initial view, and that this would lead to providing advice and identifying further issues for a client. He emphasised the need to be proactive in assisting clients. Senior Government stressed that the goal was to find the 'right answer' in order to 'search for the truth'. Both Junior Private and Senior Private used information to gain an understanding and a level of 'comfort' for the basis of their decisions. As Senior Private explained:

it's really to form a professional view whether you think there's sufficient uncertainty or whether you can get more comfort, you make a call as to whether you need to research it further.

Standard 6: uses information with understanding and acknowledges cultural, ethical, economic, legal, and social issues surrounding the use of information

The experience of using information with understanding and acknowledging cultural, ethnic, economic, legal and social issues surrounding the use of information was implicit in the discussion with all respondents. Particularly, all respondents talked about client confidentiality, and Junior Private indicated how this actually affected how research was conducted and the pools of information used. This was because talking to people outside the transaction may breach confidentiality.

In sum, in relation to the information literacy standards, all respondents demonstrated to some degree the six standards. The use of electronic databases, particularly those internally generated, featured strongly in all respondents' process of finding and using information. It is interesting to note that a number of respondents had difficulty in discussing the actual process of finding and using information, as they did it as 'second nature'. Generally, the strongest awareness of their information seeking and use was when they described being faced with an issue where they wanted to gain an understanding to either confirm or correct their initial thoughts or to provide a framework to assist in further investigations. The respondents spoke of 'confirming', refining, finding 'comfort', searching for the 'truth' and a desire to be able to 'make decisions'.

THE INTERACTION BETWEEN CONTENT KNOWLEDGE AND INFORMATION LITERACY

Respondents were asked about the relative importance of content knowledge versus the ability to find and use information. We found that the junior respondents tended to emphasise the importance of content knowledge, whereas the senior respondents placed an emphasis on both, with content defined in terms of a 'basic framework understanding'. This finding is illustrated in Table 2.

Table 2: Content knowledge versus finding and using information

Respondent	Importance of content knowledge	Importance of finding and using information
Junior Government	Yes	
Junior Private	Yes	
Senior Government	Yes	Yes
Senior Private	Yes	Yes

The senior respondents seemed to say that both aspects were important, with a slight emphasis on 'finding and using information'. The junior respondents, while acknowledging the importance of both, indicated that at their level, content was more important. Junior Government stated:

you...need the background and understanding of what you're doing and actually know where to find the information and what the information is actually telling you...for my manager looking at a [my] recommendations its probably more important to them that I actually have that [accounting] standard in there.

Junior Government explained that content knowledge (such as specific rules for an accounting standard) in isolation isn't enough and:

unless you're able to take information from different sources and actually produce a result, or use that to enhance the steps that you take to complete the task, then I guess the research that you've done is really wasted and your result isn't going to reflect the effort.

Senior Private commented that you need good content knowledge to be able to identify issues and talk through issues with clients. He also indicated as a senior staff member you are more expensive so you must be able to narrow points down and know where to look.

Senior Government stated that content is important; as if you don't have a degree of content knowledge then you could fall into error. For him content knowledge was the 'basic framework' as the fundamentals tend not to change. As a consequence, knowledge of precise details is really not important. He went on to emphasise that employees are 'useless' without the ability to find and use information.

In discussing business graduate qualities, Junior Government stated that 'everything that I needed to know I could learn on the job' though she did indicate that 'they're not going to spoon feed everything to you and you've got to use research skills'.

Senior Private explained that content was not important in the area of business that he practiced, as graduates in his experience do not get much out of university and do not have content knowledge. For him, the ability to find and using information is important because that is what graduates need, as well as the capacity to build upon their content knowledge. Such statements confirm Junior Government's comment that at her level she needs to assure her manager that she has considered all possible avenues and shows supporting evidence for her conclusions.

Senior Government stated that an understanding of the fundamental principles was important. He emphasised that it was essential to not get overwhelmed by this content, and to be able to focus on an issue. It was important to have the ability to sort the relevant from the irrelevant. This required the graduate to be able to research thoroughly and in a systematic way.

Junior Private indicated that he thought a business graduate should have 'an assumed level of knowledge'. For him that included how basic economics works, the market and some form of financial analysis. In addition to this basic assumed knowledge, the business graduate needs a 'keenness to learn'.

Finally, the importance of an information literate graduate is illustrated by Senior Private:

Someone who doesn't just accept things, who asks lots of questions and enquires. Someone to search and understand things, which in the long run I think, is, you know if you can get someone who's always trying to understand something, rather than just accepting things then ultimately they will, in the longer run, just be a better consultant.

HOW UNIVERSITIES PREPARE GRADUATES FOR CONTENT KNOWLEDGE AND INFORMATION LITERACY

In relation to the question on how they thought universities prepare business graduates, Senior Private indicated that graduates, compared to himself, are now more familiar with internet based research, however the 'biggest difficulty was that graduates are good at just spitting out information' and 'do not take the second step'.

Senior Government indicated that business graduates' understanding of fundamental legal principles in core areas, such as contracts and trusts, could be lacking:

I don't care whether they know the detail of an area – but a problem to me is if they don't understand the fundamentals.

Junior Private indicated that the content knowledge of his undergraduate business degree was 'great', as he stated (which supports Senior Government's comments above) that:

obviously you can't get to a point where you know each topic in-depth but at least you have an understanding of it when you go into the workforce and someone talks about something like that, you at least know what it is in relation to and you can go and find out more information.

Though in relation to using that information Junior Private thought undergraduate business students:

tend to try and arrive at an outcome...rather than understanding what they've written...they just get ...the numbers there.

Supporting this statement he indicated that the university curriculum lacks a focus on context and the big picture. He gave an example of learning ratios of working capital, where there was failure to discuss how these ratios are important as businesses need cash to work. He commented that:

it's good to have the technical knowledge but it's also good to round it off with a bit of, where does all this stuff fit into the greater environment?

OWN UNIVERSITY EXPERIENCE IN REGARD TO CONTENT KNOWLEDGE AND INFORMATION LITERACY

Respondents were asked about their own university experience in regard to content knowledge and development of the ability to find and use information.

Junior Government initially indicated for 'content' that she didn't use a lot of what she learnt at university, but then later stated that the content had just become 'second nature', such as knowing what debits and credits are, understanding different terminology, and understanding balance sheets. In relation to 'finding and using information', she indicated that:

[it] gets put across to us [students]....if you get those extra readings and extra texts... it will sort of give you a better understanding of the subject.

In addition, by doing assignments, university prepared her for finding information for a specific task and the necessity to 'to keep writing down our [own] thoughts'. Concerning using information, Junior Government got experience in writing reports and actually using the information she had gathered to produce a result. This:

..made it easier by doing that practical experience when I went into the workplace.

Senior Private indicated that he did not necessarily 'get a lot out of my undergraduate experience', especially tax. He thought that this was because courses were not structured particularly well:

it seemed a bit all over the shop...it just explored specific issues [such as residency for tax] without really bringing it together with the context of the course.

Upon reflection, Senior Private wished he had paid more attention to early research subjects as 'later on you realise how important it is to get the fundamentals and the really good research skills are particularly important'.

Senior Government told of a similar experience, where he thought too much time was spent on testing whether you knew the detail as opposed to testing whether you could apply your skills. His experience has led him to believe that universities emphasise knowing the detail in a small range of areas, as opposed to knowing the fundamentals and having the ability to go into more depth when you need to.

Junior Private had an interesting reflection on his undergraduate experience, because unlike the other respondents, he had completed an additional honours year. While he indicated that his undergraduate degree had provided him with good content knowledge, he thought his honours year 'did not really add to this' content knowledge. However, in relation to finding and using information, he thought that his undergraduate experience was lacking. He stated:

doing an assignment at undergrad, it's basically looking up information and applying that to your assignment...you get this sort of cut and past mentality from a lot of people who do undergrad assignments and oh, think well this is relevant and they just like move it around, just put it into their assignment.

This undergraduate experience was in stark contrast to his honours experience, where 'it was learning how to read information so that you can apply that'. When asked about the skills he obtained in the honours degree, he stated:

time management for one...two, I think your analytical capability...it gives you a very rigorous outlook on how you might prepare information...and then, preparing a document. And even a confidence in that you're willing to approach people about your research, and also like building relationships, you know and communicating with your supervisor... It's like all right boss, here's my work, what have I done wrong, how can I improve for next time...you come to them with a solution not a problem.

Junior Private then explained how the information literacy he developed in his honours degree consisted of:

being able to read work that people have done and understand what they've done, and understand what you're trying to do, like this is all numbers and models... understand what they've done, understand what you're trying to do and then understand the variables that would affect what you're trying to do... you sort of anticipate any questions people are going to ask.

In reflecting upon why this development might have occurred, he explained that in honours there is the 'one-on-one' relationship with supervisors and people are going to be reading thoroughly everything you write and questioning it. He also observed that in honours you are required to give a number of presentations, and that this form of communication (compared to writing) made it 'obvious whether someone understands something as 'anyone can write down stuff on a piece of paper and hand that in.' He concluded that more presentations should be instituted at the undergraduate level.

IMPLICATIONS FOR ACCOUNTING EDUCATION

This exploratory research has lead to a number of preliminary conclusions about business professionals' perceptions of information literacy, including the importance of context for the acquiring of content knowledge, and the relationship between content knowledge and information literacy. These conclusions have significance for accounting educators and for the design of accounting curriculum.

All respondents emphasised the importance of content knowledge, with the senior respondents also emphasising the importance of finding and using information. However, an issue for educators is to determine what makes up this content for their courses and overall programs. Respondents described content knowledge as 'the basic framework', or 'assumed level of knowledge' or the 'fundamentals'. This identifying of the basic framework compared to obscure areas is of particular importance for courses that are content rich. Indeed, by focusing on the 'basic framework' it may be possible to free-up course time to enable the development of information literacy. However, in determining the delivery of this basic framework it is important to address the respondents' experiences where courses were 'a bit over the shop' or just 'explored specific issues without context' or where students were 'examined on knowing the detail as opposed to whether they could apply it'.

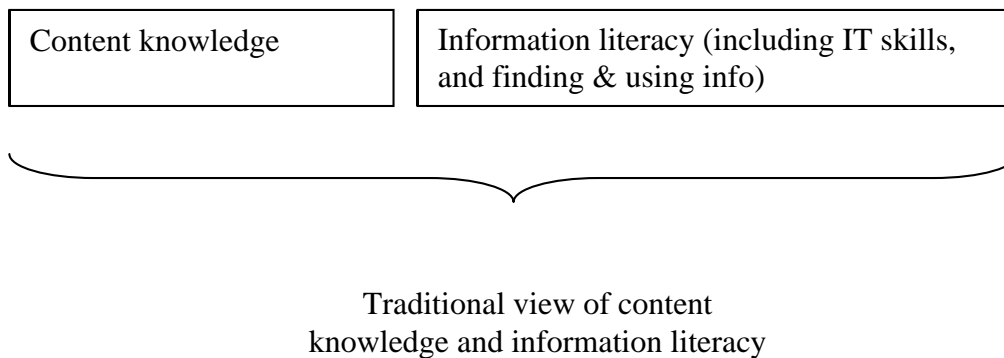
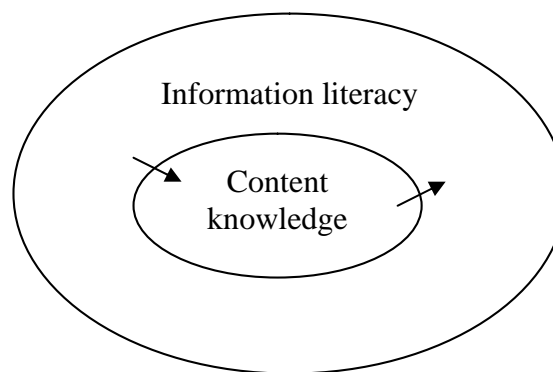
This emphasises the importance of delivering content knowledge to students in the *context*, which would then enable a deeper level of learning and understanding. Students need to see where the content sits in the big picture 'context'. We submit that this big picture context has a number of levels from micro to the macro – ranging from course context, to program/degree context, to professional context and then to social context. By illuminating these 'contexts' to the 'content', students will be able to gain a stronger understanding of the basic framework and content.

Take for example, a tax course where students learn about allowable deductions for a business project:

- *Course context* - allowable deductions are important as they affect what the business taxpayer's taxable income will be for a year
- *Program/degree context* - determination of a business taxpayer's tax payable has important implications on the financial viability of the business project
- *Professional context* - professional advisors will need to be able to give clients advice on the potential tax implications on a proposed business project (such as the timing of deductions)
- *Social context* - the government has allowed a number of tax concessional deductions to encourage certain business projects to enhance economic growth in Australia

By providing this 'context' to the 'content' being taught, students can gain a deeper appreciation and understanding of the content – the basic framework.

Furthermore, we submit that it is important not to think of 'content knowledge' and 'information literacy' as mutually exclusive as represented in Figure 1. Instead, we argue that content knowledge and information literacy are intrinsically linked and dependent on each other, and better understood as represented in Figure 2. When content knowledge and information literacy are considered together, then synergies are possible to achieve.

Figure 1: Mutually Exclusive: Content knowledge and information literacy**Figure 2: Integration of content knowledge and information literacy**

The business professionals appeared to appreciate this co-dependence relationship, as without content knowledge graduates cannot know what the issues are, or what needs to be found, or how the information they find can be interpreted and applied. Without content knowledge Senior Government warned that graduates could 'fall into error'.

In comparison, a graduate with content knowledge but no information literacy knowledge and skill is limited in their ability to keep up with changes in their area, or the ability to find specific information required when they faced with something new. Furthermore, a graduate with content knowledge and the ability to just 'find' information is also lacking, as it is essential for graduates to be able 'use' and synthesise the information they find, otherwise they are 'useless'.

This co-dependency relationship between 'content knowledge' and 'information literacy' is important to appreciate, as they are key attributes that need to be addressed together by universities, and not in isolation of each other. Courses need to integrate their content with issues that enable students to have the opportunity to find and use information to provide solutions. With this inclusive understanding of content and information literacy synergies can be achieved and students will be better equipped to be life-long learners.

Another theme arising from the respondents is the apparent strength of graduates' information technology skills and their ability to 'find information'. However, there were weaknesses with graduates' in 'using' the information that they had found. The ability to use information was seen by Senior Private as making a graduate 'shine':

[they] are the ones who have good research skills...[and] who can actually apply the information to some facts in an intelligent sort of way, rather than just, one of the things you do find is they write a big essay on this is the law, this is all the commentary and everything, and then they have a one sentence, this is what I think the answer is, in the facts, rather than, you know, thinking it through and really analysing it, and applying it.

The comments by Senior Private tend to indicate that universities do not prepare graduates well in using the information that they have found. Universities may have placed too much emphasis on finding information, but little guidance or practice in using the information found. In some way this may be attributable to the consideration of content and information literacy as mutually exclusive (as demonstrated in Figure 1). If universities are going to assist business graduates in being independent learners this needs to be addressed. This is critical because the 'sheer abundance of information and technology will not in itself create more informed citizens *without* a complementary understanding and capacity to use information effectively' (Bundy 2004 3). This is important if the 'information society of today is to transform into the learning society of tomorrow' (Bruce 2002 4).

To assist students in using the information they have learnt, Junior Private indicated that work experience could be important to give students the big picture and to 'help their learning and confidence'.

Junior Government described her Accounting Theory course at university where she had to look at theoretical perspectives of modern theories, and then formulate a view on what she thought the accounting profession was. Such a course could serve as a capstone to draw together the context students have learnt in other business courses. Students could apply the information they know and have found from a variety of courses and use it in a program context.

Senior Private reflected that he wished he had utilised the research courses available more in his undergraduate experience. He thought that universities should not only put more focus on research skills, but they need to appreciate how important research is. This is an important point, as it is all well and good for business programs to provide opportunities for students to develop their abilities to find and use information, but universities also need to emphasise to students how important this is for later professional development. Perhaps a way this can be achieved would be to have outside professionals to come and talk to students about how they have found information literacy to be a critical factor in their own career development. Also, the aligning of assessment with information literacy is always a good motivator for students.

Given the statements by Junior Private about how honours developed his information literacy compared to his prior undergraduate experience, universities need to consider how they could capture some of this honours experience at the undergraduate level. Perhaps this could include one course where students have to write and present a critical piece. Such a course could be over a year with the first half to provide students time for research skills and supervisory assistance. The second half of the year could include oral presentations of argument accompanied by a 5,000 word paper. An alternative to this may be to seriously consider whether it is appropriate for business programs being locked into a three year model, and whether they should be extended (Howieson 2003 23).

CONCLUSION

This study has provided some empirical understanding into calls to redirect focus from a technical orientation to a more conceptually orientated and skills based focus curriculum. With the insight provided by this study, tertiary educators in the accounting curriculum should consider the structure of their courses. The aim for such educators should not only be to strike a balance between learning to learn and content knowledge, but how to ensure that they are inter-related. Therefore,

by leading individuals to think critically, and by helping them construct a framework for learning how to learn, educational institutions provide the foundation for continued growth throughout the careers of graduates, as well as in their roles as informed citizens and members of communities (Bundy 2004 5).

The issue in accounting education is not one of 'content knowledge' versus 'information literacy skills', but one of ensuring an appropriate emphasis and integration of both.

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