

# USE OF ONLINE INFORMATION RESOURCES BY RMIT UNIVERSITY ECONOMICS, FINANCE, AND MARKETING STUDENTS PARTICIPATING IN A COOPERATIVE EDUCATION PROGRAM

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This paper examines the use of online information resources by Economics, Finance, and Marketing 3rd year students in a cooperative education program and explores some possible factors and issues that influence how students use these resources. The nature of Work Integrated Learning (WIL) programs, the business information environment, and the information seeking behaviour of students are discussed. Barriers to using online information resources and workplace information literacy are also reviewed. From this better understanding of the online information resources used by students on work placement will emerge and assist the Library in assessing its acquisition of resources and designing of information literacy training.

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## INTRODUCTION

In the Business Portfolio at RMIT University, students participate in a cooperative education program as part of their undergraduate degree, under the auspices of the Work Integrated Learning (WIL) program. For Economics, Finance and Marketing students, their cooperative or 'co-op' placement is undertaken in their third year, with students spending two semesters in paid

employment. They gain valuable industry experience and apply the knowledge and skills they have gained at university in the workplace. They complete a series of educational tasks, including the completion of a business project and report: students investigate and report on an aspect of the organization in which they are employed, or prepare an assignment on an approved topic.<sup>1</sup>

Liaison librarians work with academics to integrate information literacy into many programs. They use their knowledge of online information resources to contribute to their design and delivery. While they have a good knowledge of online information resources relevant to students for study purposes, less is known about which resources are used by students out in the workplace. This paper investigates the use of online information resources both for study and work purposes, by Economics, Finance, and Marketing 3rd year students in the workplace during their cooperative year.

It is hoped that this research will assist the library to provide relevant and customised information literacy training for this group of students and also for final year students preparing for researching in the workplace. It will inform the library about online information resources used in the workplace that the library could acquire in order to increase the range and availability of resources useful for students in the workplace, and will also explore barriers to using online information resources.

### Literature review

The literature review focuses on work-integrated learning, and on understanding factors that might influence on students' use of online information resources. These include changes in the business information environment, trends in information seeking behaviours, barriers to using online information resources, and workplace information literacy.

### Work integrated learning

RMIT University has a strong history of Work Integrated Learning (WIL) programs and alignment with industry. Accordingly, one of the objectives of the Learning and Teaching strategy is to "produce work-ready graduates with a hunger for life-long learning".<sup>2</sup> Work-integrated learning has a significant role in the development of graduate competencies. It is a "holistic tripartate, endeavour in which students, employers and faculty within educational institutions work together to produce graduates that are more 'work-ready'".<sup>3</sup> Graduate employment capabilities at RMIT University consist of generic or employability skills valued by employers. Information literacy and an orientation to lifelong learning are both listed as employability skills at RMIT University.<sup>4</sup> The School of Economics, Finance, and Marketing has a Work Preparation Programme designed to prepare students for their coop placement<sup>5</sup>, which includes the development of resume writing, job search strategies and interview skills. Other universities such as Flinders University<sup>6</sup> also have these programs. The University of Southern Queensland<sup>7</sup> has 'The-Backpack-to-Briefcase' project, which includes employability skills workshops and induction support for students

in the Faculty of Business. This is based on a lifelong learning developmental approach. Graduate employability is one of the measures of success for undergraduate programs, and is therefore part of the criteria upon which AQUA assesses universities for funding allocation. Employer satisfaction and graduate destination surveys are used to gauge of performance in this area.<sup>8</sup> Therefore, developing graduate employment capabilities in students is an important focus for Schools.

### Business information environment

Economics, Finance, and Marketing professionals have different information resource needs, reflecting the character of their disciplines. Quantitative research methodology is often the basis for research in the fields of Economics and Finance. Very broadly, resources include data, indicators, statistics, analyst reports, working papers and conference papers.<sup>9</sup> Marketing research is influenced by the need to deal with 'people and organisations, buying and selling, exchange, relationships, products, distribution, promotion and price'.<sup>10</sup> The internet and Web 2.0 technologies have had a large impact on the way marketers research and relate with consumers. Some of this information can be provided through subscription online information resources, while a great deal is available free on the Internet. There is a general shift from using formal published sources of information towards gathering, analysing and sharing open source information from the web, such as grey literature, unpublished papers, personal websites and blogs.<sup>11</sup> There is also a global trend towards self-publishing and new licence and business models for paper and digital formats that impacts on the online business environment.<sup>12</sup>

Business graduates will be entering a knowledge based economy, where increasingly companies build competitive advantage by using their intellectual capacity in a global environment. Klausegger feels that 'all business decision-making processes are associated with the collection, processing and forwarding of information'.<sup>13</sup> Intranets and knowledge management systems are important tools for communicating and sharing information<sup>14</sup> and in the workplace, there is more emphasis on the use of data, internal information and knowledge gained from others and teams through social networking.<sup>15</sup>

### Student use of information

Along with rapid change in the business information environment, there is also the notion that younger generations such as Gen N or millennials<sup>16</sup> and the Google generation, born after 1993<sup>17</sup>, now view and search for information in a different way, although Rowlands suggests that 'we are all Google generation now'<sup>18</sup>, with more people of all ages using the internet widely. As a generalisation, Gen N tend to have a hypertext mindset. They like to 'power browse' - scan pages quickly, click on hyperlinks and read out of sequence.<sup>19</sup> For students, 'Google provides immediate results'<sup>20</sup> and sets the standard for quick and seamless access to information. In a study by OCLC, 64% of students said that 'search engines perfectly fit their lifestyle'.<sup>21</sup>

Students trust free information as firmly as they do purchased information<sup>22</sup>, and there are some who think everything on the web is free or in the public domain.<sup>23,24</sup> They also spend little time evaluating information and assessing relevance from search results.<sup>25</sup> Lippincott reports that academics feel that students do not use appropriate resources for assignments, and that they “submit multimedia projects that are superficial and full of glitz, not substance – and that they no longer read, period”<sup>26</sup>, or at least do not read as much as older generations.<sup>27</sup> If this is the case, changes in information seeking behaviours will have an impact on how students research and use online information resources.

### Barriers to use of information resources

Another dimension influencing on student use of online information resources may be the way library resources are structured, accessed, and searched. Rowlands feels that users find library systems less intuitive than search engines. Students find it more difficult to use library interfaces than to use Google, and online library resources are often located outside of the student’s learning environment.<sup>28</sup> They may not even be aware of resources’ existence. Other difficulties in using library online resources include having to make separate searches in catalogues and databases, locating relevant databases, and not always having access to full-text, an obstacle for students who want everything instantly.<sup>29</sup> Rowlands also feels that library content is diminishing and “will become more difficult to find as users land where the search engines take them and not where librarians think they ‘ought’ to land”.<sup>30</sup>

It is important that libraries keep up with changes and trends in information seeking behaviours, new technologies, and changes in the online environment. Lippincott states that “library websites often reflect an organizational view of the library”<sup>31</sup>, rather than a user-centred interface and that “there is an apparent disconnect between the culture of library organizations and that of Net Gen students”.<sup>32</sup> New forms of information seeking behaviours present a “serious challenge for traditional information providers, nurtured in a hard-copy paradigm, and, in many respects, still tied to it”.<sup>33</sup> If there are barriers in the path of students in using library online information resources, then this could influence their choices and techniques.

### Workplace information literacy

Information literacy is a significant issue for industry, and in the Employability Skills Framework developed by ACCI/BCA “collecting, analysing and organising information” is one of the employability skills listed under the heading of planning and organising.<sup>34</sup> Information seeking skills are mentioned in a study by Coll & Karsten as one of twenty four desirable competencies for new graduates entering the workforce.<sup>35</sup> In this study, employers and graduates ranked this skill higher than did students or faculty. The work environment is increasingly “characterized by fragmentation, uncertainty and change”<sup>36</sup> and employers face a more ‘complex and ever-changing work environment’.<sup>37</sup> According to Candy, “when students graduate, they confront a diverse range of formal, non formal and informal post-graduation learning opportunities, and the development

of a capacity for lifelong learning should form the core of all undergraduate programs".<sup>38</sup> This highlights the importance of the need to include information literacy as a graduate employment capability.

Information literacy at work is influenced by the "hierarchical and collaborative nature of the workplace" and social networking is a key information literacy skill.<sup>39</sup> Sources of information in the workplace are numerous and diverse, include internal and unpublished information.<sup>40</sup> This perhaps implies a need for a broader understanding of information literacy and the information environment than presently exists within the higher education sector. Librarians and academics have adopted the Australian and New Zealand Information Literacy Framework as a guide when working with students and staff to develop core information literacy skills within the educational sector.<sup>41</sup> Hepworth and Smith feel that there is a "gap between librarians' and LIS academics' conceptions of the skills associated with information literacy that stem from the school and higher education context and the experience of information literacy in the workplace".<sup>42</sup> Understanding the underlying discipline and workplace contexts of co-op students is important in developing information literacy strategies that are both informed and focused.

### Research project

An online questionnaire consisting of 18 questions was created using Survey Monkey and sent to all of the third year undergraduate Economics, Finance, and Marketing students on co-op work placement in 2008. There were approximately 100 students in total, one group finishing their placement at the end of June 2008 and the rest in December 2008. The survey link was emailed to the students by the Industry Placement Manager for the School. There were 33 responses to the survey. The key questions asked students which RMIT University Library online information resources, online information resources provided by their co-op workplace, and free resources available on the internet they used for study and work research. There were questions about the stream they were in, the size of the organisation, and their use of resources in their first two years of study. There were also questions about the resources they would recommend, problems they had experienced accessing and using RMIT University Library online information resources and obtaining help. They were also asked a question about alumni access.

### QUESTIONNAIRE RESULTS

This table summarises the results:

<b>Q1.</b>	<b>What degree are you completing at RMIT University?</b>	
	Bachelor of Business (Marketing)	63.6%
	Bachelor of Business (Economics and Finance)	36.4%
<b>Q2.</b>	<b>How many people are employed in your co-op workplace?</b>	
	30 or less	45.5%
	100 or more	33.3%
	200 or more	21.2%

\* There was no obvious correlation found between known provision of subscription online resources and size of organization in this study.

- Q3. In your first two years as a student in this degree at RMIT University, have you used any Library online information resources when researching for student assignments?**
- |     |       |
|-----|-------|
| Yes | 78.8% |
| No  | 21.2% |

\* Marketing students used them more than Economics and Finance students.

- Q4. Are there any RMIT University Library online information resources that you would use or have used this year when researching for your student business project?**
- |   |       |
|---|-------|
| Had used or would use at least one database                   | 61.3% |
| Had not used, would not use at least one database or not sure | 38.7% |

- Q5. Are there any RMIT University Library online information resources that you would use or have used this year when researching for your co-op workplace? (not for study purposes)**
- |  |       |
|--|-------|
| Had used or would use  | 38.7% |
| Had not used or would not use  | 41.9% |
| Not researching for their workplace as part of their co-op placement | 16.1% |

\* More students made use of the databases for their student business project than for researching for the workplace. The most used databases in both cases were IBISWorld, Factiva and ProQuest. In the case of IBISWorld, the majority of use was by Marketing students, as might be expected. They also used Ebsco when researching for their co-op workplace. Economics and Finance students also used Emerald for their student business project. Other databases such as Expanded Academic ASAP, Business Who's Who, Australian Public Affairs FT and EconLit were used once or twice, with a small variation of usage between them for either the student business project or research in the workplace.

- Q6. Are there any subscription online information resources provided by your co-op workplace that you know about?**
- |          |       |
|----------|-------|
| Yes      | 44.8% |
| No       | 34.5% |
| Not sure | 20.7% |

\* Marketing students listed some of the resources they knew about, such as BRW, AFR, media guides and magazines.

- Q7. Are there any subscription online information resources provided by your co-op workplace that you know about that you would use or have used this year when researching for your student business project?**
- |     |       |
|-----|-------|
| Yes | 10.3% |
| No  | 79.3% |

Not sure 10.3%

\* Resources mentioned were CCH, Gartner, Factiva, IEEE and Thomson Research.

**Q8. Are there any subscription online information resources provided by your co-op workplace that you would use or have used this year when researching for your co-op workplace? (not for study purposes)**

Yes 20.7%

No 34.5%

Not sure 31.0%

Not researching for their workplace as part of their co-op placement 13.8%

\* Some of the resources mentioned included Nielsen Adview Reporter, Gartner and IMRAS.

**Q9. Are there any free resources available on the Internet that you would use or have used this year when researching for your student business project?**

Yes 35.7%

No 32.1%

Not sure 32.1%

\* Resources listed included industry websites and ABS data, case study, marketing and white paper websites.

**Q10. Are there any free resources available on the Internet that you would use or have used this year when researching for your co-op workplace?**

Yes 35.7%

No 25.0%

Not sure 28.6%

Not researching for their workplace as part of their co-op placement 10.7%

\* Resources included real estate and career websites, White and Yellow pages, Google, government websites, online IT magazines and newspapers

**Q11. Which online information resources would you use most frequently when researching for your student business project?**

RMIT University Library online information resources

Online information resources provided by your workplace 25.0%

Free resources available on the Internet

Other 7.1%

None 10.7%

\* There were more Marketing students who indicated they would use free resources available on the Internet.

- Q12. Are there any subscription online information resources available in your co-op workplace you think should be provided by RMIT University Library for student use?**
- |          |       |
|----------|-------|
| Yes      | 10.7% |
| No       | 57.1% |
| Not sure | 32.1% |
- \* Suggestions included Ad News, BRW and Direct Magazine. (Some of which the Library already possesses)
- Q13. Are there any other subscription online information resources you know about that you would specifically recommend to the Library for purchase?**
- |          |       |
|----------|-------|
| Yes      | 14.3% |
| No       | 67.9% |
| Not sure | 17.9% |
- \*Students suggested more IBISWorld reports, BRW and Buddecomm.
- Q14. Are there any free Internet resources that you would specifically recommend to the Library to include in information research skills training?**
- |          |       |
|----------|-------|
| Yes      | 0.0%  |
| No       | 60.7% |
| Not sure | 39.3% |
- \* There were no recommendations from students about free internet resources to be included in information research skills training.
- Q15. Have you had any difficulties in accessing and using RMIT University online information resources from the workplace?**
- # (Out of total of students who experienced difficulties)
- |  |       |
|--|-------|
| #Difficulty in locating databases  | 22.7% |
| #Difficulty in choosing databases  | 22.7% |
| #Difficulty in searching databases   | 31.8% |
| #Problems with student login (out of total of students who experienced difficulties) |       |
| #Network security in workplace blocking access                                       | 4.5%  |
| No difficulties (out of all students who responded to this question)                 |       |
| * Majority of these were Marketing students  | 42.9% |
- Q16. Do you know where to find information on the RMIT University Library website about how to contact your Liaison Librarian for assistance with research?**
- |          |       |
|----------|-------|
| Yes      | 50.0% |
| No       | 21.4% |
| Not sure | 28.6% |
- \* More Marketing students knew how to contact staff than Economics and Finance students.



**Q17. Currently, when you finish your degree and are no longer studying at RMIT University, access to RMIT University Library online information resources is very limited. Do you want to have access to key RMIT University Library online information resources after you graduate?**

Yes	85.7%
No	3.6%
Not sure	10.7%

## **DISCUSSION AND RECOMMENDATIONS**

### **Use of resources by students**

The questionnaire results indicated that the many of the students did use RMIT University Library online information resources both for researching for assignments in the first two years of their course, and in the workplace for their business research project and workplace research. There was greater use of the library online information resources for their business research project than for workplace research. The most frequently mentioned databases such as IBISWorld, ProQuest, and Factiva are all key business resources. There were a small number of library online information resources that were not used at all by students surveyed in this study, including the Connect 4 databases and SourceOECD. Students used subscription online information resources provided by their co-op workplace more for workplace research than for their student business project. The use of these resources was low. However, and only 44.8% of students knew about subscription online information resources accessible in their workplace.

Although there was use of the library online information resources for both study and work, when asked about which resources they would use most frequently, students reported a preference for free resources available on the internet, followed by online information resources provided by the workplace, and then RMIT University Library online information resources. Students reported some difficulties with searching, locating, and choosing the library databases, yet there was a positive indication that they would like to have access to RMIT Library online information resources when they graduate.

There were some differences between the marketing students and economics and finance students with regards to use of resources. While the use of information resources was generally quite similar, they did recommend specific resources used by each of their professions, as might be expected, and economics and finance students reported having more difficulty than marketing students in locating, choosing and searching databases and finding assistance. Marketing students also used library online information resources more than economics and finance students when researching for student assignments in their first two years of study. It would be useful to further investigate the differences between the two groups in order to better plan how to assist each of them. It may also be valuable to research how being in the workplace impacts on a student's ability to find assistance with using Library resources, compared to research undertaken on campus.

It is not surprising, given what is indicated in the literature review, that students in this study would choose to use most frequently resources available on the internet. Changes in the information environment, emerging patterns of information seeking behaviours in young people, and barriers to accessing Library subscription resources have influenced the way they use information. Online information resources typically provided by the Library are a vital part of the academic environment, and are important to many professionals and graduates who continue to study; however they are only one contributor of knowledge in the broader business information environment. In this study, some of the workplace resources available may have been unknown to students, and it would be useful to gain a more in depth understanding of the subscription-based and other information resources available in business workplaces.

### Online information resources

In addition to reviewing the need for large subscription resources recommended by students, the library could consider recommendations for purchasing smaller, specific resources that may not have typical subscription models, such as websites with case studies, financial data, and market research company resources that workplaces might have access to. This would complement the large electronic collections such as IBISWorld and Factiva that support student and staff study and research needs, and are additionally useful for the workplace. The library could also review its collection development policy to see if a broader view of selection criteria for electronic resources could be taken: one more inclusive of students in the workplace. It is possible that these kinds of resources might also be very relevant for study purposes. Reviews of those resources infrequently used by these students could also be part of the collection development process. This could include a detailed review of database usage.

Review of the barriers and possible solutions relating to locating, choosing, and searching online information resources is always a priority for the library. The library continues to seek feedback and to think of ways to make its online information resources visible, accessible, and more user-friendly. Information literacy helps students to search and choose databases, and subject guides are a valuable tool for introducing students to key resources. A student-centred focus is paramount and moving towards utilising technologies students are comfortable with and within their information space is vital. One approach for research libraries suggested by Rowlands is to "make their sites more highly visible in cyberspace by opening them up to search engines".<sup>45</sup>

There was a strongly expressed desire from students to continue to access RMIT University Library online information resources once they graduate. Questionnaire comments indicated this access was important for students, and that it would be useful not only for work research, but for further professional development, and postgraduate education. Although some organisations will have their own subscription resources, these are unlikely to replicate the range of what is available within universities. Extending access to the alumni community is a course currently being considered by the university.

## Information literacy development

The ability to communicate, network, share, and organise information in a team environment is an essential skill to information literacy and to the development of lifelong learning skills. Professional development for librarians regarding the workplace information environment, workplace information literacy, and the information seeking behaviours of Gen N students may help in developing focussed information literacy programs for these students, and may also contribute to a broader understanding of how they use information in the workplace. It might also assist in addressing the lack of understanding about differences in information literacy between the higher education sector and the workplace: a situation described by Hepworth and Smith in the literature review.

While information literacy skills are developed and lifelong learning initiated through university study, there remains a challenge presented for academics and librarians in trying to meet the information literacy needs of students both for study purposes and for workplace research. Alignment of these needs could in part be achieved by focussing on resources useful for the workplace as well as for study, such as some of those recommended by the students in this research.

Given that this group of students indicated that they would most frequently use free resources available on the internet, and that the information seeking behaviours of students have changed, perhaps training could be offered using classes such as GoogleSmärt, an internet tutorial developed by RMIT University Library. It has a student-centred, problem solving, and evaluative approach to learning about Google. It considers the information seeking behaviours of students and uses a teamwork approach, reflecting the nature of the workplace. Strengthening the internet research skills of these students will be useful, particularly for those students who go on to work in small organisations with limited access to large subscription online resources.

The library currently runs an information skills research class each semester for a small number of WIL students in the Business portfolio. The School of Economics, Finance, and Marketing offers a Work Preparation Programme to students prior to starting their placement; however, it does not currently include information literacy training. Liaison librarians may be able to work with WIL academics and administrators to integrate information literacy training for the workplace into this programme.

## Liaison opportunities

Current marketing and liaison strategies for informing students and academic staff about the existence and use of online information resources need to be examined. Only 50% of students in this study knew how to find out through the Library website how to contact their liaison librarian for assistance. It would be useful to look at strategies for reaching this group, such as communicating through Blackboard, where students visit for their business project, emailing them directly, or even visiting some of them in the workplace in consultation with WIL staff. Academic staff are well-placed to encourage students to become familiar with information resources, and further marketing and liaison with staff would be

important. One way to strengthen relationships with academic staff, and to learn more about WIL programmes is for liaison librarians to become involved in any WIL professional development activities and to join relevant WIL committees.

## CONCLUSION

There are many new challenges for Economics, Finance, and Marketing students as they move from the university environment to the workplace, and these include a need to be able to research effectively in an increasingly knowledge based and rapidly changing business environment. This paper provides some insight into the online information resources students are using in the workplace, and indicates that while they know about and use RMIT online information resources and workplace subscription online information resources for study and work research, they most frequently use free resources available through the internet. Further, extended research into the online information resource needs of WIL undergraduate students at university in a variety of discipline areas would assist in providing a more accessible and relevant library service.

There is some evidence in the literature that changes in the business information environment, the information seeking behaviour of students and barriers to using Library online subscription resources have influenced the way students research and use resources. The social nature of the workplace and the broad range of resources and knowledge used in the business work environment need to be considered when contextualising information literacy design for students. It is also hoped that librarians can work effectively with WIL staff to design and integrate information literacy into work preparation programs, and to design information literacy programs for final year undergraduate students preparing to enter the workforce.

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