WRITING INTENDED LEARNING OUTCOMES
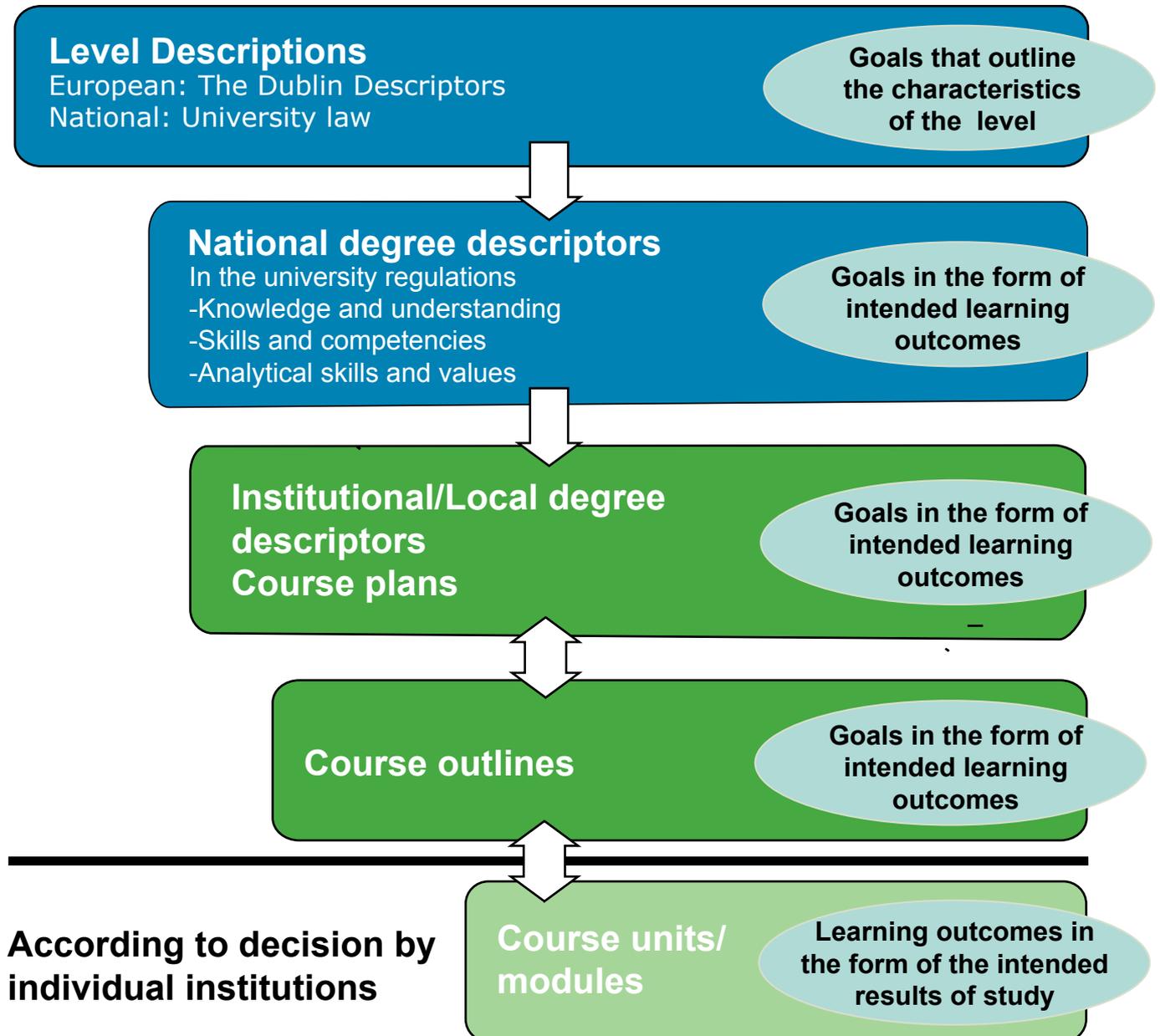
A guide: writing intended learning outcomes at module level

The following guide is part of the project "Web-based quality support for the pedagogical work of universities on learning outcomes, assessment, and learning activities". The project is financed by NSHU, the Swedish Agency for Networks and Cooperation in Higher Education, and is built on the concept of Constructive Alignment, whereby expected learning outcomes, learning activities, and assessment are aligned in a structured way.

What are intended learning outcomes?

Intended learning outcomes, seen as the results of study, are statements which together describe what a student is expected to know, understand, and/or be able to do at the end of a module or course at a specified level.

Learning outcomes can be used for comparison and for quality assurance, both at the institution concerned (at module and course level) and nationally and internationally.

Level Descriptions
European: The Dublin Descriptors
National: University law

Goals that outline the characteristics of the level

National degree descriptors
In the university regulations
-Knowledge and understanding
-Skills and competencies
-Analytical skills and values

Goals in the form of intended learning outcomes

Institutional/Local degree descriptors
Course plans

Goals in the form of intended learning outcomes

Course outlines

Goals in the form of intended learning outcomes

According to decision by individual institutions

Course units/ modules

Learning outcomes in the form of the intended results of study

The Swedish Term

'Learning outcomes' (or 'intended learning outcomes') translates into Swedish as:

▪ Lärandemål

▪ Förväntade studieresultat

▪ Förväntade läranderesultat (Flär)

▪ Lärmål

Lärandemål appears to be the most commonly used term thus far, and it implies *intended results of study*. Until a better term emerges in Sweden, it is lärandemål that is used here, where lärande means learning and *mål* (outcome/goal) is understood as intended outcomes.

The role of learning outcomes in course outlines and programs

Course outlines should include learning outcomes. Learning outcomes are statements that clearly explain the central core of the course –the key elements the students must learn. Learning outcomes are an important part of course information, but additional sections are also necessary. Learning outcomes do not preclude shorter, more general descriptions of course aims or overarching goals.

Educational Progression

Educational progression involves the student building on and increasing the knowledge and skills they already have. The educational process must support and encourage this development. It is comparatively straightforward to plan progression when it comes to the deepening of knowledge. More thought and preparation is required when piecing together separate modules to form a complete whole and achieve progression. Progression in the acquisition of new knowledge also entails the systematic and further development of critical thinking and analytical skills.

Students need to be constantly challenged to develop an independent approach to study, take responsibility for their own work, and develop their communication skills, so that they can progress in the acquisition of transferable skills and competencies. Both study skills and professional skills must be identified and students' progress in acquiring them assured.

Clear learning outcomes in the form of intended results of study make it possible for instructors to build on previous modules and they are therefore a prerequisite of reliable progression.

Learning material/content

Learning outcomes do not describe course content in detail. Separate descriptions of course content are also necessary.

Testing

It should be possible to test the attainment of all learning outcomes. Aspects of the course that the teacher would like to include, but which are not or cannot be assessed should not be written into the learning outcomes. These elements can still be highlighted in the course description, but under different headings (see Course Requirements for examples)

Assessment

Appropriate forms of assessment must be selected so that it is possible to determine whether the learning outcomes have been achieved.

Course Requirements

Although not assessed, the course requirements represent the conditions that must be fulfilled for the student to receive a pass grade for the course. Learning outcomes do not describe all the course requirements; for example, mandatory attendance, deadlines for assignments, and active participation do not belong in the learning outcomes section.

The student's own learning goals

It is possible to allow students to write their own goals in addition to the formal learning outcomes. In that case, the instructor can specify in the learning outcomes that students should be able to set realistic goals for their own personal work and learning.

Unplanned learning

Learning outcomes do not prevent the unplanned learning that occurs through the interaction between students, teachers, and the subject, but this type of learning can naturally not be formulated as a course goal

WHY WRITE LEARNING OUTCOMES?

Writing learning outcomes leads to:

A focus on student learning
▪ Student learning becomes central when the focus is on what the student should be able to achieve by the end of a course.

▪ It is not the instructors and their teaching, but student learning that is of primary interest.

▪ The vital task for instructors is to facilitate and support this learning.

Clarity
▪ It becomes clear to students what is expected of them.

▪ New instructors can more easily see what their responsibilities are.

▪ Higher levels of consensus among the teaching staff can be achieved.

▪ Instructors teaching subsequent courses know what students are capable of and can adapt the level of their teaching accordingly

▪ Potential employers have access to better information about student capabilities after a given course. The knowledge, skills, and competencies demanded by employers are given more emphasis

Overall vision and progression
▪ Clarity facilitates the effective linking of courses to the entire program/education.

▪ Since the objectives describing the skills and abilities that the student is expected to achieve must also be written, they can easily be integrated into the course, so students can begin to acquire and develop them.

Realism
▪ When course goals describe what the course should give (learning intentions) teachers are often tempted to appear generous, which can easily lead to overload and unrealistic goals.

▪ Clear descriptions of the results that students are expected to attain show that this is not the place for mistaken generosity. Instead, the importance of achieving concrete goals for both students and instructors is highlighted.

Clear connections between goals, teaching, and assessment
▪ Assessment determines what, how, and when the student studies and it must therefore be aligned with course goals. This is facilitated by the fact that the goals are observable.

▪ This alignment is essential for student learning.

▪ It is easier to plan teaching to facilitate learning when goals are concrete and student-focused.

The process of educational development in the academy
▪ The formulation of goals in the form of intended learning outcomes is a process which often leads to the development of teaching and learning.

▪ Cooperation with colleagues, both within and outside a teacher's discipline, is a tool for course development.

▪ Reflection on learning outcomes leads to discussions about the nature of subject-related knowledge, which results in a deeper understanding of teaching and its impact on learners.

Better quality assurance
▪ It is easier to examine the fulfillment of goals if the goals are concrete.

▪ The fact that goals are centred on the essential aim of teaching, that is student learning, also makes it possible for evaluation to focus on learning.

HOW TO WRITE LEARNING OUTCOMES

Ten steps towards learning outcomes

– getting started: writing learning outcomes at module level.

WRITE

Step 1. **Formulate: What?**
Subject-related content in learning outcomes

Step 2. **Formulate: How?**
The format of learning outcomes

REVISE

Step 3. **Focus**
Distinguish between the wording in the module learning outcomes and other descriptions in the module outline (for example: the aims of the course and course content)

Step 4. **Specify**
Make learning outcomes observable and clear

Step 5. **Refine**
Distinguish between learning activities and results

Step 6. **Clarify**
Clarify vague outcomes

Step 7. **Limit**
Limit the number of learning outcomes

CHECK

Step 8. **Adjust**
Check that the form and content of learning outcomes can be assessed

Step 9. **Estimate**
Estimate student learning time

Step 10. **Calibrate**
Check the module in relation to other modules; develop a sense of the course as a whole

WRITE. Steps 1-2

Step 1. Formulate: what?
Narrow down course content by describing the intended learning outcomes

At degree level, outcomes are formulated in three main categories:

- Knowledge and understanding
- Skills and competencies
- Analytical skills and values

Outcomes are often written as "demonstrate knowledge about, "demonstrate the ability to", or/and "show understanding of". At the module level, these overarching outcomes are made more concrete in the form of learning outcomes, which are usually written in one category, not separated as above.

At module level, learning outcomes should:

- Narrow down the essential knowledge content and the abilities and skills practised.
- Describe what the student should be able to demonstrate after completing the course
- Be formulated as requirements for passing the course, if nothing else is stipulated
- Be observable, relevant, and realistic.
- Provide a foundation for evaluation, assessment, and grading criteria.

Step 2. Formulate: how?
Formulate clear learning outcomes. Learning outcomes should be written for the student and be comprehensible to students, teachers, and other stakeholders.

A clear learning outcome consists of:
- Active verbs that express what the student is expected to be able to do at the end of the course.
- Words or phrases that describe the material, the area, subject, etc. which the student works with or is the result of the educational experience.
- If wished, words or sentences that describe how the knowledge should be used (individually, in summary, in detail, with the help of, orally, written, etc.)

Example:
After completing the module/course, the student should be able to

Ex 1.   Write a report describing the relationship between chemical structures and material properties (the focus is on the structure of knowledge, principles, and connections)

Ex 2.   With the help of reference material, select an appropriate construction material and justify the choice taking into account its function, economics, and environment, (the focus is on the practical application of knowledge).

REVISE. Steps 3-7

Step 3. Focus

Differentiate between the wording in the course goals/content and the wording in the learning outcomes. A goal, for example, describes, that the student will be given the opportunity to develop his/her understanding of, acquire knowledge or awareness of, etc. It can describe the intentions of the course, focus on main content, and show how the course relates to different parts of a program. The content, generally in bullet form, specifies the central subject matter in more detail.

A learning outcome at module level describes what the student should be able to demonstrate –the results– and how the student should show the attainment of these goals.

Examples of a goal

The goal of the course gives both an overview and lays the foundation for further studies in political science, preparing the student to complete a degree in journalism, law, or economics.

Example of a possible learning outcome for the course

After finalizing the course, students should be able to:
- Summarize the political government and administration both in Sweden and in other countries.

Step 4. Make it concrete

Make learning outcomes clear and observable. The verbs describe the degree of complexity and depth of intellectual/practical processes. The verb "to understand" is not a good choice because it is vague and not observable. As an example, the verb "to understand" can be made more concrete by substituting it with a verb which the student can perform: reproduce, interpret, clarify, reformulate, propose, account for, translate, describe in your own words, exemplify, illustrate, classify, categorize, arrange, differentiate, summarize, generalize, explain, specify, draw conclusions, predict, confirm, demonstrate, compare, contrast, map, pair, choose, describe commonalities between different phenomena, appreciate, report, judge, or defend.

Example: learning outcomes that are not observable:
After completing the course, the student should be able to:

- Understand how laws and guidelines for social planning are applied.

- Read academic texts about the scholarship of teaching

Example: Rewritten learning outcomes that are observable
After finalizing the course, the student should be able to:

- Explain the relationship between applied legislation and the process of urban planning.

- Review relevant scientific texts about the scholarship of teaching

Step 5. Refine

Make a distinction between learning activities and results. The learning outcomes should not describe how the outcome is achieved, but detail the results of the various learning activities which occur during the course.

Example: Learning outcomes that describe the activity and not the result

The student should:

- Have visited at least three university teaching sessions and have observed one session with a pre-defined aim in mind. (Question: And why?)

Example: reformulated learning outcome that describes the result of the activity
The student should be able to:

- Categorize and analyze observed teaching and learning activities to achieve a pre-determined aim, while at the same time drawing conclusions about his or her own personal reactions as a teacher.

Step 6. Clarify

Clarify vague learning outcomes. Vague learning outcomes do not provide the student with much guidance.

Example: A vague learning outcome
The student should be able to:

- Carry out a company audit.

Example: Reformulate learning outcomes so that they specify content and how knowledge will be used.
The student should be able to:

- Carry out a company audit from the perspective of an economic theory, justifying and explaining his or her choice of method

Step 7. Limit

- Combine and limit the number of learning outcomes to about eight
- The presence of too many outcomes indicates that the outcomes may be too detailed
- What is the overall result that must be evaluated?
- The underlying, more detailed level is subsumed within the overarching level. For example, a grasp of certain facts is needed before a certain phenomenon can be analyzed. It is therefore sufficient to write that the student should be able to analyze a given phenomenon.

Example: Redundant learning outcomes
The student should be able to:

- Define known concepts of second-language acquisition (SLA)
- Use concepts of second-language acquisition (SLA) to judge the competence of second-language teachers in written and spoken Swedish.

Example: The redundant learning outcome should be deleted. It is already included in the other outcome.
The student should be able to:

- Use concepts about second-language acquisition (SLA) to judge the competence of second-language teachers in written and spoken Swedish.

Step 8. Adjust

Check that learning outcomes can be assessed. Sometimes it is necessary to reformulate the outcomes because they are unrealistic or impossible to test. Then write the grading criteria and decide on the methods of assessment, in relation to the learning outcomes in both cases.

In this way, it is easier to:

▪ Make the outcomes observable

▪ Write realistic goals

▪ Make assessment more valid

▪ Help students to work in ways that allow them to achieve good results

Step 9. Weigh

Estimate the approximate student workload required to attain the learning outcomes and complete assessment. Consider the time spent on instruction and the total study-time needed for both individual and group work. Remember that too much material often leads to cramming and limits the space for analysis and critical thinking.

Step 10. Calibrate

Check how the module relates to other modules/courses. Each course belongs to a specific level: undergraduate or postgraduate. In addition, the course could be also placed at a certain point within a level, implying that a particular course must be studied before another, perhaps as part of a sequence. The progressive development of knowledge should thus be reflected in the outcomes.
Specific subject-related content can be covered in more than one course, but must be approached differently in each instance. It is the learning outcomes that clarify for the student if the course requires deeper analysis or if it results in the development of knowledge on a more general level.