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DESIGNERS' KIT

ASSESSMENT GUIDE

Students' assessment in NECTAR project

Students' assessment is a crucial element for the effective implementation of NECTAR's CGE Curriculum. Thus, it has been addressed at different levels and with different tools, targeting both designers and teachers.

Firstly, an "*ASSESSMENT TABLE*" defining the main assessment methods suggested for each Learning Outcome (LO) is provided along with the Curriculum.

| Learning Outcome	EQF Level	Mandatory / Optional	SUGGESTED ASSESSMENT METHODs (one or more methods for each LO)
UNIT OF LEARNING 1: MANAGE SUPPLIERS AND BUY IN SUSTAINABLE FOOD INGREDIENTS			
LO1-A-1: Identify the costs of required raw and semi-finished food products, kitchen equipment and consumable items, at the light of quality and sustainability and make and progressively update an inventory of all potential, local, food products, estimating their periodical cost	EQF 4	M	WE, OE, A-WBL, SSK,OTH
LO1-A-2: Identify international and national quality brands, also exploiting ICTs and dedicated e-data resources and taking into account high quality and parameters of sustainability, and take these brands into account managing suppliers	EQF 5	M	WE, SSK
LO1-B-1: Define quality criteria of suppliers (including agri-fish-food chain) in order to identify, compare, monitor and evaluate regularly the best high-quality food suppliers	EQF 5	M	WE, OE, SSK
LO1-B-2: Plan and manage the supply process related to the specific health or social context	EQF 5	M	WE, OE, SSK

Assessment methods have been grouped into 5 categories:

- *Written exam/assignments* [WE]: this method is based on the use of traditional tools such as written tests or essays;
- *Oral exam* [OE]: this traditional method is based on a discussion or a test in which an examiner poses questions to the student in oral form;
- *Assessment of WBL* [A-WBL]: it includes each procedure and tool which is used to assess the student when involved in WBL; the assessment can be done by the teacher, by the tutor of the WBL or by the students themselves (self-assessment);
- *Simulation/skill demonstration* [SSK]: it includes a number of strategies and tools supporting the demonstration of a specific skill in a situated context;
- *Assessment based on other data* [OTH]: this category includes all the methods which do not fall into the previous categories, such as the ones related to the use of ICTs (e.g. collection of tracking data and learning analytics), or innovative tools such as e-portfolios or specific functionalities of Virtual Environments.

For each Learning Outcome, some assessment methods are suggested. In the localized courses, it is possible to implement only one LO or the whole set of them, depending on the educational strategies adopted in the design phase. This table is a fundamental preliminary step to define the assessment tools to be used for students' assessment.

Based on the "*ASSESSMENT TABLE*", courses DESIGNERS are supposed to fill in a specific SHEET of the "*FLEXIBILITY TOOL*", named "*ASSESSMENT SCAFFOLDING*". In this sheet, they have to specify for each LO (which had already been assigned to a specific module) the actual assessment methods they are willing to implement (one or more).

ASSESSMENT SCAFFOLDING						
M1	*MANAGE SUPPLIERS AND BUY IN SUSTAINABLE FOOD INGREDIENTS*	ASSESSMENT TOOLS				
		WE	OE	A-WBL	SSK	OTH
		33,33%	33,33%	25,00%	8,33%	0,00%
LO1-A-1	Identify the costs of required raw and semi-finished food products, kitchen equipment and consumable items, at the light of quality and sustainability and make and progressively update an inventory of all potential, local, food products, estimating their periodical cost	x	x			
LO1-A-2	Identify international and national quality brands, also exploiting ICTs and dedicated e-data resources and taking into account high quality and parameters of sustainability, and take these brands into account managing suppliers	x	x			
LO1-B-1	Define quality criteria of suppliers (including agri-fish-food chain) in order to identify, compare, monitor and evaluate regularly the best high-quality food suppliers			x		
LO1-B-2	Plan and manage the supply process related to the specific health or social context	x	x			
LO1-C-1	Identify and use local and seasonal ingredients in an appropriate way, identify local food suppliers and establish a network with them in order to guarantee constant food supply, also exploiting ICTs and dedicated e-data resources, being aware of the regional food supply chain and of how seasonal products are delivered	x	x			
LO1-D-1	Promote full use of ingredients, raw materials and leftovers according to Hazard Analysis Critical Control Point-Concept (HACCP) and local law				x	
LO1-D-2	Introduce measures for the prevention, separation and proper disposal of waste in the kitchen and ensure compliance with these measures by all members of the kitchen team			x		
LO1-D-3	Create a food waste assessment plan, use it regularly, and share the results with all the staff			x		

As shown in the figure below, these tools delivered by NECTAR project are fundamental references for the following work of designers and teachers of future courses based on CGE Curriculum in their activity of students' assessment.
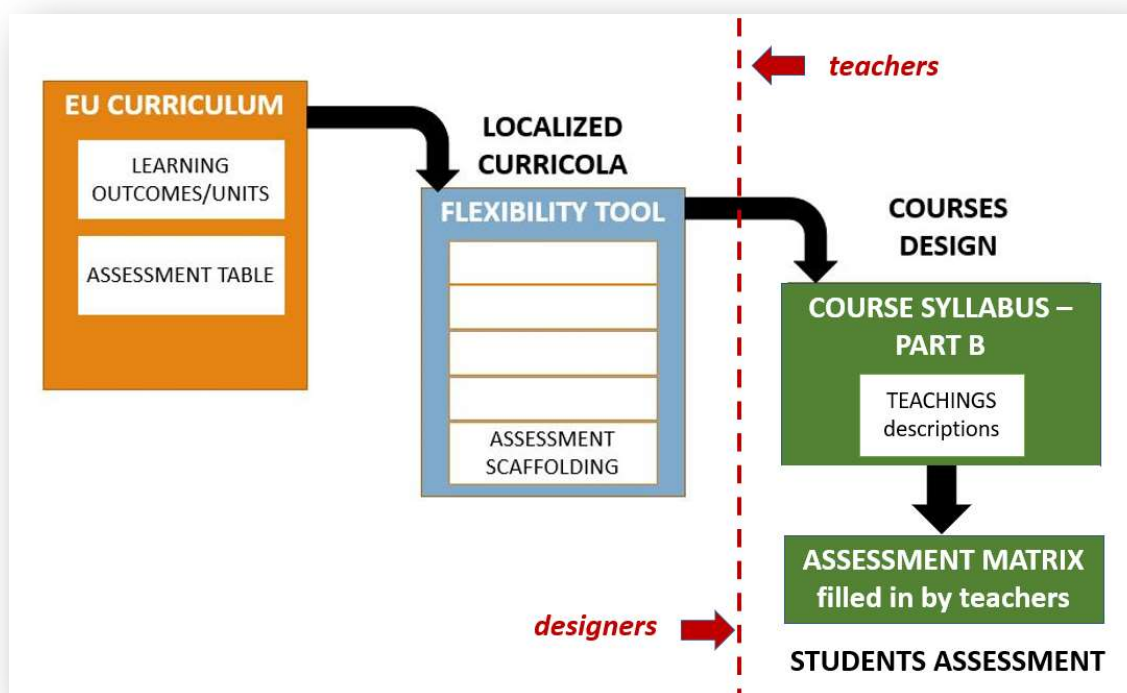
In the following steps of courses' design, TEACHERS are invited to formalize the description of their TEACHINGS in the "COURSE SYLLABUS – PART B". Each teaching description includes a specific section devoted to STUDENTS' ASSESSMENT where teachers are invited to specify the ASSESSMENT TOOLS they are going to adopt. These descriptions must be compliant with the methods selected in the "ASSESSMENT SCAFFOLDING".

Then, during the implementation of pilot courses, TEACHERS are supposed to monitor and report about students' assessment. As detailed in the following section, a specific tool, i.e. the "ASSESSMENT MATRIX", was developed by NECTAR experts in order to support this reporting activity.

The selection of the proper assessment methods and tools

The CGE EU Curriculum details each LO in terms of Knowledge, Skills and Personal and Transversal Competences, as shown in the figure below.

LO6-D-2	
Know the chemical composition of fortified food and correctly perform fortification in meals	
KNOWLEDGE He/she is able to: • Describe and compare different techniques for fortifying food • Recognize how fortified food was prepared • Describe the difference of chemical composition of fortified food and enriched food • Describe the difference of mandatory fortification and voluntary fortification • Describe US and EU Regulation on the addition of vitamins, minerals, and other substances to foods • Identify specific fortification for each food to correctly combine the ingredients • Identify the nutritional need of the added component to fortified food to determine the exact quantity of ingredient	**SKILLS** He/she is able to: • Select the proper technique for fortifying food to perform tasteful and balanced menu and apply them • Evaluate dishes after consistency changes • Apply international rules to the creation of meals
PERSONAL AND TRANSVERSAL COMPETENCES He/she is able to: • Collaborate with kitchen team to ensure the meals are rightly fortified • TAKE RESPONSIBILITY for the fortification in meals • Work as part of a team to prepare fortification in meals • Provide responsible explanations to teams about the necessity of the changes in the meals	
MANDATORY OR OPTIONAL: *mandatory* **LINK TO OTHER LOs:** *Preliminary to: LO6-A-B-1 and LO6-D-3* *Linked to: LO6-A-B-2 LO6-D-1*	

TEACHERS should be aware of this fact and set up the assessment process in a such way that each component of the LO can be assessed.

Each of the 5 main assessment methods identified in the NECTAR tools can be more or less effective depending on the "components" (Knowledge, Skills and Personal and Transversal Competences) they intend to assess.

A number of theories, well-established practices and patterns have been formalized in traditional and recent literature concerning the most suitable learning strategies for specific objectives and the most suitable assessment methods to be put in place to assess the related learning outcomes. Here is a very short list of hints that draw inspiration from them:

✓ The more complex the cognitive tasks are, the more active, situated and contextualized should be the activities performed to learn them; in the same way, assessment methods aimed at demonstrating the mastery of such tasks should be active, situated and contextualized;

✓ Learning Outcomes are defined through 3 main dimensions: Knowledge, Skills and Personal and Transversal Competences; each dimension can characterize the whole LO in different percentages, so sometimes a dimension can be prevalent or not present;

✓ When the "*knowledge*" (theoretical and factual) dimension is prevalent, the most suitable learning strategy is usually a "traditional" lesson or the individual fruition of effective learning materials. Especially in adult learning, when time for learning is particularly precious, the individual fruition of materials (in e-learning for example) is often preferred to other strategies. As to the assessment methods, traditional methods such as written exams or assignments or oral exams are preferred, since they are effective and time-saving;

✓ When the "*skills*" dimension is prevalent, active practice is fundamental and learners should be involved in activities that encourage them to put the addressed skills into practice. Learning strategies such as learning-by-doing, problem-based learning, simulations, drill & practice and so on should be the proper strategy in this case. Especially in CGE context, work-based learning (WBL) is fundamental to develop practical skills. In a similar way, assessment methods should make the student put the targeted skills into practice in order to show whether he/she masters them or not, in accordance with the description of the Learning Outcome itself. The assessment of the activity performed during the WBL is fundamental to assess the skills of a student;

✓ When the "*Personal and Transversal Competences*" dimension is prevalent, learners should be actively involved in situated and contextualized activities, possibly in groups through collaborative or cooperative tasks. The learning strategy should provide a "scaffold" for the learner to play a specific role in an authentic context, possibly involving also informal or non-formal learning processes and fostering the sharing and internalizing of tacit knowledge. In the same way, an assessment method should foster the demonstration of these competences in a situated context;

✓ When a competence is articulated in many dimensions (and this is what often happens), different strategies can be integrated in order to address the different components of the competence.

In the CGE Curriculum, a prevalent component can be identified in some LOs, but LOs are often complex and articulated and involve the 3 dimensions in the same way.

To choose the proper assessment methods and tools, we suggest following these steps:

- **STEP 1**: **analyse the description of the LOs addressed by the teaching** in order to identify possible prevalent components.
- **STEP 2**: **check your choices in the Assessment Scaffolding sheet of the Flexibility Tool.**
- **STEP 3:** choose the proper assessment strategies and tools, **trying to ensure that each component of the LO will be assessed in the proper way.**

Monitor students' assessment and report about it

In order to be able to recognize and validate competences in the framework of the ECVET EU standard, **students' assessment should be "learning-outcome oriented"**: this means that TEACHERS should be able to assess **if a student has achieved EACH LEARNING OUTCOME**.

In complex curricula such as the one for CGE, assessing students "LO by LO" could require a very big effort and this task may not be in line with the needs and rules of the VET provider.

To support and lighten this complex task, NECTAR experts identified **3 main ASSESSMENT APPROACHES. Each approach corresponds to "*a way to manage the assessment of LOs in the assessment tools*"** *(e.g. an automatic test, a written essay, a simulation, etc.).* TEACHERS can define **a different approach for each assessment tool**, from the simplest (approach 1) to the most complex (approach 3).

Here they are in detail:

- **ASSESSMENT APPROACH 1:** the teacher reports if the WHOLE EXAM/TEST has been PASSED or FAILED. If the exam has been PASSED, each LO assessed through that exam/test is considered as PASSED.

- **ASSESSMENT APPROACH 2:** the teacher reports if EACH LEARNING OUTCOME assessed by the tool has been PASSED or FAILED.

- **ASSESSMENT APPROACH 3:** the teacher reports if EACH LEARNING OUTCOME assessed by the tool has been PASSED or FAILED. In the event that a LO has been PASSED, the teacher also has to detail the specific mastery level (e.g. satisfactory, good, excellent).

In order to support TEACHERS in the formalization of these choices and in the monitoring of students' assessment, a specific tool, i.e. an Excel file named "***ASSESSMENT MATRIX***", is provided by the NECTAR PROJECT. The Excel file is a template which should be filled in by the course coordinators in collaboration with teachers. It allows to keep track of the Learning Outcomes achieved by each student.

SHEET 1 – ASSESSMENT APPROACH

This sheet should list all the assessment tools adopted in the course (first column in the figure below). For each tool, the corresponding assessment method must be specified (column 2) as well as the selected assessment approach (column 3).

COURSE NAME:		
COORDINATOR:		
please complete the table: note that green columns have a drop-down menu with fixed values		
blu texts are examples		
ASSESSMENT APPROACH		
ASSESSMENT TOOL name	**ASSESSMENT METHOD**	**Assessment Approach (1/2/3)**
Written test - Module 1	WE	1
Oral exam - Module 1	OE	1
Written test - Module 2	WE	1
Oral exam - Module 2	OE	1
Written test - Module 3	WE	1
Oral exam - Module 3	OE	1
Written test - Module 4	WE	1
Oral exam - Module 4	OE	1
Written test - Module 5	WE	1
Oral exam - Module 5	OE	1
WBL assessment	A-WBL	2

SHEET 2 – STUDENTS LIST

This sheet is a "placeholder" for the list of course students, which will support the assessment monitoring. Then, based on the template created in SHEET 3 – S1, you will have to create **A SHEET FOR EACH STUDENT.**

SHEET 3 – S1

This sheet is a template you must customize based on the tools you decided to adopt. Once you have customized the template, you should create as many sheets as there are students attending your course.

References

This document has been adapted from "Assessment Guide" and "How to DESIGN and FORMALIZE STUDENTS' ASSESSMENT" guides included in ENhANCE Project Designers' Kit https://oot.enhance-fcn.eu/course/view.php?id=26