

Guideline to The Information Literacy Competency Grid

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The «Swiss Information Literacy Standards» can be accessed at the following
address: <http://www.informationskompetenz.ch>

Introduction and Terminology

The information literacy competency grid describes the learning outcomes based on the standards for different levels of competency and explains what knowledge is expected at each of the three levels, beginner, advanced and expert. Each level of competency integrates the competencies acquired at the previous level. Therefore, beginner and advanced level competencies are prerequisites for reaching the expert level.

This guideline to the competency grid provides for each area of competency examples of the skills required at the three different levels. The examples listed are not exhaustive, but aim to offer ideas and inspiring thoughts for the development of courses in information literacy (see also "Guidelines for Courses in Information Literacy").

The descriptions of the three levels beginner – advanced – expert are based primarily on the levels of tertiary education. Generally, a person educated at a certain level has acquired different levels of competency for the various standards.

Terms frequently used in the guideline are explained below.

Levels of Competency

Beginner

A person working on straightforward assignments and questions, this would include high school graduates or college freshmen.

Advanced

A person at the end of their bachelor studies or at the beginning of master's programs who is working on final college papers or more extensive papers at the master's level.

Expert

Master's and PhD students or generally a person involved in scientific research projects (research assistants, professors).

Information Sources

Broadly speaking all types of text or hypertext as well as collections of data and metadata, but also people, are considered information sources.

More narrowly defined information sources are printed or electronic media containing text or hypertext, for example books, journals, and newspapers, but also web pages and audio-visual media. When searching for information, structured collections of meta-information such as bibliographies are important sources of information. For example, bibliographic information can be found in reference databases such as library catalogs and specialized databases or full-text databases. In addition to printed and electronic media, human experts can also be important sources of information.

The examples listed in the guideline focus on the search of information in

electronic media, which is why in this document the term information sources describes all types of databases.

Tools and Methods

Search functions in information sources are called tools. A method is based on an activity and describes how the search functions are used and how an information source is accessed. Tools and methods are used to implement a search strategy.

Tools can include:

- Free text search, search in specific fields, search in multiple fields
- Index search, browsing
- Thesauri, keyword lists, classification systems
- Limits, filters
- Meta search options: multiple information sources
- Search operators: Boolean operators, proximity operators, truncation, wildcards, phrase search, limits etc.

Search Strategies

A search strategy is generally defined as the entire process of reaching a specific search objective (Kriewel, 2010). The choice of appropriate search strategies depends on the type of assignment as well as available information sources and tools.

Familiar concepts of search strategies are (cf. Bekavac, 2011; Kriewel, 2010):

Building Blocks

With this search strategy all the main concepts, facets or themes of an information request are first identified individually, then their logical relationships are analysed. In a second step search terms are compiled from thesauri or classification systems for each of the themes. Finally, the search is performed using Boolean operators.

Citation Pearl Growing

This search strategy is based on a relevant document as the starting point of the search. By means of thesaurus terms, classification terms or keywords used frequently in the document a search for similar documents is performed. It also uses references or citations listed in the document. This search strategy is also called the snowball principle.

Successive Fractions

This search begins with general aspects of an information request and then successively reduces the number of results by using limits, filters and Boolean operators.

Successive Facets First

This strategy begins with specific concepts of an information request. If necessary, further concepts are added to extend the search.

Literatur | Bekavac, B. et al. (2011). Schweizer Portal für die Recherche im Internet (SPRINT). Retrieved from <http://sprint.informationswissenschaft.ch>

Kriewel, S. (2010). *Unterstützung beim Finden und Durchführen von Suchstrategien in Digitalen Bibliotheken*. Dissertation, Universität Duisburg-Essen. Retrieved from http://duepublico.uni-duisburg-essen.de/servlets/DerivateServlet/Derivate-24181/Kriewel_Diss.pdf

Standards and Levels of Competency

Standard 1 Need

Standard 1.1
defines and articulates the information need referring to a defined purpose

Beginner – recognizes and describes the current information needs

Recognizing and describing his/her information needs can mean:

- phrasing questions on education (school, college, university), work and leisure
- determining existing personal knowledge
- discussing a topic in a study group and noting down important aspects

Advanced – identifies and documents the information requirements for a defined task

A defined task can be:

- an exam at the end of a course
- a course paper
- a presentation
- a final paper

Identifying and documenting the information requirement can mean:

- determining existing knowledge for a defined assignment
- finding out what additional knowledge is required
- continuously documenting your work on an overview of a topic

Expert – determines the information needs for a defined project and develops a conceptual concept

A defined project can be:

- a dissertation
- a presentation at a conference
- a scientific publication

Developing a terminology concept can mean:

- working with a Mind Map
- defining keywords and their interrelations
- defining synonyms and antonyms
- translating terms into the required languages
- searching for technical terms with a thesaurus
- limiting the topic with exclusion criteria

Standard 1.2

understands the purpose, scope, and appropriateness of a variety of information.

Beginner – identifies various sources of information and describes the content

Different types of information sources can be:

- Books, journals, newspapers
- Web sites
- Audio-visual media
- Library catalogs
- Bibliographic and full-text databases
- Human experts

Advanced – distinguishes the various sources of information according to orientation and scope

This can mean that you are aware that:

- the library catalogue contains metadata on the holdings of libraries
- a video portal in the internet provides audio-visual material
- bibliographic databases contain metadata on scientific publications
- knowledge of experts is limited to a specific discipline
- an English-language database contains only very few German-language studies
- international journal databases contain little information on regional topics
- the archive of a local newspaper contains information on local topics

Expert – compares different sources of information regarding its suitability and appropriateness

The following factors can help determine the suitability and appropriateness of an information source:

- coverage
- orientation
- language (of the evaluated sources)
- addressee or target audience (e.g. popular vs. scientific)
- purpose
- publication type

Standard 1.3

selects and uses diverse sources of information to inform decisions

Beginner – uses appropriate sources to meet the information need

Using appropriate sources to meet an information need can require:

- the use of search engines to find basic information on a subject
- reading newspapers to find up-to-date information
- the use of a library catalogue to find textbooks

Advanced – makes a justified choice of information sources and uses them according to their suitability

Using information sources according to their suitability can mean:

- becoming aware of the differences between various information sources in one field
- selecting from a large number of information sources in one field the most suitable sources for a particular assignment
- using information sources that are suitable for a specific information requirement

Expert – makes a justified choice of appropriate information sources and uses them comparatively

Using information sources comparatively can mean:

- obtaining knowledge of the content and coverage of the information sources in your own field
- comparing the different information sources in your own field based on this knowledge
- comparing journals suitable for the publication of an article

Standard 2 Retrieval

Standard 2.1

selects efficient methods or tools for finding information

Beginner – uses various tools or methods for information retrieval

Using various tools or methods for information retrieval can mean using:

- Search fields: free text search, search in specific search fields
- Search operators: Boolean operators
- Search tools: truncation

Advanced – makes a justified choice of different tools or methods for information retrieval

Making a well-founded choice of different tools or methods for information retrieval can mean:

- using search fields adequately in a specific situation
- recognizing the usefulness of an index search in a particular situation
- making reasonable use of search tools and search operators

Expert – makes a justified choice of tools or methods and uses them comparatively

Using tools or methods comparatively can mean:

- using various tools or methods for a targeted information retrieval and
- verifying the quality of found information comparatively

Standard 2.2

constructs and implements effective search strategies

Beginner – defines the bases of various search strategies and applies this

This can mean:

- understanding and applying the basics of the Building Blocks search strategy

Advanced – implements search strategies with the use of specific tools and documents this

This can mean:

- using controlled vocabulary (thesaurus, keywords) or classification systems when applying the Building Blocks search strategy
- understanding the difference between the mechanism of a meta search across multiple sources and a search in individual sources and making use of these options
- saving search strategies in a database

Expert – provides a search plan according to the information need and documents the process and course

Preparing a search plan can mean:

- selecting possible search terms from a terminology concept
- selecting information sources and documenting them
- determining a search strategy and the order in which the individual search steps are to be performed
- choosing tools and methods suitable to the search strategy and field

Standard 2.3

obtains information using appropriate methods

Beginner – obtains information using local suggestions

Using local suggestions can mean:

- obtaining information by borrowing from the local library
- obtaining information from a study group
- being aware of supply channels outside of academic institutions (book stores, government agencies, organisations)

Advanced – uses different methods to obtain information and gives reasons for the process

Information can be obtained by:

- using interlibrary loan
- using document supply services (e.g. Subito)
- using link resolvers (e.g. SFX)
- downloading digitized documents
- using alert services

Expert – evaluates several ways of efficient information retrieval, taking economic factors into account

Economic factors can be taken into account for information retrieval by:

- weighing the cost and benefit of various ways of obtaining information
- judging the speed and quality of various ways of obtaining information
- considering technical specifications (copyright rules) of information retrieval.

Standard 3 Assessment

Standard 3.1 defines and applies criteria for evaluating information

Beginner – evaluates information according to defined criteria

This can mean:

- examining the reliability of an internet site according to defined criteria (e.g. URL, timeliness, publisher of a website)
- judging the results of a search in a library catalogue according to defined criteria (e.g. timeliness, relevancy)

Advanced – makes a justified choice of evaluation criteria and applies them

This can mean:

- making a justified choice of criteria from a predefined list to check the reliability of a website (e.g. by using the list of criteria of a renowned university)

Expert – assesses existing evaluation criteria and adjusts them as needed

This can mean:

- reassessing existing evaluation criteria and
- establishing new evaluation criteria

Standard 3.2 assesses the usefulness of the information obtained

Beginner – assesses the usefulness of the information obtained in terms of relevance

An assessment in terms of relevance can mean:

- correctly interpreting the data of a catalogue entry (e.g. information on the edition or series)
- being aware of what type of source the information is coming from (e.g. recognizing the importance of the orientation of a particular newspaper/journal)

Advanced – assesses the usefulness of the information obtained in terms of quality

An assessment in terms of relevance can mean:

- checking the credibility, validity, accuracy, timeliness of the information obtained
- obtaining information on the credibility of the author or information provider

Expert – assesses the usefulness of the information obtained in terms of completeness

This can mean:

- examining the completeness of the sources and the extent of information they contain in terms of the current research status in a specific field

Standard 3.3

re-evaluates the nature and extent of the information need

Beginner – decides whether additional information is necessary

This can mean:

- questioning the information need and the chosen search strategy
- re-assessing your own level of information and deciding whether additional information sources should be used

Advanced – determines the coverage of the information need and justifies the use of additional information sources

This can mean:

- extending if necessary the present level of information on a certain question
- using further information sources in a reasonable way

Expert – re-evaluates the nature and extent of the information need regularly and adjusts the conceptual concept accordingly

This can mean:

- reformulating a question and adapting the terminology accordingly
- installing alert services or RSS feeds to obtain the newest information on a specific aspect of a discipline

Standard 3.4

reflects on the information seeking process and revises search strategies as necessary

Beginner – reviews the procedure and modifies the search strategies

This can mean:

- obtaining an overview of the selected procedure
- limiting or extending search results

Advanced – reviews the procedure and compiles new search strategies as necessary

This can mean:

- improving the search strategy and consulting additional information sources
- obtaining information from the media or experts on new information sources and including them if necessary in your search
- keeping up-to-date on new search interfaces for databases

Expert – assesses the procedure and progress and revises the research plan

This can mean:

- critically assessing the progress and the results of a research project
- continuously examining and revising the research plan
- applying improvements to subsequent research projects

Standard 4 Organisation

Standard 4.1 records information selected and its sources

Beginner – records information and its sources with simple methods

To reference something with simple methods can mean:

- creating a card index
- managing an electronic list (e.g. with a spreadsheet program)

Advanced – records information and its sources digitally

To reference something with digital tools can mean:

- using reference management programs
- managing websites with structured bookmarking

Expert – records information and its sources with collaborative tools

To reference something using collaborative tools can mean:

- using internet-based reference management programs collaboratively
- making use of new web functionality (e.g. Web 2.0)

Standard 4.2

organises, classifies, and stores information using appropriate methods

Beginner – uses various methods for the organisation and storage of information

This can mean:

- saving information on your own computer in a structured manner
- printing out information and filing it in a structured manner
- filing information in a card index according to a system
- saving information in a database

Advanced – classifies information with appropriate methods

This can mean:

- using different formats for saving data
- using different criteria for aligning information (chronologically, by subject, alphabetically, numerically, etc.)

Expert – administers and updates information systematically and sustainably according to specific order criteria

This can mean:

- saving information based on a hierarchical classification system
- arranging information according to a universal thesaurus
- using a subject-specific thesaurus (e.g. Medical Subject Headings MeSH, Standardthesaurus Wirtschaft)
- taking into account bibliometric information when referencing information

Standard 4.3

shares information with others

Beginner – shares information within a study group

This can mean:

- participating in group discussions
- using e-learning platforms and their different functions

Advanced – shares information through the use of information technologies

This can mean:

- exchanging information in internet-based academic societies (e.g. on e-learning platforms)
- working together in groups (e.g. through a reference management program)

Expert – uses collaborative networks for information exchange

This can mean:

- reading and publishing articles in blogs, internet forums, and newsletters in your own field

Standard 4.4

keeps uptodate with information sources, information technologies, and investigative methods

Beginner – keeps uptodate with selected information sources

This can mean:

- keeping uptodate regularly on new functionalities in information sources

Advanced – keeps uptodate with the latest search methods

This can mean:

- using the help function in information sources to gather information on search methods

Expert – observes the development of information technologies and considers their usefulness

This can mean:

- observing the development of new information technologies and judging their usefulness for a specific academic field
- using new web functionality for research activities (e.g. Web 2.0)

Standard 5 Application

Standard 5.1

applies new and prior information to the creation of new knowledge or a particular product

Beginner – integrates the new knowledge or product in a student project

This can mean:

- writing a short paper (e.g. final high school paper, paper at college entry-level) as graded performance test

Advanced – integrates the new knowledge or product in a scientific project

This can mean:

- using the knowledge gained when writing a paper at the bachelor or master level

Expert – integrates the new knowledge or product in a scientific publication

A scientific publication could be a:

- journal article
- dissertation
- conference paper
- poster presentation

Standard 5.2

communicates the new knowledge or product effectively to others

Beginner – communicates the new knowledge or product effectively within a study group

This can mean:

- preparing and giving a presentation (simple methods: Power Point slides, flipchart)
- providing information on an e-learning platform

Advanced – communicates the new knowledge or product with suitable means for specific target groups

This can mean:

- adapting presentations for different target groups
- knowing and using different presentation techniques (visualisation, multimedia)
- writing comments or lead articles on an academic topic

Expert – discusses the new knowledge or product within a specialized community

This can mean:

- presenting papers at conferences
- participating in podium discussions or public discussions
- giving an expert opinion on a specific topic

Standard 5.3

revises the creation and communication process of knowledge or product

Beginner – documents the creation of knowledge or product

This can mean:

- being aware that the process of creating new knowledge or a new product must be reproducible (document work in process)

Advanced – analyses and assesses the creation and communication of knowledge or product

This can mean:

- proof reading the work of a colleague in the same field and integrating his/her arguments into the new knowledge or the new product
- reflecting your own way of proceeding

Expert – examines the effect of a scientific publication and optimises the process

Examining the effect of a scientific publication can mean:

- following up on how often a publication is cited
- checking if a publication is mentioned in new articles and in which journals these citing articles are published
- calculating your personal impact factor

Standard 6 Responsibility

Standard 6.1

acknowledges cultural, ethical, and socioeconomic issues related to the use of information

Beginner – acknowledges ethical issues in a domestic cultural environment

This can mean:

- being aware of ethical values concerning the use of information in your own cultural environment (e.g. freedom of expression, freedom of the press, copyright)

Advanced – acknowledges cultural and ethical issues in the international environment

This can mean:

- understanding and assessing discussions about freedom of the press and censorship with regard to the handling of information in foreign cultures)

Expert – acknowledges cultural, ethical, and socioeconomic issues in the international environment

This can mean:

- being aware of different means of access to information in different cultures
- being able to act appropriately in international expert panels consisting of people with different cultural backgrounds

Standard 6.2

conforms with conventions and etiquette related to the use of information

Beginner – conforms with institutional conventions and rules of etiquette related to the use of information

This can mean:

- conforming to institutional rules on the handling of information (e.g. including a bibliography in a high school paper)
- communicating openly in a study group on how information was obtained

Advanced – conforms with specialist conventions and rules of etiquette related to the use of information

This can mean:

- writing in the generally accepted publication language of your academic field
- conforming to rules of conduct for web-based technologies (e.g. netiquette)

Expert – conforms with interdisciplinary and international conventions and rules of etiquette related to the use of information

This can mean:

- orienting oneself by the requirements of different academic journals
- knowing the requirements of your own university and those of other academic institutions concerning Open Access

Standard 6.3

legally obtains, stores, and disseminates all kinds of information

Beginner – knows the rules of citation and their legal basis

This can mean:

- correctly citing books and journal articles, published in print or electronically, according to institutional regulations
- knowing how to use copyright (e.g. CC-licenses) and
- especially knowing how to responsibly handle visual, sound, video, and music recordings

Advanced – knows the basics of copyright law and applies them to information gathering and data storage

This can mean:

- assuring the traceability of primary data
- adhering to legal guidelines when storing and using data
- being aware of the plagiarism problem
- avoiding plagiarism

Expert – knows the basics of author's rights and follows them in the dissemination of information

This can mean:

- knowing the difference between copyright and exploitation right
- acquiring the necessary exploitation rights when using the works of others (e.g. pictures, drawings, maps) in your own publications.