

What is information literacy and why does it matter?

The Background booklet from the Better Informed for Better Health and Better Care series



Unless otherwise indicated, this work is licensed under a Creative Commons Attribution-Noncommercial 2.5 UK : Scotland License. To view a copy of this licence, visit <http://creativecommons.org/licenses/by-nc/2.5/scotland/>.

This licence permits users to derive other non-commercial works providing that NES is acknowledged as the creator of the original work.

For the links between information literacy competence and the Knowledge and Skills Framework, please refer to the **Tables** booklet in this series.

For explanations of unfamiliar terms, please refer to the **Glossary** booklet in this series.

For demonstrations of search tools and techniques referenced in the tables, please visit our information literacy courses at <http://www.infoskills.scot.nhs.uk>.

For further information and resources related to information literacy, please visit the information literacy portal at <http://www.infoliteracy.scot.nhs.uk/home.asp>

Contents

Background and context.....	4
<i>What is information literacy?</i>	6
<i>Model of the information literacy process</i>	7
<i>Supporting competencies</i>	8
Benefits of Information Literacy.....	10
<i>Information literacy and the organisation</i>	10
<i>Information literacy and the individual</i>	13
Using the Framework	15
<i>Purpose</i>	15
<i>Who is it for?</i>	15
<i>How to use the framework</i>	16
Acknowledgements	18

Background and context

As a general rule, the most successful man in life is the man who has the best information. Benjamin Disraeli (1804-1881)

On first sight, the quotation makes perfect sense. However, on further reflection, it becomes clear that it is not just information, nor the most information that makes for success but the **best** information.

Although the quotation dates from the 19th century, the connection has been made between 'good' information and success. It has taken some time for the link to be acknowledged in the 20th and 21st centuries. So, how do you decide what is the best information or even good information? This is just one of the attributes of an information literate person : s/he assesses the quality of information in order to decide whether it is relevant, valid, reliable and accurate for the purposes to which it is to be put. However, simply **having** the best information leads neither to success nor anywhere else. Having, sharing and **using** the information appropriately is what makes for success. All of these activities form the basic skills and abilities of an information literate person. In addition, an information literate individual is a critical thinker and problem solver who has learned to make informed decisions and who has the ability to adopt and adapt, create and recreate, contextualise and recontextualise. (Lloyd, 2003).

It follows that an organisation employing and actively supporting information literacy throughout the workforce is likely to be more efficient than one whose workers do not have these skills and abilities.

This framework aims to contribute to the achievement of the goals of The Scottish Government's action plan **Better Health, Better Care** (The Scottish Government, 2007). The Plan acknowledges the need for the confident and competent use of information, in order to meet the Government's aspiration for a healthier Scotland. **Better Health, Better Care** states : *Health and social care professionals need quick access to information and to have the skills to use the knowledge appropriately.*

However, these aims are not limited to NHS employees. There is a commitment in the document to create a National Health Information and Support Service which will ensure that patients and public *get support to find the information they need ; understand the information provided and develop the skills and confidence to use it effectively in order to become an active partner in their own care.*

The idea of a National Health Information and Support Service, supported by the development of information literacy among staff, patients and carers, originates in the coordinated national strategy for NHS Scotland Knowledge Services (**Enabling Partnerships : Sharing knowledge to improve patient care in NHSScotland**, NES, 2008). The document argues that *Information and knowledge are powerful tools that can be used to strengthen patient care and improve people's health.* The

strategy goes on to describe various ways to help ensure that in future *patients, the public, healthcare staff and partner agencies have access to the information they need, when they need it*. Information literacy is also acknowledged as being *key to empowering individuals and communities to take more control over their health and wellbeing and life circumstances*.

The importance of information literacy has been acknowledged by organisations and governments worldwide.

UNESCO's *Prague Declaration*, (2003) emphasised the importance of information literacy for all, from nations to individuals. One of the basic principles of the document is that : *The creation of an Information Society is key to social, cultural and economic development of nations and communities, institutions and individuals in the 21st century and beyond*.

In 2006, the European Parliament identified 'digital competence' and 'learning to learn' as two of eight key competencies 'necessary for personal fulfilment and development, social inclusion, active citizenship and employment'. Digital competence is described as the confident and critical use of information age technology, including basic skills in information technology. Learning to learn is regarded as the ability to pursue and organise one's own learning, either individually or in groups, in accordance with one's own needs, and awareness of methods and opportunities. The acquisition of these competencies is regarded by the European Parliament as essential for every individual, in order to *provide added value for the labour market, social cohesion and active citizenship by offering flexibility and adaptability, satisfaction and motivation*.

Information literacy contributes towards organisational efficiency by :

- ensuring that a sharable and accessible information pool exists, containing only relevant and accurate documentation ;

- identifying and eliminating duplication within the information pool, thus reducing overall storage requirements ;

- empowering individuals with the knowledge, ability and tools to identify needed information from the shared pool and other sources ;

- reducing information search time and thus enhancing productivity, efficiency and effectiveness ;

- increasing consistency of organisational responses, as these are based on information drawn from the shared pool.

The purpose of this Framework is to encourage and support the development and enhancement of *the information finding and evaluation skills, values and attitudes of the people involved in improving health and caring for patients* (NES, 2008).

It is intended for NHS Scotland staff, partner organisations, patients, carers and members of the public who wish to further their information literacy capabilities and consequently, health improvement and better service delivery.

The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn.

Alvin Toffler

What is information literacy?

If “information literacy” is so important, what precisely is meant by the term?

The following quotations are two of the most often cited definitions of the term *Information Literacy* :

Information literacy is usually described as the ability to locate, manage and use information effectively for a range of purposes. As such it is an important 'generic skill' which allows people to engage in effective decision-making, problem solving and research. It also enables them to take responsibility for their own continued learning in areas of personal or professional interest.¹

To be information literate, an individual must recognise when information is needed and have the ability to locate, evaluate and use effectively the information needed... Ultimately information literate people are those who have learned how to learn. They know how to learn because they know how information is organised, how to find information, and how to use information in such a way that others can learn from them.²

¹ Bruce, Christine (1997), *Seven Faces of Information Literacy in Higher Education*, Queensland University of Technology, at URL <http://www.perceptualworlds.fit.qut.edu.au>.

² American Library Association (1989), *Presidential Committee on Information Literacy*, at URL <http://www.ala.org/ala/acrl/acrlpubs/whitepapers/presidential.htm>

The Steering Group supporting this Framework has developed the following working definition of the term :

An information literate person can recognise an information need and is able to apply the set of transferable skills, attitudes and behaviours needed to find, retrieve, assess, manage and apply information in any situation, throughout life.

Information literacy supports individual and organisational learning, creativity and innovation and contributes to improved healthcare delivery through a continuously evolving, reliable information base.

The Steering Group's definition of what is meant by "information literacy" is the one used in this series of booklets.

Model of the information literacy process



Recognising the critical importance of information literacy to health in Scotland, NES Knowledge Services Group has begun the development of a variety of tools and resources to assist staff, partner organisations, patients, carers and members of the public on their journey towards information literacy. The first of these is the seven-stage model shown below which illustrates the process of applying information literacy skills.

The image is intended to display seven basic stages of the information literacy process.

Question	what do you need to know? Defining the question related to your information need is vital to finding the right solution : you must ask the right question to get the right answer. [Acknowledge and articulate an information need and formulate a question]
Source	where can you look for the information? Your sources will include people as well as written and electronic materials. Perhaps there is someone you know or can contact who would be able to fulfil the information you need? [Identify potential sources which may provide the needed information.]
Find	which words do you use in your search? At the <i>question</i> stage you will have identified the key words in your question and are now ready to use them to search the sources you have selected. [Apply the question to the selected source(s) to find the needed information]
Evaluate	have you found 'good' information? Look closely at the information your search has retrieved to check whether your question has been answered. Do you believe the information? [Assess the value and reliability of retrieved information]
Combine	have you learned something new and useful from your search? Blend this with what you knew before searching. [Add valid retrieved information to the existing knowledge base]
Share	would other people in your work-group/family find your new information useful or interesting? How would you share it with them? [Communicate the information to others]
Apply	how will you use the information? Will this help improve management or treatment of your condition? Improve your work practices? Help you write a new policy document? [Use information in everyday work activities]

The capabilities tables which appear in a later booklet in this series are based around this model. They use **illustrative examples** of the types of skills, abilities, attitudes, behaviours, personal facilitators and organisational climate which might be expected at each stage of the process.

Supporting competencies

When the phrase *information literacy* is used, several subsidiary skills are implied. Competence in the basic literacies of reading, writing and numeracy is always

assumed. A reasonable level of ability and confidence with IT is usually also expected. Thus, the essential underpinnings of “information literacy”, are reasonable levels of ability with :

words – literacy ;

numbers – numeracy ;

and, technology - IT literacy.

A person with these skills and abilities has the basic tools necessary to begin developing information literacy.

Therefore the term is used to encompass abilities in literacy and computing, together with some level of proficiency in identifying, retrieving, evaluating, sharing and applying “information” in a practical context. *Information* in this instance is intended to describe material which is available in any format : audio, visual, electronic, book, journal article or other written document, advice received from another person or, an exchange of views between two or more people.

Benefits of Information Literacy

Information literacy and the organisation

Without information one cannot have knowledge and similarly, without information literacy, one cannot have knowledge management (Goad, 2002). To achieve the aim of a knowledge-competent workforce (NHS Education for Scotland, 2006), it is first necessary for that workforce to be information literate.

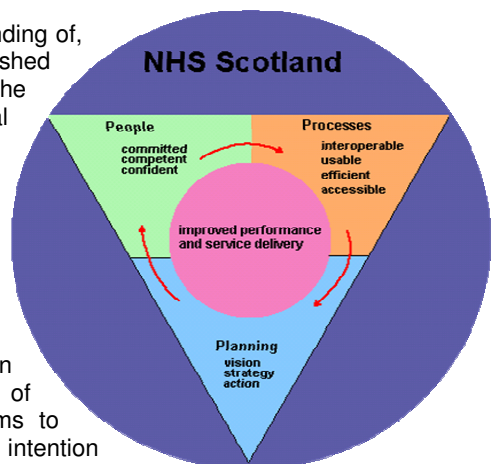
The drive towards information literacy is based partly on the shared perception and acceptance of information resources as an organisational asset, equally as valuable as any physical asset (such as computers or medical equipment). As such, this asset needs to be used efficiently and effectively in order for the organisation to derive benefit from it (Burk and Horton, 1988). The more skilled and confident information users become, the greater is the benefit achieved by the organisation.

As already indicated, abilities with computer-related tools are *supporting* skills for information literacy. The facility to operate computer equipment and to make use of supplied software does not necessarily indicate that a person has the additional abilities required to find, assess, manage and use information efficiently. In many cases, people continue to experience information overload and anxiety, disinformation or misinformation and may have insufficient time or inadequate skills to locate or share identified information. (Kirton and Barham, 2005).

A common reaction has been to invest in more technology or to throw more information at the problem but this can aggravate rather than resolve the problem. (Moody and Walsh, 1999). A more satisfactory solution is to enable and support people in coping with the information which already exists.

Information literacy incorporates understanding of, and respect for sensitive, unpublished information as well as an appreciation of the value of publicly available, factual information. Its development flourishes in a culture of open, equitable access to information resources.

An information literate workforce able to locate, evaluate and use information for the benefit of the organisation is key to the success of many organisations (Lloyd 2003 ; Oman 2001 ; O'Sullivan 2002). This is particularly true of NHSScotland, since the organisation aims to operate on evidence based practice. The intention



behind this goal is to ensure that decisions, advice and activities are based on considerations of the best available research evidence, best practice examples, most current information and the experience and expertise of those involved. Thus information literacy should not be regarded simply as the “program of the month” (Lloyd) but rather as a vital set of abilities and skills which can improve the overall efficiency of any organisation.

One consequence of widespread information literacy throughout the organisation is the increasingly efficient arrangement and description of information resources. This, in turn, results in a more orderly information pool which assists decision-making and business activity. When shared across the organisation, this enables all employees to identify and access needed information much more quickly than otherwise would be the case (State Records Authority, NSW, 2004). This reduces information search-time and ensures that staff operate from a shared knowledge base.

This shared information can also be used to develop new knowledge and insights which may result, after analysis and reflection, in challenges to traditional workplace and professional practices and the development of improved procedures (Bruce, 2007). This, in turn, leads to service improvements based on evidence and best practice.

In order to support the acquisition and development of information literacy, the organisational climate should be supportive and encouraging to individuals trying out new ideas and new ways of doing things in order to learn. Mistakes will be tolerated and expected as the learning takes place since new ideas and processes do not always work first time. (Brefi Group, 2007).

Enabling Partnerships (NES, 2008) sees information literacy as being *at the heart of the shared understanding and empathy that underpins the patient-professional relationship*. As it strives to operate as a learning organisation (**Learning Together**, 1999), NHS Scotland should be well-placed to support staff, partners in other agencies, patients, carers and members of the public in their self-development activities. NHS Scotland is committed to developing its structure, culture and processes to assist the learning of the whole organisation as well as of the individuals associated with it.

In order to support and encourage information literacy, the organisation should share some or all of the following characteristics :

- believes in and expects continuous learning and improvement ;
- recognises that there are many ways to learn and grow and provides opportunities to do so ;

- opens itself to new ideas and is prepared to adapt to them ;

promotes creativity and innovation as common events ;

allows people to make mistakes and helps individuals and the organisation to learn from these ;

thinks in terms of the total system ;

practises and encourages widespread collaboration at all levels ;

believes in and promotes the concepts of competency and mastery of core competencies of both the organisation and the individual – ie. performance at the highest level ;

orientates itself toward teamwork with teams the norm and people functioning as team players ;

facilitates the acquisition of new skills before they're needed ;

spells out organisational mission and goals clearly and ensures that they are shared by all who work in the organisation – and all actions are based on them. (Goad, 2002)

In the work situation, it is important that sufficient time is allowed for self-directed exploration and learning.

Supervisors also need to appreciate the challenges faced by the novice, perhaps through recall of their own learning experiences.

An information literate NHS Scotland, able *to develop and use information and technology to support faster access to diagnosis and care* will be in a better position to deliver the objectives of the Service Transformation Programme (**Better Health, Better Care : Action Plan**) for *quicker access to services whilst improving patient safety and reducing health care inequalities*.

Information literacy and the individual

The arrival of the so-called Information Age means improved access for everybody, to millions of information resources. However, easy access and abundant resources do not mean that information users are retrieving 'good' information. Often, the retrieval process results in feelings of being overwhelmed by an avalanche of information and little idea of how to separate what is needed from what is irrelevant. The ability to focus an information search and to evaluate and select appropriate results requires, amongst other things, self-awareness, practice and experience – in short, information literacy.

The steps of the information literacy process are applied in every walk of life. They are as relevant in social situations, such as finding details of a forthcoming broadcast of a sports match or identifying the location of the nearest NHS dentist, as in work activities. In order to become successful and efficient in information use, each of us needs to apply information literacy with conscious awareness rather than processing through the phases with little planning or thought. We need to be aware that effective information use recognises and exploits the *interdependence amongst colleagues and information and communication technologies appropriate to the needs of the group*. (Bruce, 2007)

Generally, the education sector worldwide has been aware of these needs for decades and has redesigned academic courses or supplemented these with library-based training to support students in acquiring and developing competence in information literacy. However, employers have tended to be somewhat slower in recognising the need for, and value of, information literacy among the workforce.

The Scottish Government is currently encouraging the spread of information literacy and participation in lifelong learning throughout the population in its **Skills for Scotland** strategies. These are intended to support the development of a 'smarter Scotland'. In its publication **Skills for Scotland: A Lifelong Skills Strategy** the Government aspires to a country *Where employers improve productivity by investing in their own staff and are able to access a skilled workforce that is increasingly literate and numerate with good ICT and problem solving skills*. As noted above, **Better Health, Better Care** sees information literacy applied not only to NHS Scotland staff but also to partner organisations, patients, carers and members of the public as one way of achieving a "healthier Scotland".

Among other skills and abilities, information literacy uses and develops :

reasoning, reflective thought and intellectual flexibility both to gather information and to understand the relationships between new information and improved practice ;

the ability to objectively assess and critically appraise retrieved information ;

personal awareness of the existing information pool ;

critical thinking and problem solving ;

improved ability to influence others and negotiate from the basis of current learning.

Information literacy has gained recognition by governments, business and other organisations as an essential feature of good citizenship, competent and confident employees and more confident and creative individuals. It is a necessary accomplishment required by everyone, to be able to find and select from the millions of articles available, the information needed to make reliable decisions, to carry out research, for study purposes or to participate fully in their own healthcare.

For patients, information literacy should mean a better understanding of their own health care needs, better-informed and more confident discussion with their healthcare practitioners and shared decision-making on the treatment or management of their own health.

For healthcare practitioners, information literacy should mean enhanced abilities in and opportunities for maintaining current awareness, improved information sharing with colleagues and patients and, informed decision-making.

Using the Framework

Purpose

The document is intended as a tool and reference which provides support to NHS Scotland staff, partner organisations, patients, carers and members of the public in acquiring and developing information literacy to support care, health and well-being.

It does this by providing ;

- a working definition of the term information literacy ;

- a simple model of the information literacy cycle ;

- a selection of scenarios demonstrating explicitly some of the ways in which information literacy may be applied in a variety of situations* ;

- a series of tables offering examples of some of the typical attitudes, behaviours and skills experienced in the ongoing journey of information literacy development (Booklet 2) ;

- a series of tables linking information literacy with several occupational standards and competencies.

* The scenarios in the **Information Literacy in Action** booklets are intended for healthcare practitioners (booklet 4) ; trainers and learners (booklet 5) ; patients (booklet 6) ; improved service delivery (booklet 7) and, equality in health (booklet 8)

Who is it for?

Patients, carers and members of the public

Information literacy supports patients, carers and members of the public to participate more effectively as partners in their own healthcare and in taking control of their own health and well-being. The explanations and demonstrations included in the document are intended to show how information literacy can help in forming and asking focussed questions, in finding needed information from healthcare professionals or written and electronic sources, and in using retrieved information to make decisions about the treatment and management of health conditions.

NHS Scotland and partner organisations staff

Information literacy supports staff in locating, evaluating and using information in their everyday work. The intention is to ensure that decisions, advice and activities proceed from considerations of the best available research evidence, best practice examples and most current information.

Healthcare practitioners

Information literacy enables healthcare practitioners to maintain the currency of their professional information and practice by supporting them in locating and using the latest evidence and information from research and best practice. It also encourages information sharing so that new knowledge is communicated throughout networks of colleagues and is shared with patients.

Educators and learners

Information literacy is a way of learning how to learn which supports all educational activities. Information literacy skills and abilities support the development of critical thinking and problem solving and encourage innovation and creativity. An information literate person has broad set of transferable skills, abilities and attitudes which can be applied throughout life.

Service Managers

Information literacy can help the service manager to analyse and reflect on current service delivery practices and procedures and to implement service improvements based on evidence and best practice.

Organisations

Information literacy incorporates understanding and respect for information arising from personal experience and expertise as well as factual information based on research. An information literate workforce able to locate, evaluate and use information for the benefit of the organisation is key to the success of many organisations (Lloyd 2003 ; Oman 2001 ; O'Sullivan 2002). Therefore, information literacy is critically important to NHS Scotland as the organisation aims for a culture of evidence-based practice and to function as a learning organisation which recognises the knowledge of its staff as one of its most important assets.

How to use the framework

The simple model of the information literacy cycle describes seven individual steps in the process. The model illustrates a pathway from formulating an initial search question through to applying retrieved information in everyday activities. This model may seem overly simplistic to those familiar with information literacy as their experience means the process is applied without conscious reference to a defined framework. However, it will confirm their current practice. At the same time, it will provide support to those who are less familiar with the process.

The use of the model of the information literacy cycle, together with the capabilities tables and the sample scenarios, are designed to demonstrate the practical application of the steps of the process. The booklets are structured to enable readers either to read from start to finish, or to pass over the introductory and explanatory text and move directly to the contextual example(s) most relevant to their current information need or work area.

Each contextual example included in the **Information literacy in action** booklets is intended as a mini, stand-alone tutorial in how information literacy skills and abilities might be applied to resolve an information “problem”. These can be used in self-directed learning or may be expanded and re-focussed to form a starting-point for group-based training sessions.

The tables booklet is intended to provide illustrative examples of the capabilities which might be expected at each stage of the information literacy process. There is also a set of tables showing the links between information literacy and selected occupational standards and competencies.

The final booklets of the series incorporate a glossary and a list of references used during the construction of the framework. The references may provide useful “further reading” for those who wish to learn more about the topic and its various applications.

It is recommended that the cycle model is used in combination with the descriptions of capabilities in order to support continuous improvement in information literacy.

NES Knowledge Services Group acknowledges :

Ann Wales, Programme Director, who initiated and sponsored the project.

Eilean Craig, Knowledge Outreach Manager who developed the Framework.

Gerry Maclean, Workforce Development Co-ordinator and Rob Westwood, Outreach and Training Co-ordinator for brainstorming sessions and contributions to the text.

Steering Group Members

Karen Adams, NES, EPM Administrative, Clerical & Support Services

Kathy Dallest, eHealth Consultant, Nurse Informatician

Catriona Denoon, Library Services Manager, Greater Glasgow and Clyde Health Board

Christine Irving, Research Assistant / Project Officer, Glasgow Caledonian University

Andrew Jackson, Teaching and Learning Librarian, Dundee University

Linda Kerr, Library Services Manager, Health Services Information & Library, Oban

Elspeth Henry, Information Literacy Facilitator, Highlands

Amanda Minns, Library Services Manager, Lanarkshire

Douglas Park, Assistant Campus Librarian, University of the West of Scotland

Lesley Thomson, Information Officer, Scottish Government

Anne Whitcombe, Knowledge and Learning Co-ordinator, Grampian