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Article

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Information literacy support for off-campus students by academic libraries in the Republic of Ireland

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Abstract

Purpose: This study investigates the perceptions of academic librarians to the development and delivery of information literacy support programmes for off-campus students.

Methodology / approach: The approach was predominantly quantitative, with a self completed questionnaire being designed and disseminated to a purposive sample of academic librarians in Ireland with responsibility for information literacy development at their institution, to determine their approach in supporting off-campus students, and how this relates to their role in developing information literacy. The questionnaire also examines current practice in terms of library teaching methods and library support for remote students. Institutions chosen were from the university and institutes of technology sector in Ireland and the National College of Ireland. A literature review was carried out focusing in particular on international examples of best practice.

Findings: The results indicate a low level of academic librarian involvement on off-campus academic programmes and minimal collaboration between teaching staff and librarians in relation to planning, design and delivery of these courses. However, the findings do, reveal a willingness on the part of most academic librarians to take on additional responsibilities and new roles implicit in the support of off-campus students, if adequate support and resources are provided. The results indicate that there is a lack of knowledge and low level of awareness amongst librarians when it comes to educational theory. Very little pedagogical training is provided for academic librarians involved in teaching information skills. The findings also reveal that non campus based learners are generally being supported through traditional means, with new technologies (online information literacy tutorials, VLEs, eReference services), innovative communication tools and teaching aids not being exploited to the full by Irish academic libraries as a means of support. The paper also includes selected free text comments from survey respondents, which provide further qualitative information, on their viewpoints on information literacy development for off-campus students.

Originality / Practical implications: A survey to determine the attitude of Irish academic library managers to information literacy support for off-campus students and a review of current practice in terms of teaching methods and support has not been conducted before in Ireland. The findings and recommendations are likely to be of interest and of potential value to Irish academic library practitioners and policy makers and will inform future research to contribute to the development of information literacy in the Republic of Ireland.

Keywords

academic libraries; information literacy; information skills; off-campus students, distance learning; Ireland

1. Introduction

The Internet and new information and communication technologies (ICT) have revolutionised the ways in which information and knowledge is accessed, created and disseminated, providing flexible and innovative pedagogical opportunities which were previously unavailable.

The potential of ICT to deliver new learning opportunities has been harnessed in Ireland where an increasing number of students are now learning off-campus as many institutions increasingly deliver flexible academic programmes through distance learning and e-learning mechanisms.

With ICT transforming education and facilitating the generation of information in many formats, and of varying quality, it is essential that all students have the ability to retrieve, use and evaluate information in an effective manner, with these information literacy skills viewed as being a prequisite to achieving life long academic progression, social inclusion and participative citizenship.

Off-campus students often require greater levels of support than students in traditional academic environments; they also expect the same level of library service that is available to their peers on campus. Supporting these distance learners and providing them with an equivalent learning environment to their on campus peers provides a key challenge for library and information professionals. Stevenson (2003) argues that remote students have an even greater need to acquire information literacy skills. Irish academic librarians need to realign traditional user education services and provide information literacy experiences to remote learners that are comparable to those available to on campus students.

This study was motivated by the need for further research into information literacy in Ireland, and to investigate how to effectively develop the information literacy skills of the growing number of students studying off-campus in the Irish higher education sector. There is a dearth of literature about information literacy in an Irish context, and apart from the work of McGuinness (2003a,b) and a review of information literacy in Irish third level education in CONUL (2004), no comprehensive study has been undertaken on the subject in Ireland. Webber and McGuinness (2007) make the point that information literacy has not been recognised at the highest political level in Ireland, with the 'Information Society' agenda focusing on information technology as opposed to information literacy. Despite some progress via the LAI (Library Association of Ireland) Working Group on Information Literacy, there is no coherent approach to developing information literacy (IL) skills in Ireland and no cohesive national strategy; neither is there a shared understanding of the significance of information literacy, with varying information literacy definitions and standards and a lack of clarity with regard to the concept of information literacy (CONUL, 2004). These differences in how academic librarians conceptualise information literacy can impact the development of information literacy in remote students through inappropriate teaching methods (Webber and Johnston, 2000). Irish academic library practitioners tend to look to international models and in particular the UK framework for information literacy (McGuinness, 2003a).

This study investigates the perceptions of academic librarians to the development and delivery of information literacy support programmes for off-campus students. Using a self completed questionnaire the study sought to determine the attitudes of Irish academic library managers to information literacy and how they perceive their role in the development of information literacy for off-campus learners. The survey also aimed to examine existing teaching methods employed by academic librarians in supporting students studying remotely, to determine how they are developing and applying effective pedagogical methods to support off-campus learners, and investigate current practice in terms of academic librarian collaboration with teaching staff, particularly in relation to the design, delivery and evaluation of study programmes for students studying remotely. Finally, the study also aimed to identify and recommend best practice on strategies to support development of information literacy in students studying remotely. The findings from the questionnaire and evidence

from the literature review which focuses on international examples of best practice are drawn together and presented with further discussion of the practical implications.

Institutions chosen for this research were from the higher education or third level sector in the Republic of Ireland – from the universities and institutes of technology and the National College of Ireland (NCI), which is one of the leading third level providers of courses through distance and e-learning mechanisms. The tertiary education sector in Ireland encompasses the university sector with seven universities, the technological sector which comprises fourteen institutes of technology around the country, the colleges of education and private independent colleges[1].

Although the survey was undertaken in 2005, the author's experience as a practitioner and involvement with the Library Association of Ireland's Working Group on Information Literacy would indicate that these results are as valid in 2008 as in 2005. A draft report by the working group in October 2008 reviewed information literacy in Ireland across all sectors, with the findings suggesting further evidence for the results of this survey. The findings and recommendations of this study are likely to be of interest and of potential value to Irish academic library practitioners and policy makers in terms of how they can develop and use appropriate pedagogic approaches and strategies to support the development of information literacy in off-campus students. The findings will inform future research and contribute to the development of information literacy in the Republic of Ireland.

2. Literature Review

A clear statement on the value of information skills within the Irish higher education context and the role of the library service is given in the national policy on library and information services in Ireland by an Chomhairle Leabharlanna (Library Council of Ireland), *'Joining Forces: Delivering Libraries and Information Services in the Information Age'* published in 1999. It states:

The changing teaching and learning environment requires increasing support from libraries and information services. The services we provide at third-level must now include teaching information-handling skills and training on information technology.

A review of the literature revealed that extensive research has been undertaken on information literacy and higher education, but there is limited research into information literacy in Ireland (McGuinness, 2003a). No definition for information literacy has yet been produced, and many Irish institutions define IL according to their own needs and look to international models and guidelines. The close relationship between the academic library profession and their UK counterparts has led to some awareness in the Irish Republic of the UK national model developed in 1999 by the Society for College National and University Libraries (SCONUL). This 'seven pillars' model for information literacy has been taken up by some Irish Universities (Webber and McGuinness, 2007).

McGuinness (2003a) discusses IL activities amongst Irish third level institutions, concluding that the sector has not tackled the issue to any great extent, with no co-ordinated approach to curriculum-integrated information literacy programmes. McGuinness (2003b) found that information literacy in Ireland holds a relatively insignificant place in academia with little acknowledgement of the teaching role of librarians and a lack of academic awareness to the pedagogical value of information skills. The limited Irish literature pertaining to information literacy relates to individual approaches adopted by

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[1] Available at
<http://www.education.ie/home/home.jsp?maincat=22823&pcategory=11076&ecategory=11120&sectionpage=12251&language=EN&link=link001&page=1&doc=11495> [Accessed 5th December 2007]

institutions to the development and implementation of online information literacy programmes (Hegarty et al. 2004, Breen and Fallon, 2005).

In 2004 The Consortium of National and University Libraries (CONUL) Working Group on Information Skills Training investigated current IL practice in tertiary education in Ireland, making a series of strategic recommendations which included the need to develop a policy on IL and more pedagogical training for librarians. Training and ongoing professional development in teaching and learning for librarians engaged in information skills delivery is discussed in the literature. Kavulya (2004) recommends that this training should include learning theories, ICT supported learning, e-learning and for such courses to be included in the curricula of library schools. It is essential that academic librarians develop their teaching expertise, familiarise themselves with academic theory and understand the variety of learning styles in the student body (Peacock, 1999).

One of the themes that emerges from the literature is the need for academic librarians to form partnerships and collaborate with teaching staff to integrate and embed information literacy instruction into course curricula (Parker, 2003). This collaborative approach also applies to curriculum design and delivery of information literacy programmes for off-campus learners (Secker, 2004). Librarians need to assume a more proactive role and work in close partnership with teaching staff in terms of distance education course planning and delivery (Gandhi, 2003).

A review of the literature also reveals a shortage of written material with regard to information literacy instruction for off-campus or distance learning students (Moyo and Cahoy, 2003). The need for equivalent library services for both on and off-campus students and the educational role that librarians can play in the support of remote students is highlighted (Lebowitz, 1997; Doherty et al, 1999).

The need to follow sound pedagogical principles when providing online library instruction is another theme discussed in the literature (Webb and Powis, 2004; Dewald, 1999), as is the importance of librarians exploiting innovative technologies (videoconferencing, course management software, streaming media) and new web-based mechanisms to deliver library services to off-campus students (McGill, 2001). Interactive online IL tutorials to support remote students are also reviewed (Donaldson, 2000), while Hegarty et al (2004) discuss OLAS[2]; an online information literacy tutorial developed at Waterford Institute of Technology (WIT) Libraries. Librarians are also exploiting the potential of the VLE to develop and deliver information literacy instruction, working collaboratively with academic staff (Patalong, 2003).

Many institutions are beginning to provide virtual reference services as a means of providing 24/7 support to off-campus learners (Peele and Phipps, 2004); streaming has also come to the fore as an innovative way of providing video-based instruction at point of need to off-campus learners (Lee and Burrell, 2004).
In order to support the development of information literacy in off-campus learners there is a need for an effective ICT infrastructure to support the relevant technologies (Chomairle Leabharlanna, 1999; Engeldinger, 1998).

It is vital that institutions receive the support at management level in terms of the development of information literacy (CONUL, 2004) and that information literacy is included as a key goal in institutional strategic planning (Doherty et al, 1999). Similarly, in order for library services to meet the needs of distance learners the support of the institution is needed and a clearly defined strategy needs to be established.

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[2] An adaption of the Gaelic (Irish) word eolas, meaning knowledge

3. Methodology

The approach of the survey was predominantly quantitative, with a self completed questionnaire serving as the primary research instrument. The questionnaire was broken down into three different sections reflecting the research objectives of the study.

Section A: Role of the academic library service in supporting off-campus students
Section B: Library service involvement in course development and training in information skills
Section C: Other support mechanisms

To provide comparative results, the questionnaire leaned towards a more quantitative approach but made use of a mix of closed and open questions to address a broad range of issues relating to teaching support for off-campus learners and the development of information literacy.

The population targeted was academic librarians in Irish third level institutions. Twenty-two academic libraries in twenty-two third level institutions in the Republic of Ireland were identified for this study. Seven of the libraries were from the university sector – three in Dublin and four from outside. Fourteen libraries were from the institutes of technology sector and were geographically spread throughout the country. The remaining library was from the National College of Ireland, a privately sponsored college based in Dublin. This institution was selected as it is one of the leading providers of distance learning courses in the Republic of Ireland.

A purposive selection approach was used to identify potential participants. The purposive sample provided an even balance and the approach to the selection helped ensure a good cross section of opinion from across the institute of technology and university sector in the Republic of Ireland.

A pilot questionnaire was first sent to a small random sample of academic librarians, with feedback being used to fine tune the final questionnaire. The questionnaire was administered by email in July 2005 to librarians, deputy librarians and sub librarians within the institute of technology and university sector and the National College of Ireland who had a responsibility for information skills development or information literacy at their institution. A cover letter sent with the questionnaire outlined the purpose of the research and reassured participants of confidentiality. Four weeks after the questionnaire was distributed, a reminder was sent by email.

The quantitative data obtained was analysed using MS Excel and Statistics Package for the Social Sciences (SPSS). The open-ended questions were analysed using content analysis.

4. Findings

A total of 42 responses were received from the 70 Irish academic librarians polled, including at least one reply from each of the 22 academic libraries; this was a response rate of 60%. Of the responding librarians, 72% were from the institutes of technology sector, 26% from the university sector and 2% were from a private college.

Half the respondents were at a senior level - librarian, deputy librarian or associate / sub librarian level. This was encouraging, as generally it would be librarians at this level that would have responsibility for the development of information skills at their institution.

69% of respondents were from institutions which provided off-campus courses. The results reported below include the replies from all respondents, whether or not off-campus courses were provided by their institutions.

43% of respondents' institutions had a policy in place for off-campus students while 36% did not have a support policy and 21% were not aware of one.

Quite a large percentage of respondents (76%) were from libraries which did not have a librarian with special responsibility for providing support for remote learners. Of the 24% with a librarian providing support, this was often offered on a part-time basis.

Respondents were asked whether information skills training and delivery is not as important for off-campus learners as it is for those on campus. 72% of the respondents either disagreed or strongly disagreed with the statement, inferring that they regard information skills development as being just as important for off-campus learners (Figure 1).

Figure 1. Information skills training and delivery is not as important for off-campus learners as it is for those on campus (N=42)
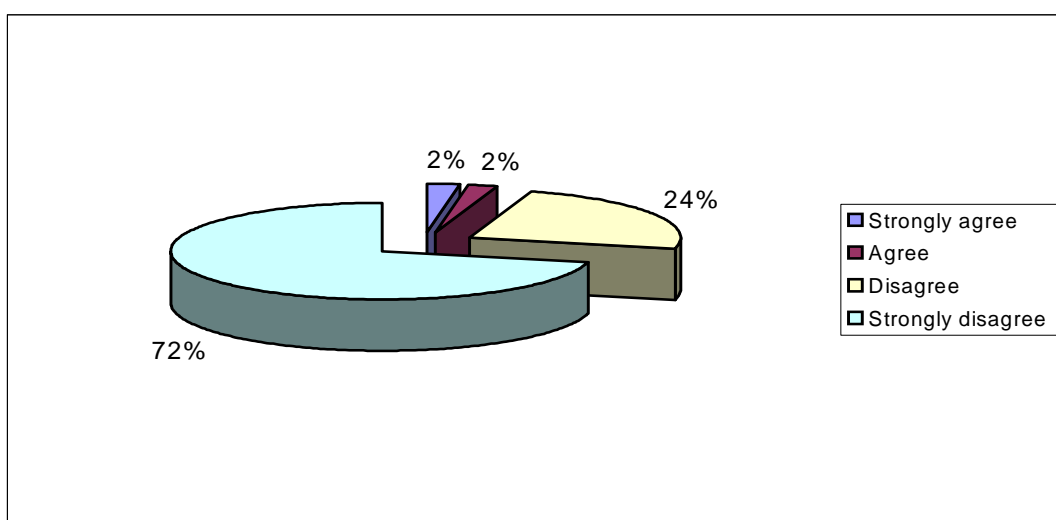
Respondents were asked how they felt about taking on additional responsibilities and providing new types of service to students who deal with the library primarily using electronic means; the findings reveal a readiness on the part of most to take on additional duties implicit in the support of off-campus students, if adequate support and resources are provided. One respondent commented:

> *I believe it to be an essential function of the library to support these users…there are major resource implications inherent in this however.*

Issues highlighted as a cause for concern included time constraints, lack of staff leading to increased workload, limited funding and the need for further training and support from management.

Other areas that respondents felt needed to be addressed if they were to take on additional duties included the need for more librarian involvement at the planning / development stage of off-campus academic programmes. Further cooperation amongst Irish academic libraries, particularly in the area of information literacy development, the need to have an appropriate ICT infrastructure in place, and the use VLEs for information skills training and development were other issues raised.

The findings indicate that 95% of respondents understood the term information literacy, although 5% did not. The study showed that quite a high number of respondents (52%) were not using the

information literacy competency standards for higher education at their institution (Figure 2). 12% of respondents do not even know about international IL standards which is a particular concern.

Figure 2. Does your library use international information literacy competency standards for higher education? (N=42)
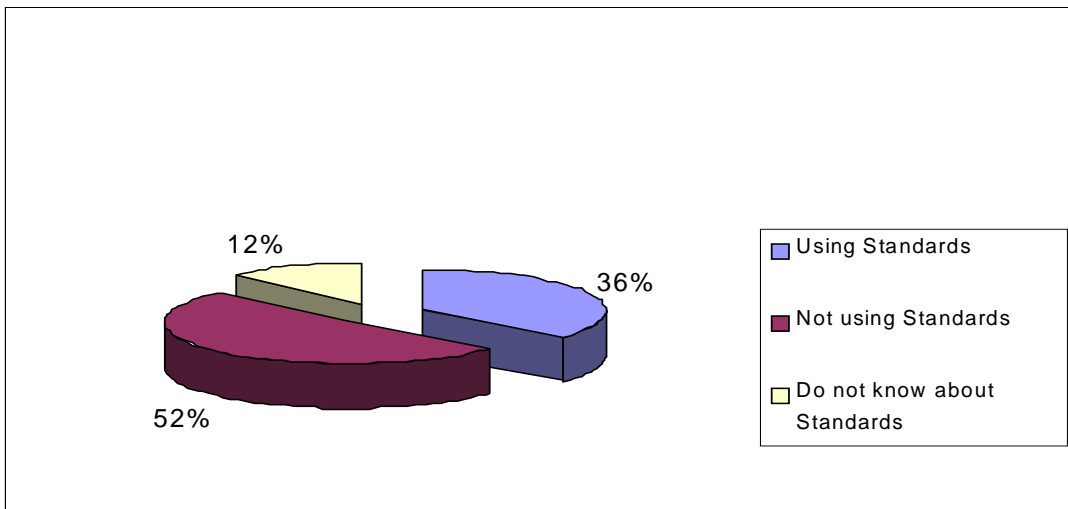
58% of respondents' libraries had developed a policy for information literacy; however 40% of the respondent libraries in higher education institutions in Ireland had yet to develop any policy in this area (Figure 3).

Figure 3. Has your library developed any policies or guidelines for information literacy? (N=42)
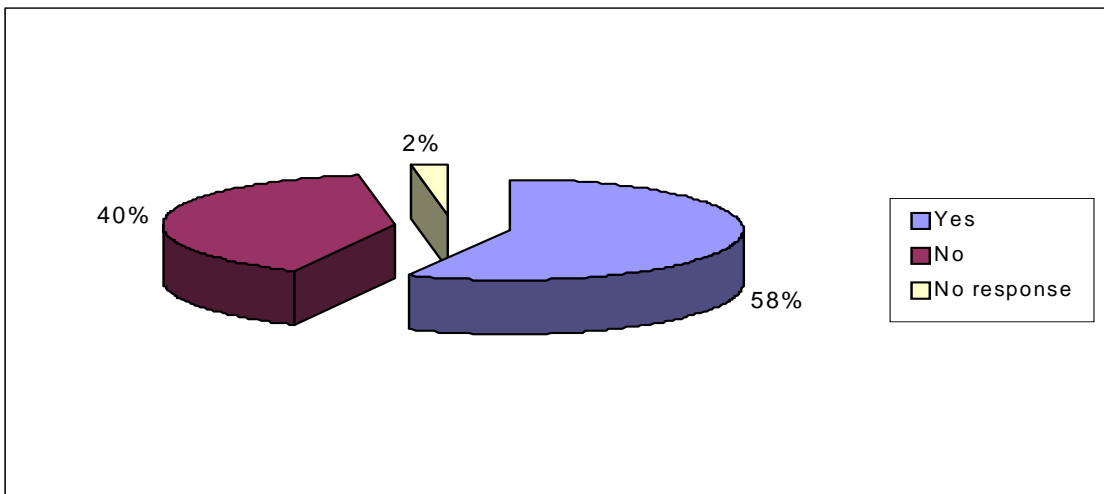
The findings reveal that only 38% of the respondents' institutions (Figure 4) had information literacy as part of their strategic plan.

Figure 4. Is information literacy part of any strategic plan at your institution? (N=42)
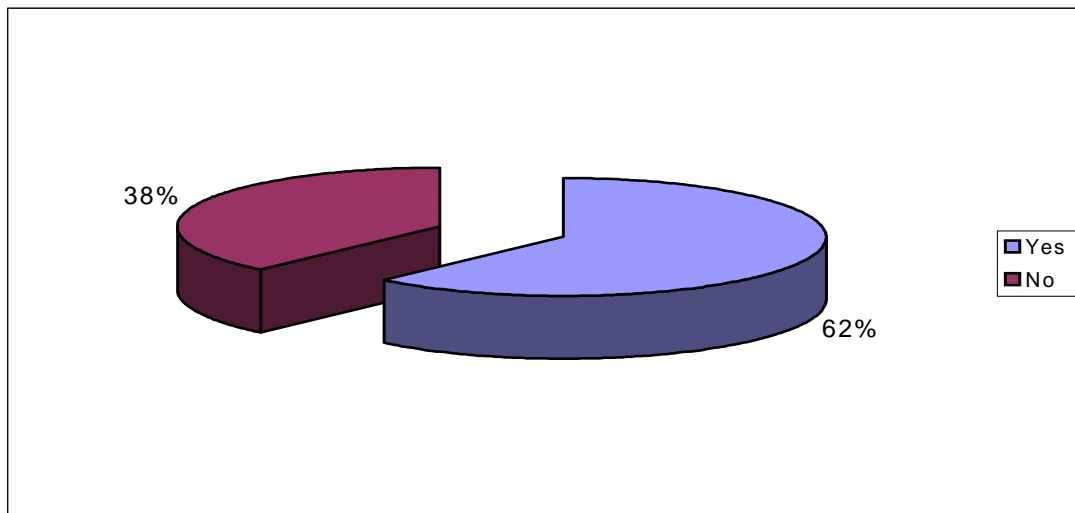
The results indicate a miminum level of academic librarian involvement on off-campus academic programmes and a lack of collaboration with teaching staff. 31% of respondents were involved in the design, delivery and evaluation of academic programmes for students studying remotely but this involvement was largely limited to providing the traditional support roles of resource consultation / induction material as opposed to supporting off-campus academic programmes through information skills training.

For those 69% of respondents not involved in the design and delivery of off-campus programmes, the majority felt that delivering information skills teaching is a priority area for their involvement in non-campus based courses.

The study found that when it comes to the support of remote students, academic staff do not generally keep librarians informed or involved (Figure 5).

Figure 5. To what extent do academic staff keep you informed or involved in the support of off-campus learners? (N=42)
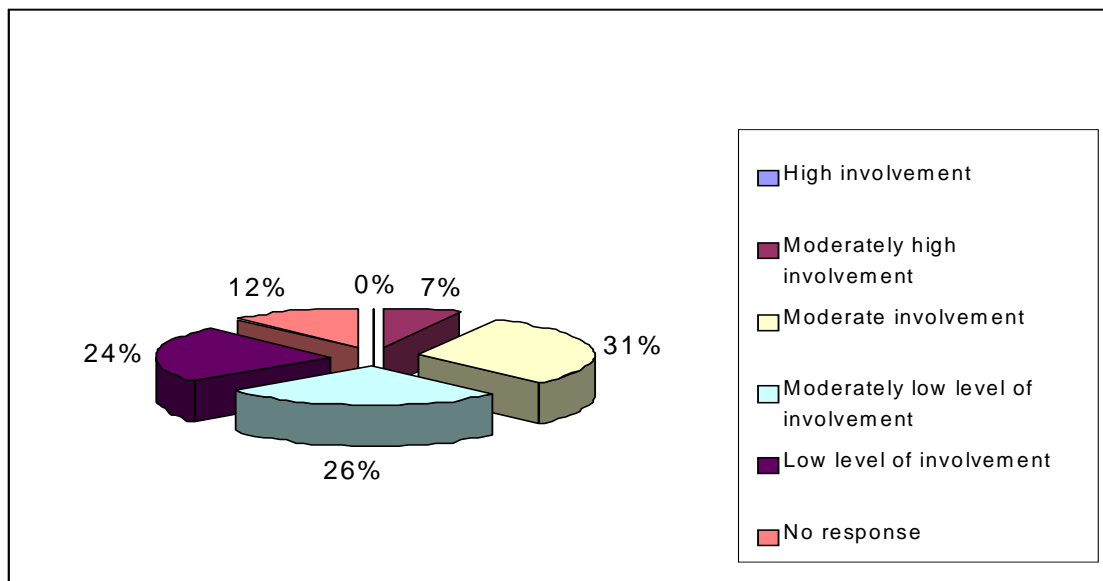
83% of respondents had information literacy programmes in place in their institution; of the 17% that did not, it was felt that the main reasons were again lack of resources, time constraints and a lack of advocacy and recognition by teaching staff as to the value of information literacy in higher education.

The majority of respondents' information literacy programmes were evaluated, although it was mainly through print mechanisms or informal feedback with lecturers at the session's conclusion. Only a small number of institutions have exploited the possibilities of using technology and electronic means to conduct assessment and evaluation. The results found that 29% of respondent's information literacy programmes were neither assessed nor evaluated.

Participants were invited to comment on other issues that they felt needed to be addressed in terms of integrating library support for off-campus learners. One respondent added:

> *Librarian involvement at course planning and development stage is imperative before we can really provide an effective service to these students.*

Other support issues raised included the need for a clear policy of support to be implemented at Irish third level institutions for off-campus learners and the importance of having a dedicated off-campus librarian in place. Having an effective ICT infrastructure, with both students and library staff receiving ICT training was also referred to as a priority, as was the need for librarians to exploit new technologies such as learning management systems and new communication tools to deliver information skills training. eReference services and the value of providing off-campus students with live online 24-7 support were also noted.

Respondents felt that: "*IL should be delivered to off-campus users to the same extent as those who spend significant study time on-campus*"

The need for librarians to become familiar with educational theory and the lack of teaching and learning training for librarians was also raised:

No training in teaching and learning is provided for librarians at our institution…. an overview of learning theory would be useful…particularly when it comes to designing my information skills sessions.

Very little pedagogical training is provided for academic librarians involved in teaching information skills. 62% of respondents received no training in learning theories or any pedagogical training relating to online learning (Figure 6).

Figure 6. What training in learning and teaching is provided for academic librarians who deliver information skills training? (N=42)
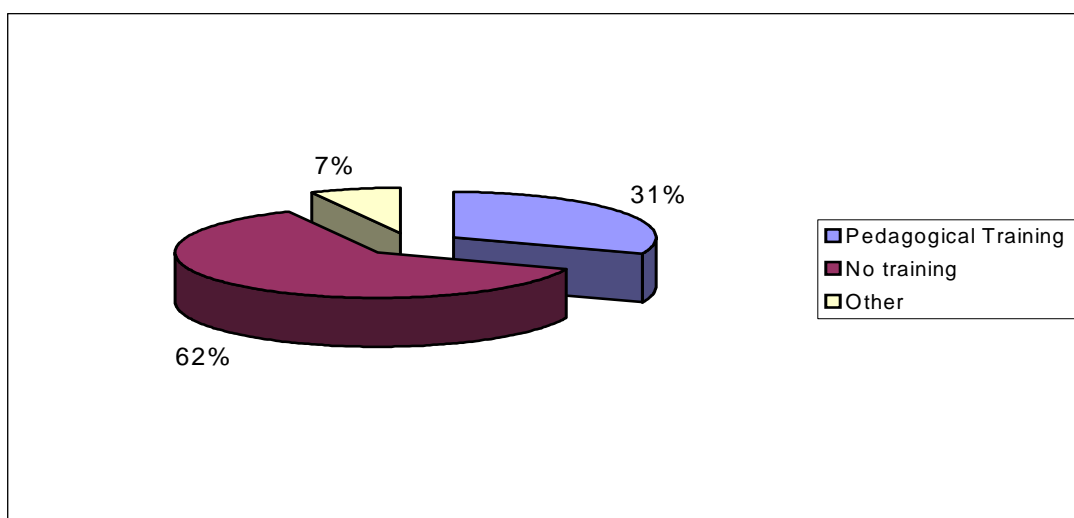
The findings also reveal that 49% of respondents had only a little knowledge of educational theory, with a further 29% having very little or none (Figure 7). These respondents included senior librarians who, it would be assumed, have responsibility for information skills development at their institution. Only 10% of the respondents indicated that they had a very great deal of familiarity with educational theory.

Figure 7. How familiar are you with educational theory? (N=42)
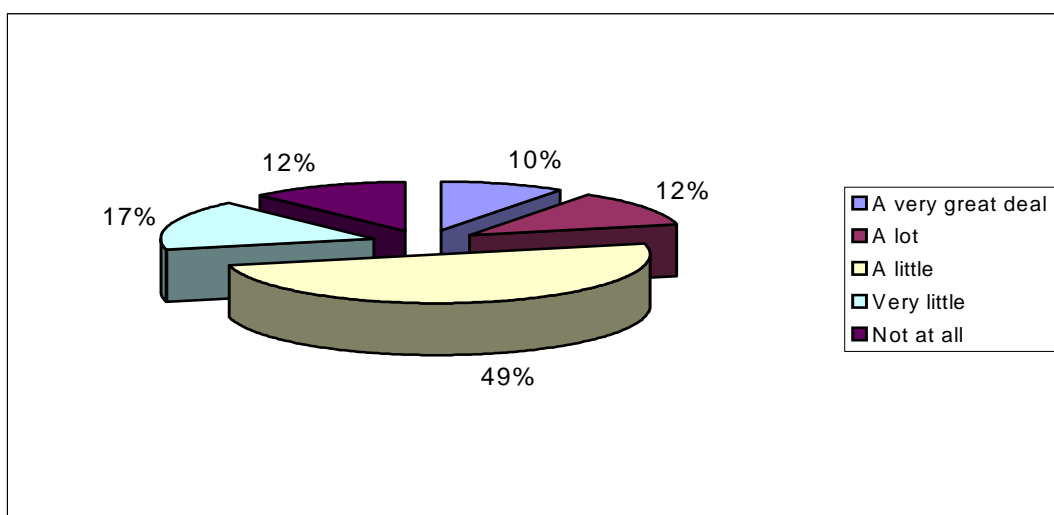
91% of respondents felt however, that an academic librarian can fulfil a teaching role in supporting remote learners. The findings indicate that there is a lack of infrastructure support for teaching and learning with 64% of respondent institutions not having a support centre or something similar in place for teaching and learning.

The results suggest that third level institutions in Ireland are using learning management systems to deliver, support and enhance teaching and learning. However the findings also reveal that Irish academic librarians are generally not harnessing the potential offered by VLEs to deliver IL training beyond the library walls. Only 19% of respondents are employing VLEs to deliver such training, with 74% of respondents indicating that they have yet to utilise this new technology, for IL delivery (Figure 8).

Figure 8. Are VLEs used to deliver information skills training? (N=42)
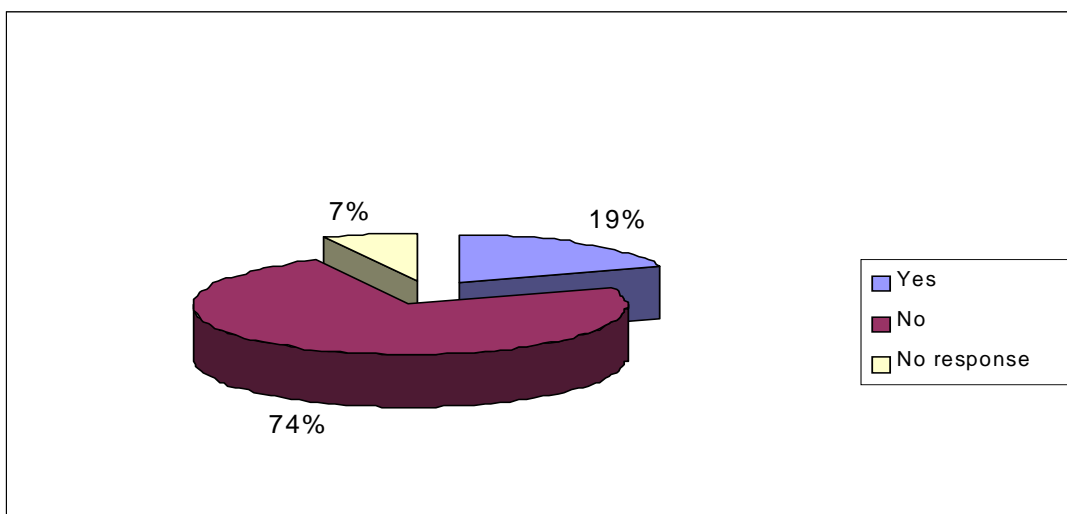
These results indicate that non campus based learners are generally being supported by the library through traditional means via telephone, email, interlibrary loan and document delivery, with the web support being limited to remote access to electronic databases or providing website listings by subject. New technologies (online information literacy tutorials, VLEs, eReference services), innovative communication tools and teaching aids such as online assessment tools, online bulletin boards and computer aided learning materials are not being used by academic libraries to support off-campus learners in the Irish higher education sector.

5. Discussion

The purpose of this study to investigate the perceptions of academic librarians regarding the development and delivery of information literacy support programmes for off-campus students has been achieved. The methodology was successful and the questionnaire with the pertinent stakeholders made it possible to determine the attitudes, perceptions and opinions of academic librarians in Ireland to supporting off-campus students and how they see their role in developing information literacy. The research also indicated current practice in terms of library teaching methods and library support for remote students.

The attitudes of Irish academic librarians to the role of the academic library service in supporting remote students are encouraging. The study found that librarians are generally comfortable about

taking on additional responsibilities and providing new types of services to support these students once provision for remote learners is made at institutional level and once additional staff, extra funding and further training is provided for librarians involved in delivery of these services. In supporting these students, there appears to be willingness from librarians to embrace change, develop innovative skills and adopt new roles. Irish academic librarians see information skills training and delivery as being just as important for off-campus students as their peers on campus and also clearly feel that they can fulfill a teaching role in the support of these students. The findings reveal a low level of academic librarian involvement in off-campus academic programmes and minimal collaboration between academic staff and librarians when it comes to the development and delivery of these courses; these results are supported by the conclusions of other studies (Lebowitz, 1997; Gandhi, 2003). The research also found that librarians are largely unfamiliar with educational theory and teaching and learning training is not being provided for those involved in information skills delivery.

The study found that amongst some Irish academic librarians uncertainty still exists around the concept of information literacy, and in particular the related language and terminology. IL has not been fully embraced by practitioners and there is limited awareness and use of international IL models and standards. These findings are supported by the CONUL report (2004) which highlights how not all academic librarians engaged in information literacy training in Irish higher education necessarily understand the concept. This has obvious connotations for the development of information literacy in off-campus students, through the potential usage of inappropriate teaching approaches and strategies.

From the findings and a review of the literature it would appear that the educational support for off-campus students is clearly not well developed nor supported by existing institutional policies and strategies. Kavyula (2004) makes the point that the most critical problem facing library services for distance education is the lack of institutional policies. Where an Irish third level institution does have a policy of support for off-campus students, some academic librarians are unaware of its content which has implications for the support of these students in terms of the planning and development of the library service. Additionally, Irish academic librarians are generally not making provision for remote students via a librarian with special responsibility for these users. Clayton (2004) highlights the value of having a librarian with special responsibility for non-campus based students.

The findings indicate that remote students in Irish third level academic libraries are being supported via conventional communication mechanisms such as the telephone, email, interlibrary loan and document delivery. Academic library practitioners are generally using traditional teaching methods in their support of off-campus learners embodied in reference support, consultation regarding resources, induction and ongoing information skills training. Most institutions do not seem to offer information literacy training specifically for remote learners.

The study also found that technology is being used by academic libraries to offer traditional services to off-campus students via library webpages, with the web support mainly being provided via remote access to electronic databases or website listing by subject. Innovative teaching and communication tools to support non campus based learners such as online whiteboards, online bulletin boards etc are generally not being employed by academic librarians in terms of how they communicate and interact with these students. The findings also highlight that academic librarians are not taking advantage of e-Reference services as a means to supporting these students and extending library provision. Additionally, only a handful of academic libraries in Ireland have developed online information literacy tutorials, with no institution developing IL tutorials aimed specifically at remote students. These findings are supported in a study by Hitchen (2005) who conducted a survey of the web sites of 92

university libraries in the UK, and concluded that innovative tools to support information skills for off-campus students were not being exploited; only Leicester University at that time offered online tutorials specifically for off-campus learners.

6. Conclusions and Recommendations

In response to the findings of this study a number of recommendations have been drawn. Irish academic librarians need to extend access to library services and offer flexible support to remote users by continually developing the services they currently offer. This support might include the provision of face to face teaching at off-campus centres, 24/7 support, improved access to library eResources, special collections for distant learners, enhanced loan rules with longer borrowing periods, enhanced inter library loan service and speedy document delivery. Irish academic librarians also need to make provision for remote students via a librarian with special responsibility for these users. Further collaboration and sharing of resources between Irish third level libraries and reciprocal borrowing agreements are also needed to increase library resources to off-campus students.

The results indicate the lack of librarian involvement in non campus based academic programmes, and limited collaboration between teaching staff and librarians in relation to planning, design and delivery of these courses; academic librarians feel that teaching staff do not keep them informed or involved when it comes to the support of remote students. One of the recommendations is a need for a more collaborative and integrated approach between librarians and teaching staff with regard to the planning, design and delivery of the curricula of off-campus courses, with ongoing provision for information literacy training. Librarians need to be more proactive and be involved with remote academic programmes from the outset. Partnerships need to be forged at the planning stage with librarians convincing academics of the value of their involvement. An awareness of the structure and content of each course will allow librarians to tailor their information skills training accordingly and facilitate the embedding of IL into course curricula. An integrated approach between all the relevant stakeholders including library, academics, support services and IT services, and a shared awareness of the support required will facilitate the development of information literacy skills in students studying remotely.

The research indicates that information literacy programmes are being delivered in most third level institutions in Ireland. Examples are given of information literacy programmes adhering to sound pedagogical approaches, with IL learning outcomes being embedded into academic modules. Many of the information skills sessions being delivered do not adhere to sound pedagogical practice, but generally take the form of project/coursework-related classes and stand-alone classes, sessions which are generally not properly assessed or evaluated. Irish academic librarians need to prioritise developing their teaching skills and expertise, familiarise themselves with educational theory and different learning styles, and be able to effectively apply these concepts into their information literacy programmes; ongoing professional development support and further pedagogical training needs to be provided in teaching and learning for those librarians engaged in information skills delivery. This includes training in learning theory, pedagogy, e-learning pedagogy, with provision being made for these courses in the curricula of library and information science schools in Ireland. Further professional development will increase librarian confidence and competence, enhance the teaching role of the librarian within the learning community and will lead to recognition and credibility from teaching staff. It will also foster closer partnerships with academic colleagues, helping to embed IL into course curricula.

Irish academic librarians need to actively promote the importance of information literacy and raise awareness of it amongst the learning community. There is an important advocacy job to be

undertaken to ensure that the role of the library service is acknowledged in the teaching and learning process. Reasons cited by librarians for having no IL programme in place at their institutions included lack of understanding and recognition on the part of teaching staff to the importance of IL. Librarians need to inform academic colleagues of the value of information literacy as a means of ongoing academic success and a key competency for life long learning. They need to actively engage their academic colleagues to develop information literacy at their institutions and help integrate these objectives and learning outcomes into course curricula.

Amongst some Irish academic librarians there is a lack of understanding and clarity with regard to the concept of information literacy with many academic libraries in Ireland not adhering to any international IL competency standards for higher education. This has a profound impact on the development of information literacy at these institutions. For a shared understanding to be achieved, it is essential that the concept of information literacy is clearly defined at institutional level and standards adopted at higher education institutions in Ireland. Guidelines or policies for information literacy have yet to be developed in some third level Irish academic libraries, with libraries not making provision for information literacy development within their strategic plan. It is vital that academic librarians have a clear mission with regard to information literacy development, and that the goals and objectives are clearly stated. The development of appropriate guidelines and policies will lead to improved recognition of IL amongst academic staff, which will help with integration into course curricula.

To ensure the development of information literacy, more support and commitment from institutional management is needed. It is vital that every institution has a clear vision, mission and strategy, which supports the educational development of all students wherever they are located. The key role of the library within this process needs to be recognised, promoted and developed. Institutions that have a commitment to distance education must provide library services for off-campus students that are comparable to those given to their peers on campus and an equivalent commitment needs to be made in terms of funding, staffing and training.

Other recommendations centre on Irish academic librarians exploiting new technologies and the potential offered by web-based mechanisms and virtual learning environments to deliver information skills training. It is essential that Irish academic libraries embrace the opportunities offered by ICT as a means of further provision and support. Information literacy instruction needs to be provided by Irish academic librarians using a variety of means including face to face instruction and online delivery, to take account of the diverse range of learners and the different learning styles that exist. Librarians need to exploit the opportunities provided by virtual learning environments and work in close partnership with their academic colleagues to embed information skills into academic programmes hosted by course management software. VLEs have the potential to offer an equivalent learning experience to students on and off-campus, and being involved with e-learning projects from the outset will raise the profile of the library, providing a more central role for librarians within the teaching and learning process. It will lead to recognition at institutional level of information literacy and add further credence to the goal of integrating it into the curriculum.

Academic librarians need to take advantage of synchronous and asynchronous methods of providing library instruction such as eReference services (chat, email), streaming video, streaming audio and web-based information literacy tutorials. Developing these services would extend access to library services and provide flexible, 24/7, online support at the point of need to students on and off-campus. Innovative electronic communication and teaching methodologies such as online assessment tools, online bulletin boards and computer aided learning materials also need to be embraced by Irish academic librarians. Web-based information literacy tutorials need to be developed by Irish academic

librarians to specifically support remote students. These tutorials would complement face-to-face instruction, allowing off-campus students to develop their information literacy skills in a more flexible manner.

The research indicated the low level of ICT skills amongst some library staff. Librarians will require further training and technical skills to ensure that they are well positioned to take advantage of these new learning tools, and provision should be made for training to include pedagogy, instructional design and new communication methodologies. It is essential that library personnel are proficient in the use of these technologies, and at the very least they should have basic skills in ICT, with ongoing training and retraining provided. This training will allow staff to keep up to date with new technologies in the support of users on and off-campus.

Irish academic librarians certainly feel that there is a potential for collaboration between third level academic libraries in the area of information literacy. Currently, much of the information literacy work that is being carried out is done at an institutional level with librarians working in isolation from each other. There is a need to develop a more coherent and integrated approach with regard to information literacy development in Ireland, with more coordination and collaboration amongst the third level academic library sector. Barriers that have traditionally existed between the different sectors need to be removed, and the sharing of resources, knowledge and expertise should be encouraged. This will promote and facilitate the development of information literacy amongst the higher education community in Ireland.

Information literacy needs to assume a more prominent position on the national agenda in Ireland and an appropriate information literacy policy adopted for all library sectors with recognised standards and definitions. The LAI (Library Association of Ireland) needs to champion this cause and use its influence at political level to lobby Government and other policy makers to achieve the above goals and recognise and promote the strategic value of IL in Ireland. Irish academic libraries are well positioned to play an important role in this process in terms of awareness, advocacy and dissemination.

This study provides a greater understanding of the attitudes of academic librarians in Ireland; it demonstrates how they perceive their role in the development and provision of information literacy programmes for off-campus students, and indicates the effectiveness of current practice, particularly from a pedagogical perspective. The findings of this research and the recommendations made will be of value to academic library practitioners and policy makers in terms of how they can develop and use appropriate pedagogic approaches and strategies to effectively support the development of information literacy in students studying remotely. The findings will inform future research and contribute to the development of information literacy in the Republic of Ireland.

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