

The role of information literacy in addressing a specific strand of lifelong learning: the work agenda.

Background information

There is much debate about the lifelong learning agenda and the role education plays in equipping individuals with the necessary skills for employability, ensuring that employers have a workforce with the right skills to support the success of their business and thus contribute to the country's economy.

The recent British government report, *Skills: Getting on in business, getting on at work*¹ emphasises the need for a skilled workforce but whilst ICT skills are specifically mentioned there is no direct mention of information literacy skills.

In other words an individual's ability to:

know when and why they need information, where to find it, and how to evaluate, use and communicate it in an ethical manner.²

This requires skills³ (or competencies) that can be defined as: an understanding of:

- a need for information
- the resources available
- how to find information
- the need to evaluate results
- how to work with or exploit results
- ethics and responsibility of use
- how to communicate or share your findings
- how to manage your findings.

Whilst it appears that "information literacy as an essential competency of the knowledge economy has been overlooked by the business sector"⁴ the Joint Information Systems Committee (JISC) reported that many UK employers consider information literacy as a key core skill for their staff within the UK's knowledge based economy.⁵ As Lloyd highlights

in a knowledge driven economy, employees who are able to develop information pathways and to create new corporate knowledge provide the strategic difference between a highly successful business and those that remain mediocre.⁶

However training employees to have the right skills takes time and money, employers often look to education or other employers to provide the skills they need from future employees rather than finance the training costs themselves

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and face the possibility of another employer benefiting from their investment. In this case the power over what training, if any, is offered to the employee or learning achieved in the workplace lies with the employer and managers. As Hager points out “there is no doubt that many contemporary work arrangements discourage learning, let alone lifelong learning”⁷.

According to Keep and Rainbird the learning that takes place within a learning organisation can be identified in three different states:

1. Individuals within an organisation learning things
2. Organisational learning – where the organisation as an entity starts to develop ways in which it can learn lessons collectively
3. The learning organisation – where the central organisational goal is systematic learning.⁸

Although Lloyd argues that information literacy should be “considered as a critical element of learning” this is generally not the case. Even although it can be “seen as a transformative agent, which, in the workplace, enables transformation from novice to expert and from individual worker to team member” and that

developing information literacy is viewed as contributing to social capital by investing in the development of human capital through ‘enlarging an individual’s skills or knowledge base’ (Karner, 2000: 2637) through access to a special kind of resource, i.e. information.⁹

However any learning that takes place in the workplace is influenced by the factors outlined above. It could be argued therefore that information literacy – a key core skill - should not be left solely to workplace learning but should begin at school level and be viewed as an essential transferable core skill.¹⁰

Unfortunately research indicates that, in general terms, information literacy programmes in schools have tended to be rather informal in nature and could be described as implicit rather than explicit. They are also either patchy or non-existent - resulting in many pupils with poor or inadequate levels of information literacy skills.¹¹ A recent interim report by HM Inspectors of Education (HMIe) in Scotland on the *Integration of Information and Communication Technology* specifically mentions information literacy and its importance and points out this lack of application. The report identifies that “Few schools had systematic approaches to developing *information literacy* to ensure that all pupils acquired this set of skills progressively as part of their passport of core and life skills.”

The report’s conclusions, relating to curricular planning, states that:

Schools should ensure that:

- pupils ultimately achieve a cohesive ICT skills set, to prepare them for the world of tertiary education or work including information literacy skills¹²

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At Glasgow Caledonian University as part of a research project into Information Literacy - the link between secondary and tertiary education¹³, interviews were carried out with seven academic librarians from Glasgow, Strathclyde and Glasgow Caledonian Universities to identify what information literacy skills, if any, new students brought with them from secondary and or further education. The findings concluded that the level of skills varied depending on the student, the course the students were undertaking at university, their school background and home environment. Skills were shown to be generally poor or limited in the following areas:

- Knowledge of the different types of information; where information comes from; how it is generated; published etc. and how to use it
- Search strategies, searching in depth or beyond what's available
- Evaluating information, especially in the area of critical thinking skills.

These findings concur with other research in this area¹⁴ and reinforce the belief that information literacy skills should begin at school resulting in secondary school pupils leaving with a skill set which further and higher education can recognise and develop or which can be applied to the world of work directly.

A recent study of Glasgow Caledonian University alumni students¹⁵ highlighted the importance of information literacy in the workplace. However little research has been conducted in this area in the past and the report calls for further research on how the information literacy agenda is carried over into the world of work.

Research methodology and procedures

The aim of the research was to carry out a small exploratory interview-based research project, in order to get a better understanding of the role of information literacy in the work place, to gauge levels of information literacy skills and competencies, and to consider how this varies in different working environments.

Semi-structured interviews were chosen as the preferred methodology to gain "more of an in-depth insight into the topic, drawing on information provided by fewer informants".¹⁶

Six interviews were carried out over a two month period (middle of February to the middle of April 2006) on a one to one basis with people in a spread of occupations and interests as detailed below:

- Quantity Surveyor – Local Authority
- Development Officer Everyday Skills – Scottish Trade Union Congress
- Mechanical Design Engineer – Small Private Business
- Senior Executive Creative Futures Team – Scottish Enterprise (Local Enterprise Company)
- Training Advisor - Local Authority

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- Human Resource Staff Development Manager – University

The areas covered included:

- The skills employers are looking for
- Learning in the workplace
- Information skills
- Information Literacy

Research findings

The skills employers are looking for

Responses varied but included specific skills in relation to the job plus generic and soft skills as the following statements demonstrate:

- wide set of skills for computer use, ability to carry out your own research, the ability to clearly communicate with others, the ability to network with other[s]
- communication skills, organisation skills, good time management, IT skills
- literacy and numeracy
- softer skills that are actually the kind of critical ones in the 21st century which do things like adaptiveness, creativity, innovation
- around transferable skills into the workplace

The general opinion seemed to be that employers would much prefer prospective employees to have these skills prior to taking up employment and that they expect people to learn / acquire these skills throughout their educational life or from job experience as reflected in the following statements:

- I think they don't want to spend the money training them – rather people come in with these skills
- Catch 22
Some employers take on graduates to give them experience and progression
Others I imagine head hunt
Council tries to take on school leavers

Learning in the workplace

The type of learning that takes place in the workplace includes task specific, job specific, generic skills and soft skills. Comments included:

- Mostly job specific training
- Essentially the learning opportunities tend to be driven by business requirements.
- typical soft skills eh presentation skills there is also policy related courses.

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With regard to how supportive organisations were of learning in the workplace this was mixed with some supportive and some not for example:

- Reasonably.. em ...but when it suits them
- No
It's impractical for them. It's impractical for the employers, impractical for those individuals. If by in the workplace you mean learning during working hours. Workplaces don't have any slack
- Absolutely. I've not worked in an organisation that I can say is so active in this area.

In principle, managers seemed to be supportive but there is a caveat to that - a good line manager would be supportive but the work still needed to be done and the training needed to be work-related. In addition, it was felt that "a lot of employers aren't interested in developing or don't seem to be interested in developing their staff and I think it's partly through fear that they feel if they spend money training them then they will go off somewhere else, a better job".

Information skills

All interviewees have a need for information and use a variety of resources - : Internet, print, people - to satisfy this need. The resources used depend on those that they have immediate access to or have experience of - the web / Internet was mentioned by everyone. Generally, they had not received any formal training at work to assist them in using any of these resources as demonstrated by the following comments:

- In house learning – by example, watching and listening to other people.
- No, (laugh) you just pick these things up as you go along.
- At university
- In terms of Internet training the actual use of the Internet in terms of using search engines - acceptable use policy
- Yes em in a couple of ways em but not as a member of staff.
As a student through my representative for HR
with you know my Masters as well I learnt a few skills.
- No
I'm a huge fan of Google and there's very little information that I've ever required that I've not been able to get to.

Although there was generally no formal training on offer at work, those involved in training within their organisations were asked if they perceived a training need there, to which they answered:

- I think there is yes I think it is quite important these days to be able to access the type of information on the Internet
- There probably is. I haven't considered it before

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The interviewees were asked to rate their own information retrieval skills from three descriptions and all but one rated their skills as 'Generally I find all the information I need with few difficulties'. When asked how they dealt with any difficulties the response was that they would turn to colleagues for help.

In relation to whether they planned '*how to find information*', this was divided into either a definite yes or no. When assessing the '*quality of the information found*' they used their own experience to gauge the quality of the information although this was not infallible as one interviewee highlighted:

Well sometimes it's quite difficult because in the past I found some material on a website that looked like a reliable source and then I later discovered that it wasn't.

Search strategies were only reviewed if they were found to be unsuccessful: information found was both adapted and used as it was depending on what the original purpose of the enquiry.

A variety of methods were used to facilitate future retrieval of information found - filing systems (electronic and paper), favourites list. Some were more organised than others, influences included personal traits and engagement in formal learning such as Masters Degrees.

They all had a sense of copyright / ownership of material and an idea of what plagiarism meant in that other people's work / words were protected by copyright and that to use and claim it as your own was plagiarism. The responses indicated that this understanding stemmed from their own experiences of study at university. It is also possible that the recent high profile of these issues in the media could have contributed towards their understanding. To what degree it was implemented or relevant within the workplace was not explored. However one interviewee working in research and development was struggling with the implications of intellectual property rights in relation to a design brief that he was currently undertaking.

How their organisation satisfies their information needs

There was a range of responses to this question and the indication is that it is not something organisations do in any structured way other than provide employees with access to the Internet. In addition some organisations have Intranets or websites but in general they rely "heavily on staff members to research and source information required, to carry out their work". One interviewee expressed frustration in relation to the provision of information resources available within their organisation:

"I'm sure that there are resource buried somewhere in the systems

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and archives but, unbelievably, it's well nigh impossible and you only become aware of specific information because someone thinks that's worthwhile pushing onto everyone's desktop".

Information Literacy

Only half of the interviewees had heard of the term 'Information Literacy' however when given a definition they all felt they had some of the outlined skills and competences required to be information literate, either to a degree or in part. The variation stemmed mainly from their ability to evaluate results and how to work / exploit results. Most didn't do the latter in any formal way and some felt on reflection that they could probably improve. As with most self assessment procedures people tend not to rate their own skills and competencies accurately and the responses given earlier of their information-related activities are probably a truer reflection of their skills and competencies.

The development of and source of their skills and competencies varied: from a combination of workplace, further education, university; not knowing where they acquired them; to the following statement "like most things you learn just through experience".

Whilst one interviewee thought some of the skills were more important than others - for example resources available and how to find information - the rest felt that the skills were very important, really important or extremely important and stated that:

- They're essential tools for my job
- Yea very important in the workplace not just academia.
Mm for my part I would say they are actually very crucial

These skills had improved, with practice, in their workplace as demonstrated by the following:

- Yes – it's a necessary tool for me to do my job, for me to do my job better those skills need to improve
- Because if you possess these skills you can identify what you need, how to get and relevance em very quickly and trying to avoid going down the wrong route following, maybe misleading information

Information literacy was felt to be important at work and that it was expected that people had these skills. The only exception was in relation to manual workers where it was felt that they were not applicable to them or as one interviewee with experience in this area stated "They say they don't need these skills to do their job - or an employer may not see it as a need for them to have these skills. But they may not realise these skills are important outwith work".

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Although employers are not thought to be explicitly looking for information literacy skills and competencies, participants indicated that it is generally implicit as reflected by this comment 'it's not something that is articulated'. The exception to this was when the post explicitly required these skills. Employers tend to assume that people have information literacy skills, particularly those in a professional role or they don't realise themselves how much these skills are required. One interviewee felt that there's perhaps "a reliance that attendance at an Internet Explorer course provides the basic grounding and from that it's down to the intellect [and] the application of individuals" concerned to further develop these skills. These assumptions are not unique as higher education are equally guilty of such wrongful assumptions of school leavers when they first enter university.

Does information literacy have a direct value to employers and employees which can be calculated?

Although it is difficult to calculate a direct value on information literacy, the indication is that it is important to employers and employees. However one interviewee felt that "An employee with higher information literacy skills is more useful to an employer than one who hasn't". The literature highlighted in the background information section of this article also supports this observation.

Conclusions and implications

Skills – whilst generally employers are not explicitly looking for information literacy skills and competencies by name, they are assuming that employees will come with these skills - particularly for professional positions. The obvious exception to this is where professions or positions explicitly call for a higher order skills or level of experience.

Learning in the workplace – although learning does take place in the workplace it tends to be driven by business requirements and is job or task specific. It generally does not formally include information literacy or any of the skills and competencies except in the form of Internet training / acceptable use policy. However informal learning, with respect to information literacy skills and competences, is taking place as employees learn from colleagues. Given the lack of information literacy application in schools as reported by HMIE, the research findings highlighted earlier in this article and the findings discussed in this report, there is a strong possibility that there is a narrow, poor or patchy level of skills within the workplace.

Information skills / information literacy – a variety of information resources are used to satisfy the interviewees' information needs. The resources used tended to depend on what resources individuals have previous experience of and have access to. Since little direct or formal training is taking place in the workplace, there is the potential that valuable resources may not be being used due to lack of knowledge or not used to their full potential through lack of training or experience. As a result the Internet and the web were in many cases the most

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used information resource as it was the most immediately accessible. Given the reliance on this resource, the lack of training re evaluating sources of information, it is not surprising that information may not turn out to be as reliable as originally thought.

This was borne out when interviewees were given the list of information literacy skills and competencies. Although they all felt they had these skills and competencies - either to a degree or in part - it was the evaluating results and how to work / exploit results that some felt these skills could be improved. Although people generally think they have the skills and competencies they need for their information related activities, the reality is that most people generally cope with what they already know and do not realise that there are invaluable skills and resources that could greatly assist them both in the workplace and in life.

Given that these skills and competences are considered to be important in the workplace, an individual's prior learning or lack of learning of information literacy skills and competences is of paramount importance both to the individual and their employer.

As individuals are learning these skills to varying degrees at work, further education or university in an ad hoc manner, it is important therefore to dispel the assumptions that everyone has these skills and competences at a level that they need, that they are explicitly and uniformly taught within education or are learned in conjunction with ICT or by osmosis. If employers are looking to education to equip individuals with the necessary skills for employability, then information literacy needs to be explicitly included as a key life skill in the learning and teaching that takes place in school and then further developed from there onwards in further or higher education and in the workplace.

Although this is a small based study of an exploratory nature and more research needs to be carried out in this area many of the findings reflect the literature and indicate the importance of information literacy skills and competencies:

- in the workplace
- the need therefore for these skills to be recognised as key skills within the curriculum¹⁷
- taught in education particularly in school where the skills and competencies can be used and developed for all information related activities – educational (from primary, secondary to tertiary), employment, citizenship and social
- taught by a collaboration of teachers who have skills and competencies in learning and teaching and librarians / learning resource co-ordinators who have information literacy skills and competencies¹⁸.
- explicitly recognised and included in CPD (Continuing Professional Development) programmes.

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