Tool for assessing quality of learners' aims and objectives Advanced version

Note on terms

In some contexts the words aims and objectives (and their synonyms) have specific meanings. Papers have been written about the importance of distinguishing them. These differences may be useful. In this tool, however, we use aim, objective, function, purpose, etc. interchangeably.

How can I benefit?

This tool can be useful for you if

- you have already used the "Tool for assessing quality of learners' aims and objectives. Simple version";
- you are familiar with the model of stages of competence development;
- you intend to organise the learning process based on the stages of competence development model.

When can it be used?

The tool should be used at different stages of mastering a particular competence. It is assumed that learners' aims and objectives should change as they progress towards becoming more competent. The tool will help you capture learners' progress and see where support is needed.

How can I use it?

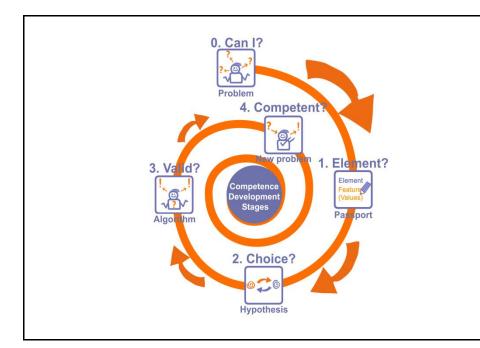
The use of the tool is similar to the application of a simple version of assessing quality of learners' aims and objectives. It is based on the same three evaluation parameters: problem-centredness, disposition and independence.

As the indicators for the parameters differ at various phases of competence development, make sure you have selected the assessment sheet for the corresponding competence development stage.

Prior to assessing individual learners, you might want to get acquainted with all the proposed objectives and decide on the best and poorest ones. Taking notes of how learners are working will help you assess their disposition and independence.

Stages of competence development

Aims and objectives depend on the stage of competence development the learner is working on. Formative assessment should help the learner move towards the next stage. This is the general path to follow for the teacher and the learner.



0. Can I? Accepting a learning problem.

Learner's definition of an objective based on the accepted learning problem.

1. What am I dealing with? Creating the passport of an element

Learner's refinement of his/her objectives for identifying a research element and its properties.

2. How to make a choice? Formulating a hypothesis

Learner's refinement of his/her objectives for formulating and testing a hypothesis for solving the learning problem.

3. Does my hypothesis work? Developing an algorithm

Learner's refinement of his/her objectives for (dis)proving the hypothesis and defining an algorithm for solving the learning problem.

4. Do I still need the algorithm? Becoming competent and facing a new problem. Learner's refinement of his/her objectives for optimising the algorithm and identifying a new problem.



1. Element?



2. Choice?



3. Valid?



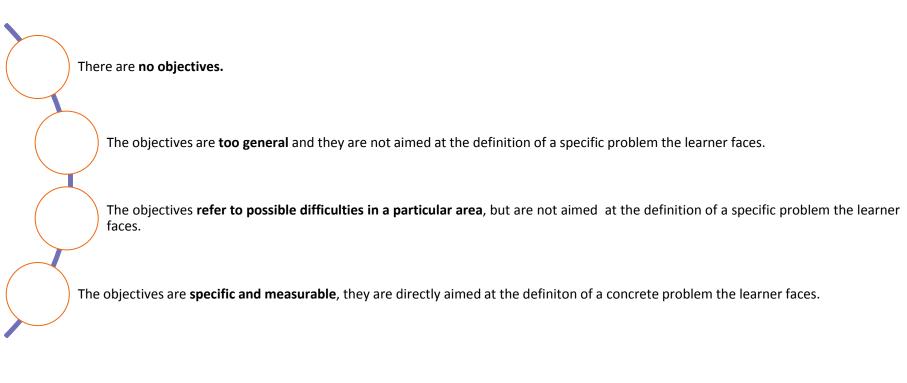
4. Competent?





Evaluation parameters Learner's Objectives at Competence Development Stage 0. Towards definition of a problem

PROBLEM-CENTREDNESS OF THE OBJECTIVE



Please note that the learner's independence and disposition <u>cannot be</u> assessed unless problem-centredness has reached point (+).

DISPOSITION OF THE LEARNER TOWARDS DEFINING QUALITY OBJECTIVES

The learner is not trying to define a specific problem, s/he doesn't define objectives or comes up with formal general objectives.

The learner **defines objectives**, tries to link them to potential difficulties in the problem area but doesn't demonstrate the willingness to connect them to formulating a specific problem s/he faces.

The learner **defines and refines objectives** until they are clearly aimed at formulating a specific problem s/he faces.

INDEPENDENCE OF THE LEARNER IN THE PROCESS OF DEFINING QUALITY OBJECTIVES

The learner can't define objectives aimed at formulating his/her learning problem.

The learner can define objectives aimed at formulating his/her problem but only with the teacher's or peers' support.

The learner can independently define objectives aimed at formulating his/her learning problem. (S)he can also help peers improve their objectives.

- ± +

1. Element?

Element Feature (Values)

Evaluation parameters

Learner's objectives at Stage 1. Towards identification of the research element and its properties

PROBLEM-CENTREDNESS OF THE OBJECTIVE

The objectives are **too general** and not aimed at identifying a particular research element and specifying its properties.

The objectives are **partially measurable** and refer to a possible research element and its properties, but they are not clearly aimed at specifying it.

The objectives are **specific and measurable**, they are clearly aimed at identifying a particular research element and specifying its properties.

Please note that the learner's independence and disposition <u>cannot be</u> assessed unless problem-centredness has reached point (+).

DISPOSITION OF THE LEARNER TOWARDS DEFINING QUALITY OBJECTIVES

The learner is not trying to identify a specific research element and its properties, s/he doesn't define objectives or re-states the objectives defined earlier.

The learner tries to improve his/her objectives, links them to the problem s/he faces but doesn't demonstrate the willingness to connect them to identifying the properties of a specific research element.

The learner refines earlier objectives or proposes new ones until they are clearly aimed at identifying properties of a specific research element.

INDEPENDENCE OF THE LEARNER IN THE PROCESS OF DEFINING QUALITY OBJECTIVES

The learner can't define objectives aimed at identifying a particular research element and its properties.

The learner can define objectives aimed at identifying a particular research element and its properties but only with the teacher's or peers' support.

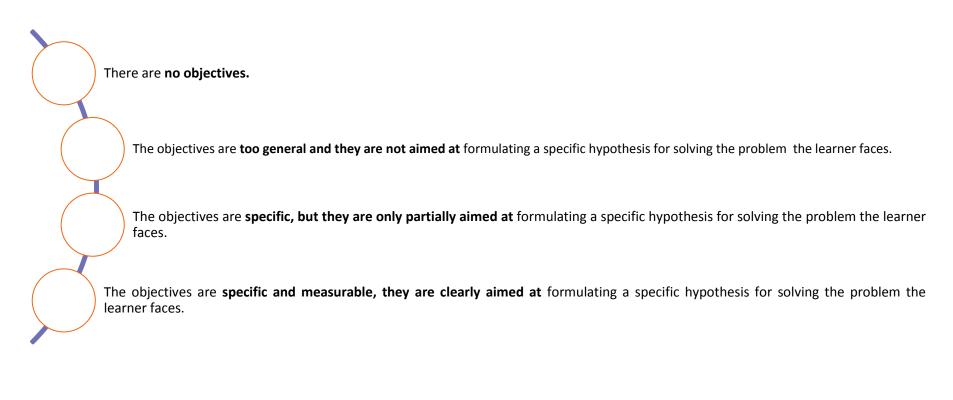
The learner can independently define objectives aimed at identifying a particular research element and its properties. S/he can also help peers improve their objectives.



Evaluation parameters

Learner's objectives at Stage 2. Towards formulation of a hypothesis for solving the problem

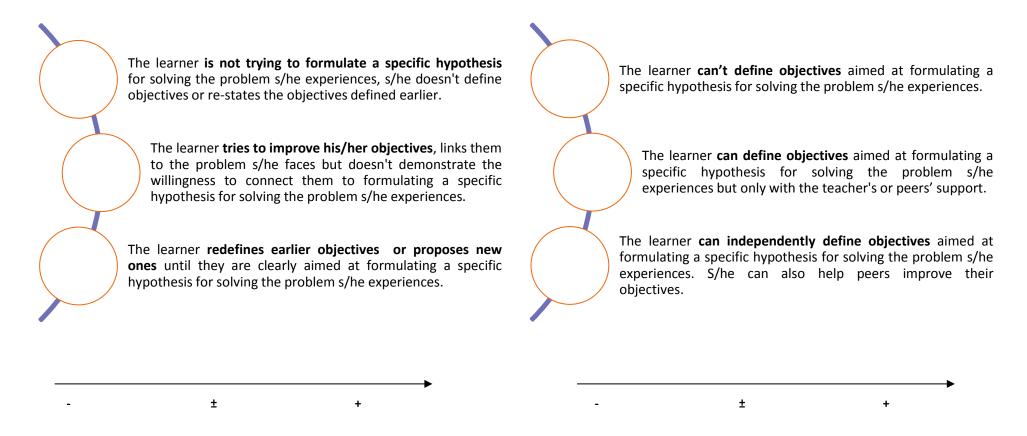
PROBLEM-CENTREDNESS OF THE OBJECTIVE



Please note that the learner's independence and disposition cannot be assessed unless problem-centredness has reached point (+).

DISPOSITION OF THE LEARNER TOWARDS DEFINING QUALITY OBJECTIVES

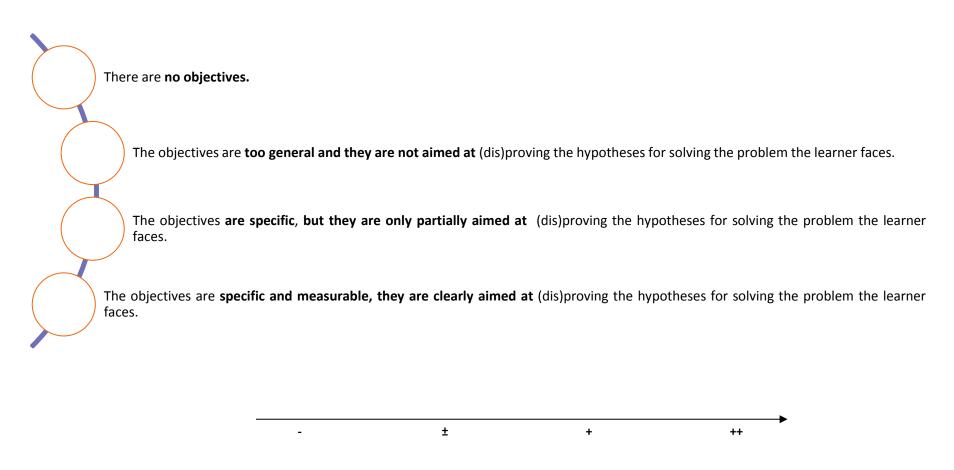
INDEPENDENCE OF THE LEARNER IN THE PROCESS OF DEFINING QUALITY OBJECTIVES





Evaluation parameters Learner's objectives at Stage 3. Towards defining an algorithm

PROBLEM-CENTREDNESS OF THE OBJECTIVE



Please note that the learner's independence and disposition <u>cannot be</u> assessed unless problem-centredness has reached point (+).

DISPOSITION OF THE LEARNER TOWARDS DEFINING QUALITY OBJECTIVES

The learner is not trying to (dis)prove the hypotheses for solving the problem s/he experiences, s/he doesn't define objectives or re-states the objectives defined earlier.

The learner tries to improve his/her objectives, links them to the problem s/he faces but doesn't demonstrate the willingness to connect them to (dis)proving the hypotheses for solving the problem s/he experiences.

The learner refines earlier objectives or proposes new ones until they are clearly aimed at (dis)proving the hypotheses for solving the problem s/he experiences.

INDEPENDENCE OF THE LEARNER IN THE PROCESS OF DEFINING QUALITY OBJECTIVES

The learner **can't define objectives** aimed at (dis)proving the hypotheses for solving the problem s/he experiences.

The learner can define objectives aimed at (dis)proving the hypotheses for solving the problem s/he experiences but only with the teacher's or peers' support.

The learner can independently define objectives aimed at (dis)proving the hypotheses for solving the problem s/he experiences. S/he can also help peers improve their objectives.

- ± +

4. Competent? Evaluation parameters



Learner's objectives at Stage 4. Towards optimising the algorithm and identifying new problems

PROBLEM-CENTREDNESS OF THE OBJECTIVE

There are no objectives. The objectives are too general and they are not aimed at optimising the algorithms and identifying new problems the learner might face. The objectives are specific, but they are only partially aimed at optimising the algorithms and identifying new problems the learner might face. The objectives are specific and measurable, they are clearly aimed at optimising the algorithms and identifying new problems the learner might face.

Please note that the learner's independence and disposition <u>cannot be</u> assessed unless problem-centredness has reached point (+).

DISPOSITION OF THE LEARNER TOWARDS DEFINING QUALITY OBJECTIVES

The learner is not trying to optimise the algorithms for solving the learning problems or identify new problems s/he might face, s/he doesn't define objectives or re-states the objectives defined earlier.

The learner tries to improve his/her objectives, links them to the problem s/he faces but doesn't demonstrate the willingness to connect them to optimising the algorithms and identifying new problems the learner might face.

The learner **redefines earlier objectives or proposes new ones** until they are clearly aimed at optimising the algorithms for solving the learning problems and identifying new problems the learner might face.

INDEPENDENCE OF THE LEARNER IN THE PROCESS OF DEFINING QUALITY OBJECTIVES

The learner can't define objectives aimed at optimising the algorithms for solving the learning problems and identifying new problems the learner might face.

The learner can define objectives aimed at optimising the algorithms for solving the learning problems and identifying new problems the learner might face, but only with the teacher's or peers' support.

The learner can independently define objectives aimed at optimising the algorithms for solving the learning problems and identifying new problems the learner might face. (S)he can also help peers improve their objectives.

Student assessment sheets

In this part you can find assessment sheets you can use at any stage of competence devenuent. Before filling in the assessment sheet, write down the stage for which you are using it.



1. Element?



2. Choice?



3. Valid?



4. Competent?



There are two types of sheets, one for assessing individual students and another one to be used for assessing the progress of the class a whole.



Individual student assessment sheet



Class assessment sheet

Each type of the assessment sheet offers three evaluation parameters:

- problem-centredness of objectives;
- disposition of students;
- independence of students.



Individual student assessment sheet at stage _____. Quality of objectives: problem-centredness of objectives

		Problem-centredness of objectives						
Student name	Student's objective(s)	No objectives	Not problem focused	Partially problem focused	Problem focused			
S1								
					•			
S2								
					,			
S3								
					—			
S4								
S5								



Individual student assessment sheet at stage _____. Quality of objectives: disposition & independence of students

Student name	Student's objective(s)	Problem- centredness of objectives	tredness				lependence (Progress bar					
		Problem focused +	Doesn't do -	Does but +/-	Does +	Can't do -	Can do with support +/-	Can do independently +					
S1									novice				competent
										+	++	+++	
S2		•							novice				competent
										+	++	+++	
S3									novice				competent
								•		+	++	+++	r
S4									novice				competent
										+	++	+++	
S5		 							novice				competent
										+	++	+++	



Class assessment sheet at stage _____.

Quality of objectives: problem-centredness of objectives

Class	

		Problem-centred	ness of objectives				
Date of assessment	No objectives Not problem focused		Partially problem focused	Problem focused	Notes		
T1							
	All	All	None	None			
	Most	Most	Few	Few			
	Half	Half	Half	Half			
	Few	Few	Most	Most			
	None	None	All	All			
T2							
	All	All	None	None			
	Most	Most	Few	Few			
	Half	Half	Half	Half			
	Few	Few	Most	Most			
	None	None	All	All			
T3							
	All	All	None	None			
	Most	Most	Few	Few			
	Half	Half	Half	Half			
	Few	Few	Most	Most			
	None	None	All	All			
T4	•						
	All	All	None	None			
	Most	Most	Few	Few			
	Half	Half	Half	Half			
	Few	Few	Most	Most			
	None	None	All	All			



Class assessment sheet at stage ______.

Quality of objectives: disposition & independence of students

Class	

Date of assessment	Problem- centredness Disposition of students of objectives				Independence of students			Notes
	Problem focused	Doesn't do	Does but	Does	Can't do	Can do with support	Can do independently	
T1								
		All	None	None	All	None	None	
	Few	Most	Few	Few	Most	Few	Few	
	Half	Half	Half	Half	Half	Half	Half	
	Most	Few	Most	Most	Few	Most	Most	
T2	All	None	All	All	None	All	All	
12		All	None	None	All	None	None	
	Few	Most	Few	Few	Most	Few	Few	
	Half	Half	Half	Half	Half	Half	Half	
	Most	Few	Most	Most	Few	Most	Most	
	All	None	All	All	None	All	All	
T3								
		All	None	None	All	None	None	
	Few	Most	Few	Few	Most	Few	Few	
	Half	Half	Half	Half	Half	Half	Half	
	Most	Few	Most	Most	Few	Most	Most	
	All	None	All	All	None	All	All	
T4					l			
	_	All	None	None	All	None	None	
	Few	Most	Few	Few	Most	Few	Few	
	Half	Half	Half	Half	Half	Half	Half	
	Most	Few	Most	Most	Few	Most	Most	
	All	None	All	All	None	All	All	