



## **CompAssess project - Assessment of student competences with emphasis on the development of competences**

Type of project: **Strategic Partnership**

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Work Package 06: **Recommendation for policy makers**

WP Leader: **Mondragon Unibertsitatea (MU)**

### **O6 - New Proposals and Recommendations about Methodologies and Tools for Competence Assessment**



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## 1.2 CompAssess brief description

The intention of this project is to create a European network for international cooperation to share best practices in the field of competence assessment in a competence-based model.

**Competences-based education** turns students into the main character of the learning action and even of a broader process which cares about and highlights their future development as professionals and as individuals, so that the main interest of this model lies on showing students their possibilities on changing and progressing. Therefore, competence-based education should **motivate** them to strive for learning, acquiring knowledge and skills, and gradually shape their character and improve their attitude. In short, competence-based education should make students more autonomous, more committed and more responsible. That is to say, more competent.

In summary, the idea of the CompAssess project is to provide VET learners not only with technical competences, but also with transversal ones. These competences should enable students to manage their careers and play an active role in society. It is assumed that this will positively influence equity, social cohesion and active citizenship.

## 1.3 Transversal competences brief description

Along the project, **Competence** has been defined as the ability to apply learning outcomes adequately in a defined context. The definition encompasses cognitive elements, functional aspects (involving technical skills), interpersonal attributes (social or organizational skills) and ethical values as it is seen in the context of the Framework of Key Competences in 2006 [European Commission 2006].

We assume that technical and transversal competences need to be combined and the implementation of these combined competences in VET centres brings important benefits, but they are accompanied by the difficulties associated with how trainers/teachers assess.

In this project, we have considered 7 transversal competences on the basis of literature review (see Work Package 2) and the best practices (see Work Package 3) identified around the world:

1. Teamwork
2. Sense of Initiative and Entrepreneurship
3. Communication
4. Critical thinking
5. Problem solving
6. Civic and social competence
7. Learning to learn

## 1.4 Transversal competences assessment

In order to facilitate the assessment process, in the CompAssess Open Framework that we have elaborated, each transversal competence is followed with a rubric of 4 levels (beginner, routing, advance and expert) and a set of criteria. These rubrics have been fitted from VALUE (Valid Assessment of Learning in Undergraduate Education) rubrics, developed by the Association of American Colleges & Universities.

During the CompAssess project, the consortium has carried out 39 experiences in the next8 VET centres located in 4 European countries:

1. La Salle Berrozpe Andoain (Basque Country - Spain)
2. Otxarkoaga Centro Formativo (Basque Country - Spain)
3. CIFP Miguel Altuna (Basque Country - Spain)
4. Maristak (Basque Country - Spain)
5. Mondragon Goi Eskola Politeknikoa (Basque Country - Spain)
6. NRC (Ireland)
7. EUC SYD (Denmark)
8. IIS Galileo Galilei (Italy)

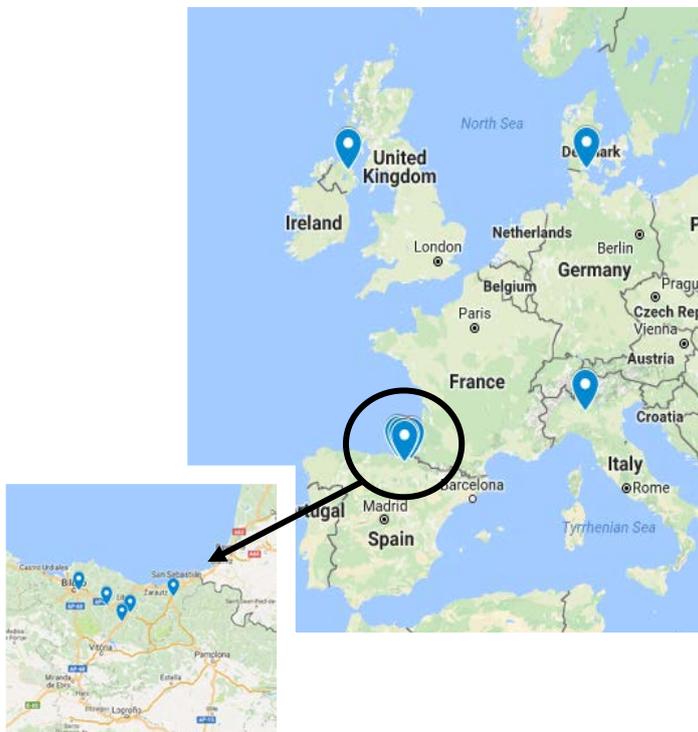


Fig. 1-Location of the 39 experiences carried out

Based on literature review (Work Package 2), identified best practices (Work Package 3) and the 39 experiences carried out (Work Package 4), the consortium has identified limitations that hinder competence assessment implementation in VET education systems. During the meeting in Porto in May 2016, the consortium has identified important conditions that influence how competence assessment implementation can and should be done.

1. Each European country has a **different legal framework** for VET education.
2. There are **different competence frameworks** described by different international institutions, but there are few practical frameworks to assess them.
3. Assessment of learning is a process that should be complemented with the **assessment for learning** concept.
4. Competence assessment is **complex and time consuming**.
5. VET education tends to use practical examples taken from the industry, but there is still some distance to **real working environment**: Companies, Associations of companies, Chambers of Commerce.
6. **Teachers' current role** must be adequate to respond to competence based education.
7. VET education system has **economic limitations** to carry out changes needed to implement new teaching and learning, as well as assessment methodologies.
8. **Students and families: Feedback** is usually one direction informative process and it is done at the end, reducing the opportunity to enrich the learning process.
9. Teachers feel that too **many changes** have been required in the last few years in VET education.

Barriers for Competences based Assessment implementation				
1	2	3	4	5
Different legal framework for VET education	Different Competence Frameworks	Assessment of Learning	Competence Assessment is complex	Need for real working environment
6	7	8	9	10
Teachers' current role	Economic limitations	Students and families	Too many changes	?

## 2. Recommendations

In the following section, we summarize the most relevant proposals to implement Competence Based Education related with the curriculum development and with the change process.

### MOST RELEVANT PROPOSALS

<b>Issue addressed</b>	<b>Different legal framework for VET education</b> <ul style="list-style-type: none"> <li>Each European country has a <b>different legal framework</b> for VET education. In the UK system the government establishes the exam for all VET institutions. In Denmark, the government defines the competences, but institutions can decide how should be assessed. In the Basque Country's educational framework, the competences are defined by the government and institutions decide teaching and learning activities as well as the assessment method. In Italy the government defines the competences, but institutions can decide how should be assessed.</li> </ul>
<b>Title</b>	<b>A. Legal Framework for assessing competences</b>
<b>Good practice</b>	ETHAZI, a project which aims at improving competence based education. This project is being carried out in some VET centres of the Basque Country. (Spain)
<b>Recommendation</b>	<p><b>A1.</b> At European level, the existing guidance and policies on competences based learning and assessment should be endorsed and reinforced in future Erasmus + programme.</p> <p><b>A2.</b> National Governments should adequate the legal framework for VET in order to introduce the concept of Competences based Learning and Assessment</p> <p><b>A3.</b> Curricula for different VET programmes should be based on this concept of competences based learning and assessment and provide guidelines for their future development at the VET centres.</p> <p><b>A4.</b> At regional Level, regional academic authorities should develop strategies to allow for initiatives linked to the introduction of new methodologies and development of innovative experiences.</p> <p><b>A5.</b> VET institutions must have freedom and flexibility to adapt the frameworks to the characteristic of their environments.</p>

Issue addressed	<b>Different Competence Frameworks</b> <ul style="list-style-type: none"> <li>• There is a European Framework of key competences, but there are few practical frameworks to assess transversal competences.</li> </ul>
Title	<b>B. Practical Assessment framework</b>
Good practice	CompAssess Open Framework
Recommendation	<b>B1.</b> Open assessment frameworks, like <b>CompAssess Open Framework</b> , should be used as a basis for competence assessment methods implementation. This framework should be understood as open frameworks. It should not be anchored to any task, subject or programme.
	<b>B2.</b> Each institution should adapt the criteria, parameters and performance indicators present in the rubrics of the Framework to the purposes and language of each specific context. <ul style="list-style-type: none"> <li>• Nevertheless, this comprehensive repository is well suited as the starting point for VET staff who intends to adopt the transversal competence assessment at any level. New competences can be added, or some removed.</li> </ul>
	<b>B3.</b> Research and experiment on the knowledge about the learning practices (dimensions and types) as a solid basis which eases the assessment process.

Issue addressed	<b>Assessment of Learning</b> <ul style="list-style-type: none"> <li>• The challenge is to make assessment a process meant to assess for learning, not just a process to evaluate learning.</li> </ul>
Title	<b>C. Assessment for learning</b>
Good practice	Experiences and good practices detected in the project.
Recommendation	<b>C1.</b> In the new curricula, to add the concept of Assessment for Learning to the traditional one of Assessment of Learning.
	<b>C2.</b> Students should receive feedback and formative assessment not only at the end of the process but during the learning activities.
	<b>C3.</b> The selected system depends on the VET`s socio-cultural and economical context and its stakeholders, so the institutions must have freedom or flexibility to adapt the assessment and delivery methods to their own circumstances.

<b>Issue addressed</b>	<b>Complexity</b> <ul style="list-style-type: none"> <li>One challenge is to make assessment a natural part of the learning process. When it is regarded as something different than the regular teaching, it becomes complex and time consuming.</li> </ul>
<b>Title</b>	<b>D. Assessment as a natural part of the learning process</b>
<b>Good practice</b>	The SET tool: A type of software hosted in a server, plus an app that runs on Android smart phones. The app facilitates taking evidences. The staff can take notes anytime and everywhere by observations or other assessment methods. Students can also peer-assess other students, reducing teacher's assessment time and involving students actively. Finally, the assessment result is easy to understand by both (teacher and students) using graphs like spider-web.
<b>Recommendation</b>	<b>D1.</b> Open Frameworks should be clear, focusing on a limited set of competences. Rubrics must be easy understandable, and symbols and expressions to be used in the process familiar to all users.
	<b>D2.</b> The protocol of process of assessing competences should be well established and be known by teachers, students, families and companies.
	<b>D3.</b> Use ICT tools to facilitate the assessment process helping to collect evidences and information and analyse results.
	<b>D4.</b> On line repositories of previous experiences, proposals of tools, practices, exercises should be available at every institution in order to support new comers to these innovative experiences.

<b>Issue addressed</b>	<b>Need for real working environment</b> <ul style="list-style-type: none"> <li>VET education tends to use practical examples taken from the real world. There are different systems and methods to relate theory with practice.</li> </ul>
<b>Title</b>	<b>E. Active learning</b>
<b>Good practice</b>	Dual system (used in Germany, Basque Country, France, USA ...)
<b>Recommendation</b>	<b>E1.</b> To implement Dual systems to integrate business and working life with theory.
	<b>E2.</b> Integrate active collaborative learning methods like Problem & Project Based Learning (PBL), Cased Based Learning (CBL), Simulations etc. or use methods like Service Based Learning (SBL) where some real activities can be used to give service to external clients: Cooking, ICT service, nurse...
	<b>E3.</b> Monitors at the companies should be allowed to take part in this assessment processes.

<p><b>Issue addressed</b></p>	<p><b>Teachers' current role</b></p> <ul style="list-style-type: none"> <li>• View education as a process in which knowledge is transmitted to younger generations, so it can later on be transferred and applied into work processes.</li> <li>• Usually, teacher tends to focus on covering <b>content</b> and checking that students have core skills. Students, identify these as the most important thing. This is why teacher need to explicit his/her intention and languages used in the assessment clear to the students.</li> <li>• Those assumptions are not usually shared among the teachers and they have an impact during the students learning process. Savin-Baden proposes that we need to <b>examine those assumptions</b>, theories and practices [Savin-Baden, 2003]. This would help us to understand and align learning and assessment.</li> </ul>
<p><b>Title</b></p>	<p><b>F. Teachers' new role</b></p> <ul style="list-style-type: none"> <li>• The teacher as a learning facilitator “tends to direct their students towards passing the module and encouraging them to be strategic” “Rather than asking them to explore their own learning and position towards the knowledge on offer.” [Savin-Baden, 2003]. <ul style="list-style-type: none"> <li>○ The <b>role now is</b>: To prepare students to develop the <b>capacity of generating knowledge</b> that works in particular situations that will be met in a constantly changing labour market.</li> <li>○ The <b>role now is</b>: To facilitate the <b>continuing development</b> of workers' competences.</li> </ul> </li> </ul>
<p><b>Recommendation</b></p>	<p><b>F1.</b> To favour the commitment of teachers with the implementation of innovative methodologies by means of support on training, on incentives and recognition.</p> <p><b>F2.</b> To enable teachers stability when taken part in these type of initiatives, since permanent changes in staff affect negatively the implementation of new methodologies and means a lost in effort and investment.</p> <p><b>F3.</b> To promote the introduction of these new methodologies through networks on VET centres, in order to favour synergies among centres, as well as the dissemination of good practices.</p> <p><b>F4.</b> Foster the development of new learning scenarios for learning, which reinforce the need for changing teachers' and students' new roles.</p>

Issue addressed	<b>Economic limitations</b>
Title	<b>G. Use of ICTs</b>
Recommendation	<b>G1.</b> Promote the implementation of the Smart VET concept which means to relay as much as possible on the potentialities of ICT to turn VET education into a modern, efficient and sustainable type of learning.
	<b>G2.</b> Select VET teachers with good competences on ICT and favour the updating with training on new ICTs.
	<b>G3.</b> Bet on open software and low cost licences.

Issue addressed	<b>Students and families</b> <ul style="list-style-type: none"> <li>• If we wish students able to solve unseen problems, reflect and improve, we need to trust our students, <b>take care of our power</b> and don't push them to use surface learning approach but ask them to develop a personal view and theoretical background in front of the problems. If we mistrust students, we tend to over-assess and in consequence we push them to surface learning.</li> </ul>
Title	<b>H. Students' new role</b>
Recommendation	<b>H1.</b> Introduce families and students to this new concept of Competences based Learning and Assessment. Explain the reason for that and the differences with traditional teaching, making them aware of potential risks.
	<b>H2.</b> As in this model students will be at the centre of the process, they should know what is expected from them, and how their role changes completely within this model.
	<b>H3.</b> Introduce the concept of self-assessment (and peer-assessment) as an interesting point to be considered to encourage students to manage their own learning and to move away from <b>authoritarian</b> approaches to assessment. Authoritarian teacher can generate intellectual and vocational conformity among students [Heron 1988].

We need to consider that we live in a continuous CHANGE or adaptation process.

Vision +	Consensus +	Skills +	Incentives +	Resources+	Action Plan+	<b>Change</b>
	Consensus +	Skills +	Incentives +	Resources+	Action Plan+	<b>Confusion</b>
Vision +		Skills +	Incentives +	Resources+	Action Plan+	<b>Sabotage</b>
Vision +	Consensus +		Incentives +	Resources+	Action Plan+	<b>Anxiety</b>
Vision +	Consensus +	Skills +		Resources+	Action Plan+	<b>Resistance</b>
Vision +	Consensus +	Skills +	Incentives +		Action Plan+	<b>Frustration</b>
Vision +	Consensus +	Skills +	Incentives +	Resources+		<b>Treadmill</b>

Fig.2- Factors in managing complex change [Thousand and Villa, 1995]

<b>Issue addressed</b>	<p><b>Too many changes</b></p> <ul style="list-style-type: none"> <li>The sense of being introducing changes continuously is something that teachers are worried about. They feel that they are asked once and again for new competences, which demands a lot of training and effort on their side. Changes should better planed in order to avoid the feeling of chaos.</li> </ul>
<b>Title</b>	<b>I. Change process: Awareness campaigns and training</b>
<b>Recommendation</b>	<p><b>I1.</b> There must be awareness campaigns: Spread the concept in conferences, magazines, etc.</p> <p><b>I2.</b> There must be a staff training and development programme. Which would help to match staff's teaching skills with the Competence Based Training paradigm.</p> <p><b>I3.</b> Share the vision of the VET centre and search for consensus with staff member, which will help to reduce the confusion and sabotage among them. Thousand and Villa [1995]</p> <p><b>I4.</b> Incentives can also help in the sense that it can decrease the resistance. All the resources allocated to the process and an action plan helps to avoid frustration and treadmill situations.</p> <p><b>I5.</b> To encourage the initial effort of teachers at the beginning of the implementation.</p>

### 3. Summary

In the next table we summarize the list of recommendations:

A. Legal Framework for assessing competences	B. Practical Assessment framework	C. Assessment for learning	D. Assessment as a natural part of the learning process	E. Active learning
<p>A1. At European level, the existing <b>guidance and policies</b> on competences based learning and assessment should be endorsed and reinforced in future Erasmus + programme.</p> <p>A2. National Governments should adequate the <b>legal framework</b> for VET in order to introduce the concept of Competences based Learning and Assessment.</p> <p>A3. <b>Curricula</b> for different VET programmes should be based on this concept of competences based learning and assessment and provide guidelines for their future development at the VET centres.</p> <p>A4. At regional Level, regional academic authorities should develop strategies to allow for <b>initiatives</b> linked to the introduction of new methodologies and development of innovative experiences.</p> <p>A5. VET institutions must have freedom and <b>flexibility</b> to adapt the frameworks to the characteristic of their environments.</p>	<p>B1. Open assessment frameworks, like <b>CompAssess Open Framework</b>, should be used as a basis for competence assessment methods implementation. This framework should be understood as open frameworks. It should not be anchored to any task, subject or programme.</p> <p>B2. Each institution should <b>adapt</b> the criteria, parameters and performance indicators present in the rubrics of the Framework to the purposes and language of each specific context.</p> <p>B3. Research and experiment on the knowledge about the <b>learning practices</b> (dimensions and types) as a solid basis which eases the assessment process.</p>	<p>C1. In the new curricula, to add the concept of <b>Assessment for Learning</b> to the traditional one of Assessment of Learning.</p> <p>C2. Students should receive <b>feedback</b> and formative assessment not only at the end of the process but during the learning activities.</p> <p>C3. The selected system depends on the VET's socio-cultural and economical context and its stakeholders, so the institutions must have freedom or <b>flexibility</b> to adapt the assessment to their own circumstances.</p>	<p>D1. Open Frameworks should be clear, focusing on a limited set of competences. Rubrics must be easy understandable, and symbols and expressions to be used in the process familiar to all users.</p> <p>D2. The protocol or <b>process of assessing</b> competences should be well established and be known by teachers, students, families and companies.</p> <p>D3. Use <b>ICT tools</b> to facilitate the assessment process helping to collect evidences and information and analyse results.</p> <p>D4. <b>On line repositories</b> of previous experiences, proposals of tools, practices, exercises should be available at every institution in order to support new comers to these innovative experiences.</p>	<p>E1. To implement <b>Dual system</b> to integrate business and working life with theory.</p> <p>E2. Integrate <b>active collaborative learning methods</b> like Problem and Project Based Learning (PBL), Cased Based Learning (CBL), Simulations etc. or use methods like Service Based Learning (SBL) where some real activities can be used to give service to external clients: Cooking, ICT service, nurse...</p> <p>E3. <b>Monitors</b> at the companies should be allowed to take part in this assessment processes.</p>

Teachers' new role	Use of ICTs	Students' new role	Change process: Awareness campaigns and training	
<p>F1. To favour the commitment of teachers with the implementation of innovative methodologies by means of support on <b>training</b>, on <b>incentives</b> and <b>recognition</b>.</p> <p>F2. To enable <b>teachers stability</b> when taken part in these type of initiatives, since permanent changes in staff affect negatively the implementation of new methodologies and means a lost in effort and investment.</p> <p>F3. To promote the introduction of these new methodologies through <b>networks</b> on VET centres, in order to favour synergies among centres, as well as the dissemination of good practices.</p> <p>F4. Foster the development of <b>new learning scenarios</b> for learning, which reinforce the need for changing teachers' and students' new roles</p>	<p>G1. Promote the implementation of the <b>Smart VET</b> concept which means to relay as much as possible on the potentialities of ICT to turn VET education into a modern, efficient and sustainable type of learning.</p> <p>G2. Select VET teachers with good <b>competences on ICT</b> and favour the updating with training on new ICTs.</p> <p>G3. Bet on <b>open software</b> and low cost licences.</p>	<p>H1. Introduce families and students to this new concept of Competences based Learning and Assessment. Explain the reason for that and the differences with traditional teaching, making them aware of potential risks.</p> <p>H2. As in this model students will be at the centre of the process, they should know what is expected from them, and how their <b>role</b> changes completely within this model.</p> <p>H3. Introduce the concept of <b>self-assessment</b> (and peer assessment) as an interesting point to be considered to encourage students to manage their own learning and to move away from authoritarian approaches to assessment. Authoritarian teacher can generate intellectual and vocational conformity among students.</p>	<p>I1. There must be <b>awareness campaigns</b>: Spread the concept in conferences, magazines, etc.</p> <p>I2. There must be a staff training and development programme. Which would help to match staff's teaching skills with the Competence Based Training paradigm.</p> <p>I3. Share the <b>vision</b> of the VET centre and search for consensus with staff member, which will help to reduce the confusion and sabotage among them.</p> <p>I4. Incentives can also help in the sense that it can decrease the resistance. All the <b>resources</b> allocated to the process and an action plan helps to avoid frustration and treadmill situations.</p> <p>I5. To encourage the <b>initial effort</b> of teachers at the beginning of the implementation.</p>	

Table 1- Summary of the recommendations

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