Guidelines for courses in information literacy

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

Introduction

These guidelines provide fundamental information for the successful planning, evaluation and promotion of courses offered for the purpose of teaching and facilitating information literacy in academic institutions. The goal is a constructive learning process, during which learners become active and in so doing are able to benefit significantly from the courses (Hanke, 2008).

Careful planning of the teaching is an essential component for its successful implementation. The planning consists fundamentally of:

- analysis of the prerequisites, expectations and requirements on the part of the target audience
- definition of the course content and learning objectives
- structuring of the lessons
- identification of appropriate methods
- analysis of organisational requirements

Prerequisites, expectations and requirements with respect to the target audience

The prerequisites, expectations and requirements on the part of the target audience in the area of information literacy can vary greatly. Bachelor students have different previous knowledge to doctoral students and so have different needs. A thorough review, possibly together with faculty lecturers, will facilitate the definition of course content and learning objectives.

Course content and learning objectives

The purpose of teaching is to stimulate the learning process and to facilitate the enhancement of the knowledge, skills and conduct of the learners. Teaching content or themes are not the same as the learning objectives. The theme of a course could, for example, be subject-specific bibliographic information sources (for a differentiation between the theme and the learning objectives, see Table 1). The learning objectives provide structure to the theme, in that they more precisely describe the learning processes and/or the results of the learning activities (Grunder, 2007).

In general didactics, the distinction is made between the degree of abstraction between the vision (also guiding principles), general goals (also disposition goals) and specific objectives (also operational learning objectives) (Eigenmann & Strittmatter, 1972; Grunder, 2007; Meyer, 2004):

Vision (guiding principles)

The guiding principles determine the frame of reference for the choice of course content and the learning objectives. They guide the motivation, why learning should take place and what the goal is. They set limits to the themes and target areas of the teaching and support and guide the selection of learning objectives and course content.

General goals (disposition goals)

General goals describe the general skills, proficiencies and attitudes that will produce the desired results with learners during the learning process.

Specific objectives (operationalised learning objectives)

Specific objectives describe the intended behaviour and actions that the learners should be able to demonstrate at the end of the learning process. Operationalised objectives are measurable and testable.

According to Robert Mager (Mager, 1994) the description of specific objectives has three components (Meyer, 2004):

- Final behaviour (what)
  This component describes the expected final behaviour of the learner. This requires an exact formulation that describes the observable behaviour.
- Conditions (how)
  This component describes the conditions and specifies the means by which the learner should achieve the final behaviour.
- Benchmark (how much)
  A benchmark shows the expected quality of the final behaviour of the learners.

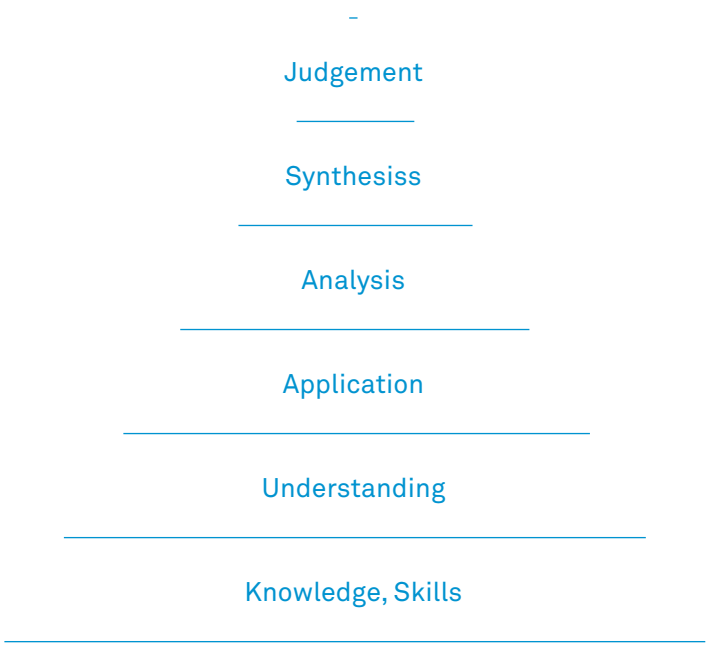
Example of learning objective formulation with regard to subject-specific information sources (Table 1)

Target level	Reference to standards
Vision	The information literate person recognises the need for information and determines the nature and the extent of the information need. (see Standard 1)
General goal	The information literate person understands the focus, the extent and the appropriateness of diverse information sources. (see learning objective for Standard 1)
A concrete specific educational objective for a course on the topic of subject-specific bibliographic information sources	The learners identify at least three important bibliographic information sources in their subject area from database descriptions, by focus (subject area under consideration) and extent (reporting period, publication type).

The example of the formulation of a specific objective in Table 1 clearly shows the three components of a specific educational objective:

- Final behaviour: the learners identify important bibliographic informati on sources for their subject areas
- Conditions: by means of database descriptions
- Benchmark: three important bibliographic information sources by focus and extent

A differentiation of learning objectives with the aim of their operationalisation relates to Bloom's Taxonomy (Grunder, 2007; Meyer, 2004).



Bloom's Taxonomy

Helpful materials by Ruth Meyer for the preparation of teaching (Meyer, 2007) are freely available on the internet. There is also a useful list with verbs for the formulation of learning objectives on various taxonomic levels.

During preparation for teaching, one operates, as a rule, on the level of general goals and specific educational objectives. Consultation of the standards serves as an orientation guide (see the example in Table 1).

During preparation for teaching, it is recommended that course content and learning objectives are established in such a way that there is sufficient time during the teaching for a large number of practical examples.

Structuring of the teaching

The precise structuring of an individual course or of complete sequences of courses is essential for effective and efficient teaching and learning. This is reflected in the setting of course content and learning objectives and methods. Here clear alignment should be evident: the logical progression of individual teaching steps, a methodical teaching sequence (see box) and the clarity of tasks, are essential features of a comprehensible teaching structure (Meyer & Feindt, 2008).

The three-step process of **Introduction – Formulation, Processing – Reaffirming results** is a classic methodical teaching sequence. An example of the teaching process for a 45 minute lesson:

- **Phase 1 Introduction:** Informative teaching introduction with an introductory talk by the teacher about the teaching content (approximately 10 minutes).
- **Phase 2 Formulation, Processing:** The course participants work through the contents of the introductory talk individually, in pairs, or in groups, for example by means of predetermined exercises. The evaluation of the results completes the clear alignment of the main section and is important for the monitoring of learning objectives (approximately 30 minutes).
- **Phase 3 Reaffirming results:** This serves as a retrospective summary of the lesson and a possible look at additional lessons (about 5 minutes).

Methods

The methods are guided by the course content and the learning objectives. The social format should be determined accordingly (individual work, work in pairs, group work, etc.) In general a high proportion of practical work is of central importance for successful teaching. As a rule interest in the teaching will increase when course participants can make use of their previous and specialised knowledge actively during the teaching. Even for lectures with a large number of students, active methods can be applied. For example, the participants can make use of the so-called flashlight, to express their opinion or sentiment or to give their feedback regarding specific questions.

A diversity of methods is an important foundation for varied teaching. The choice of methods should make didactic sense and should follow the teaching sequence of the lesson, and not too many methods should be applied simultaneously.

For further self-study the following books are helpful:

- Mattes, Wolfgang (2004). Methoden für den Unterricht
- Meyer, Hilbert (2009, 2010). Unterrichtsmethoden

Even teachers with little teaching experience can teach effectively by making use of proven methods. Between the information uptake phases (theory), regular active working phases (practical work) should be built in.

Methods for information uptake phases

- Introductory talk (not longer than 10 minutes)
- Reading, etc.

Methods for processing phases

- Practical examples
- Teaching discussions
- Flashlight
- Partner interviews, etc.

Course format and frequency

The format, duration and frequency of lessons in information literacy depend on the requirements of the target audience, the learning objectives, the resources and the infrastructure.

Course format

- Presentation to large group (up to 250 students)
- Training in a computer room or with laptops (up to a maximum of 24 students)
- E-learning modules (independently or in combination with an in-class lecture)

Course duration

- Short presentation (20 to 30 minutes)
- Workshops (45, 90 or 180 minutes)
- Block course for a half or a whole day

Course frequency

- single course
- two to three courses
- semester course

If only limited time is available, then the course content should be reduced → brave the gap
Supervised practical examples are personnel-intensive. The size of the group should be limited (maximum of 24 people)

Positioning within the degree programme

The point at which a course should be offered should be chosen in such a way that the student will derive the most immediate benefit and when what the student has learned can be effectively applied.

Free courses offered
The library offers independently-organised courses. The courses on offer can cover a wide spectrum in terms of content: from literature searching to reference management to bibliometrics and how to publish with Open Access.

Free courses must be intensively and directly promoted to the target audience. The effort involved and the value of the free courses must continually be evaluated.

Non-independent part of a course during the degree programme
Generally a distinction is made between mandatory courses and elective mandatory courses. A mandatory course is compulsory for all students in a particular degree programme. With an elective mandatory course, the students can make a selection from a set of courses on offer. As a rule the courses are run in the form of semester courses or block courses.

The performance records of students are an integral part of the course with elective mandatory courses and mandatory courses and should be taken into consideration during the planning for the semester (see also Chapter Evaluation).

Independent courses require careful semester planning.

In addition to the planning and presentation of the lessons, independent, integrated courses are associated with additional organisational and administrative input.

Non-independent part of a course during the degree programme
During a course (lecture, proseminar, tutorial, seminar, exercises, practical training), the library is provided with a time slot for the teaching of information literacy.

The content, format and extent of the sequence of courses should be decided on in consultation with the lecturers for that subject area. In addition, agreement should be obtained on any possible performance records that might be required.

Integration into a study/degree programme requires intensive collaboration between the lecturers in that subject area and the library. Ideally it should be based on the curricula and study conditions, which specifically require the teaching of information literacy as a key skill.

Didactic and technical support from academic institutions

Didactic centres promote the quality of teaching at academic institutions. With the assistance of academic didactic course programmes, lecturers can establish and deepen their teaching skills. The courses offered also frequently consist of individual consultation such as direct counselling, support with the development of the course and the curriculum, and project monitoring. Material databases as well as libraries further complete the profile.

Many academic institutions also offer technical support for the creation of e-learning courses and/or the multimedia processing of teaching content.

The selection of a teaching platform (ILIAS, OLAT, Moodle, etc.) or of multimedia tools (software for screencasts and video editing, etc.) should be made in accordance with the recommendations of the academic institution's support centre.

Administration of the course room

Most courses include a high proportion of time for practical examples. A library course room is an advantage, but not necessarily a requirement. As a rule academic institutions make course rooms with computer workstations available. Should no computer workstations be available, then it would be sufficient to provide rooms that are equipped with a wireless LAN.

For organising the course, the following prerequisites should be determined with regard to the rooms and technology:

- Is a course room with computers required?
- Do the participants have their own laptops?
- Which version of which software should be installed?
- Is access to licensed databases functioning?
- Is the interoperability of various software components working (for example reference management and word processing)?
- Is classroom management software required?
- Can the participants work with shared and/or individual files?
- What additional infrastructure is available (projector, flipchart, whiteboard, overhead projector, etc.)?

Careful preparation of the course room is important for the successful presentation of the course. The application of classroom management software should not be the end in itself, but should make didactic sense.

A course room with computers or a wireless LAN is necessary when courses incorporate supervised practical training sessions.

The following should be kept in mind:

- all seats should allow for a clear view of the projection screen(s)
- there should be sufficient space between seats
- consultation discussions with the course participants
- clarity about contact people and responsibilities for technical maintenance

Personnel

The application of resources should be planned realistically, as the preparation and presentation of courses in information literacy are time intensive. Depending on the type of course, the effort involved in the preparation, the presentation and the review is very different, as the estimation by Fabian Franke (Franke, 2011) in Table 2 shows.

Estimation of personnel involvement (Table 2)

Type of course	Factor	Example
Presentations, guided tours, lectures	2	Introduction for Bachelor students of 90 minutes corresponds to input of 3 hours
Lessons with practical examples	3	Course of 90 minutes corresponds to input of 4.5 hours
E-learning	10	Working duration for an e-learning course of 5 hours corresponds to input of 50 hours

As a rule, the initial time and effort is notably higher, but the input required will decrease with repeated presentation. For the creation and marking of performance records, sufficient time should be allocated. The above specifications are average values.

One does not need to be a qualified teacher to present courses on information literacy.

The following characteristics or skills are however required:

- Familiarity with the content
- Enthusiasm with the presentation of teaching content
- Confident and winning manner
- Openness to, and interest in, new developments
- Willingness to undergo further subject or didactic training, see also the document Proficiencies for Information Literacy Instructors

Evaluation

Evaluation requirements in the area of teaching of information literacy consist fundamentally of:

- the evaluation of individual courses, course sequences and course programmes
- the evaluation of the learning efficiency of course participants

Evaluation of individual courses, course sequences and course programmes
Regular evaluation is a requirement for the continuous improvement of individual courses, course sequences but also the entire course programme.

It is meaningful, within an institution, to compile a grid with few, but relevant criteria for the assessment of teaching. These will form the basis for the creation of a feedback form.

For feedback forms the following are relevant:

- formulate unambiguous questions
- bear in mind that the results should be easy to evaluate
- ensure that a minor amount of work is required by the course participants
- KISS: Keep it short & simple

Individual courses and course sequences can be evaluated by means of various feedback measures:

- Feedback from course participants (oral or written with respect to individual criteria or a grid of criteria)
- Feedback from faculty colleagues (after teaching visits on the basis of observation requests)
- Feedback from lecturers (for non-independent course sequences incorporated into lectures)
- Self assessment (on the basis of selected criteria)

For semester courses or longer course sequences, it is meaningful to obtain short feedback about individual course units or criteria repeatedly, for example, for specific learning content, for chosen methods or for presentation techniques. This facilitates the role in planning and improvement of teaching during the duration of the semester or the course.

Course programmes with all courses offered should be reviewed regularly for

- Timeliness (course content, teaching materials)
- Comprehensiveness (course content, educational level)
- Redundancies within different courses (overlap of learning content)

Evaluation of learning efficiency of the course participants

Learning performance can fundamentally be evaluated using the following measures:

- With the reaffirming of results (for example when discussing the practical examples)
- By teaching contributions made by course participants (in the form of oral or written contributions about the learning content, for example a talk or presentation about the learning content that was worked through independently)
- By tests (online self-testing, through tests marked by the course presenter, etc.) or semester assignments (for example in the form of a portfolio)

The call for a review of performance by the course administration is a requirement for ECTS-accredited courses.

Promotion

To ensure the optimal response, the courses offered should be promoted in a targeted manner. The methods for promotion are dependent on the organisational form of the courses. Promotion may be carried out in the following ways:

- Printed flyers, placards
- Web pages (library and associated institutes)
- Newsletter or blog
- Social networks and platforms
- Communication channels via professional associations
- University calendar
- Details in official publications of the academic institution
- Screens in building entrances
- Presentations during information sessions at the start of the semester
  Email lists

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