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### **SOCCES – Certified modular assessment (Eurocompass)**

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## INTRODUCTION

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The development of entrepreneurship has increasingly become a key policy objective to renew the economic growth and employment all over the world. Policy makers are aware that entrepreneurial skills, knowledge and attitudes can be nurtured through entrepreneurship education and are trying to support the development of dedicated educational and training programs.

In Europe, the importance of entrepreneurship education was first acknowledged in 2003, with the *Green Paper on Entrepreneurship in Europe* (European Commission, 2003). With the European framework for key competences (European Parliament and Council, 2006), the 'sense of initiative and entrepreneurship' was identified as one of the eight key competences for lifelong learning necessary for all members of a knowledge-based society. In 2006, the European Commission, jointly with the Norwegian government, organized a Conference on 'Entrepreneurial education in Europe: Fostering entrepreneurial mindsets through education and learning', which promoted the *Oslo Agenda for Entrepreneurship Education* (European Commission, 2006) as a step up to progress in promoting entrepreneurial mindset in society. Since then, a set of documents have been issued to keep the need to promote entrepreneurship education under the spotlight, such as the *Small Business Act for Europe* (European Commission, 2008), the *Communication on Rethinking Education* (European Commission, 2012), the *Entrepreneurship Action Plan 2020* (European Commission, 2012), and the *New Skills Agenda for Europe* (European Commission, 2016).

Today, the entrepreneurial learning community of practice most often refers to sense of initiative and entrepreneurship as 'entrepreneurship competence' (Bacigalupo, Kampylis, Punie, & Van den Brande, 2016: 7). This competence can be defined as the capacity to recognize or create opportunities that produce value and to turn these ideas into action. However, even if entrepreneurship as a key competence has been recognized as critically important for people's personal fulfillment and development, active citizenship, social inclusion, and employment, the progress of educational methods and tools in this area is still lagging behind (EACEA/Eurydice, 2012; International Bureau of Education, 2016). In particular, given the increased attention to this topic, an emerging problematic issue is nowadays related to how to assess entrepreneurial competences. To date, some assessment tools exist to measure other competences, such as the Common European Reference Framework (CEFR) to assess students' ability in foreign languages, developed by the Council of Europe in 2001; or the 'European Computer Driving Licence' to assess competences in the use of information technologies (IT). Contrarily, the assessment of entrepreneurial transferable competences is not well established (EACEA/Eurydice, 2012). Setting up a standardized assessment system of entrepreneurial competences is important for two sets of reasons. First, standardized assessment plays a role in evaluating students' knowledge, matching achievement states with grades and offering a certification of the acquired/possessed competences. Second, standardized assessment can play a role in evaluating schools and to monitor education systems as a whole (Bacigalupo et al., 2016).

Testing transferable competences, such as entrepreneurship ones, is challenging because of their embeddedness into multiple domains of competence. Therefore, whereas standardized tests to

assess transversal entrepreneurship competences are desirable, they have to incorporate multiple assessment methods developed in a coherent assessment framework.

The project SOCCES – SOCIal Competences, Entrepreneurship and Sense of initiative – addresses the issue of assessing entrepreneurship and sense of initiative competences, through the development of a proposal for a commonly recognized modular European assessment and certification system related to entrepreneurial competences. The goal of the project is therefore to develop a proposal for a standardised modular competence assessment concept to be implemented as a ‘European Driving Licence’ or ‘EuroComPass’ for Entrepreneurship. The proposal of such a certified assessment system developed by SOCCES will be presented in this report, highlighting (a) the assessment framework for relevant entrepreneurial competences to be tested; (b) the concept for using the methodology as a European standardized assessment test; and (c) policy recommendations.

The proposed EuroComPass has been developed through a multi-step method including (1) the development of an assessment framework for entrepreneurial competences, involving a baseline analysis of competences and tools, pilot testing and refinement of tools; (2) discussion with experts and further refinement of the assessment tools aimed at proposing a modular standardized assessment tools to be used in a one-time, dedicated assessment session taken by entitled certification bodies.

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## **ASSESSING ENTREPRENEURSHIP COMPETENCES**

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Assessment in education is defined as a process of gathering evidence, making judgments, and drawing inferences about student’s knowledge, achievements, and performances (Curtis, 2010; Pellegrino, Chudowsky, & Glaser, 2011).

Because scholars have to date acknowledged that the “the aim of assessment is primarily to educate and improve student performance, not merely to audit it” (Wiggins, 1998, p. 7), assessment not only plays a role of certification of a learning program, but it is part of the process of knowledge building (Segers, Dochy, & Cascallar, 2003). In this perspective, assessment should provide feedback on where students are and how they could be supported to progress further, in order to promote meaningful learning.

Three main theoretical perspectives have provided models for assessment (Terzieva, Luppi, & Traina, 2015). First, the behaviorist school of test and measurement of outcomes, focused on assessing measurable facts, behaviors, performances, events through quantitative, valid and reliable variables. Second, the cognitive approach, focused on processes lying beyond learning, reflexivity, metacognition and learning strategies. Third, the constructivist view, focused on autonomy in learning, self-assessment, and experiential learning. All these theoretical approaches present both strengths and weaknesses in the assessment of students’ transferable competences, as highlighted in Table 1. Therefore, it can be suggested that an adequate assessment should include mixed models of assessment, i.e., elements from classical measurement, cognitive, and constructivist theoretical approaches to education.

**Table 1 – Strengths and weaknesses of different theoretical approaches to assessment**

Theoretical approach	Strengths	Weaknesses
Behaviorism	Evidence based approach	More focus on learning outcomes rather than learning processes
	Assessment based on indicators	Risk to inhibit motivation
Cognitivism	Emphasis on self-regulation	Generalizability of results
	Synergy with learning processes	Lack of standardisation
Constructionism	Commitment	Generalizability of results
	Focus on learner	Lack of standardisation

Adopting this view, the main role of assessment should be that of providing feedback to learners, emphasising metacognition, self-assessment and the transferability of knowledge and competences acquired within other settings (Packer & Goicoechea, 2000). Assessment tools should therefore be authentic and contextualized (i.e., using skills in context), adopting multiple measures, having high levels of comprehension, assessing many dimensions of intelligence, offer an assessment integrated with the learning process, and being student-centered (Segers et al., 2003).

The assessment of transferable competences is particularly challenging since these competences are not easily definable, neither completely separated from competences related to contents. The assessment of transferable competences should therefore be concerned on three key issues (Gibb, 2014). First, the contexts (inputs), i.e., transferable competences should be clearly specified in order to define “good performances” and to contextualise it into the educational or organisational goals, characterising the broader learning environment. Second, the content of transferable skills assessment, which is related to quality and asks for fair methods and tools for evaluating such competences, using observations, data and inferences and quality information. Third, the consequences (outcomes) of transferable skill assessment, which should consist in making learners aware of their behaviour, reflect on their own experiences, self-motivate and going on in a path of formative assessment for receiving constant feed-back for self-improvement. At the same time soft skills assessment outcomes have a formative impact on the further teaching and training activities (Gibb, 2014, p. 466).

In line with these considerations, assessment of transferable competences should serve diagnostic, formative, summative, and certification purposes. To this extent, Ketchagias (2011, p. 121-122) has summarized the following key principles of such an assessment:

- reflect the development of transversal competences goals and clearly specify the expected soft skills, and their development, from novice to expert;
- include adaptability to different circumstances where such competences are actually used and adopted, even taking into account unexpected situations;
- be based on performance, to give evidence to the ability to apply knowledge to critical

thinking, problem solving and analytical tasks, which are key aspects connected with soft skills expertise;

- be formative for teaching and learning processes, offering directions, suggestions and feedback for improving soft competences;
- provide information and improving knowledge on student's cognitive and metacognitive learning strategies;
- assess fairly all learners, even adopting adjustment when necessary, in order to reduce the impact of difficulties and come to an authentically equal evaluation;
- be accurate and reliable, according to assessment purposes, and clearly specify its technical and statistical qualities or limits in order to give the possibility to the evaluator and the evaluated to assess the impact or generalisation of results;
- provide information that can act as feedback not only for learners, teachers but also for policy makers and for a wider public to be sensitised to the importance of soft competences;
- contribute in improving competences and strategies for promoting such competences for educators, teachers, trainers;
- be integrated in a wider assessment system that can authentically improve lifelong learning.

The assessment of entrepreneurship competences should therefore use models of competence development based on cognitive research, but transforming psychometrics to deal with new kinds of assessment and making students' thinking visible; account for new modes of communications (e.g., ICT); include collaboration and teamwork (i.e., integrate individual performance evaluation by assessing collaborative tasks); include local and global citizenship; interpreting assisted performance (i.e., ensuring accessibility and customization of items for students with special needs); ensuring validity; and consider cost and feasibility (Ketchagias, 2011, p. 129-130).

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## METHOD

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This EuroComPass proposal was developed through the following multi-step methodology:

- 1) Development of an assessment framework for entrepreneurial competences (see SOCCES project Report "Evaluating entrepreneurial transversal competences: An assessment framework"), based on:
  - a) a baseline analysis of the current educational environments and practices at SOCCES partners' institutions, their perceived main development needs regarding the assessment framework and the defined competences (see SOCCES project Reports "Current practices in defining and understanding transferable skills" and "Current practices in transversal competences assessment");
  - b) a review of programs, policy documents, and literature on the approaches and methods in teaching entrepreneurial transversal competences, assessment methods and tools at the European level (see SOCCES project Report "Currently known related assessment frameworks for transferrable competences");

- c) development of a draft assessment framework and methodology and pilot testing of the framework through two virtually enabled, real-life business cases to assess the defined transversal competences;
  - d) analysis of data from the pilot testing of the assessment tools and refinement of tools.
- 2) Development of a refined version of the assessment framework and tools representing a proposal for a standardized modular assessment 'EuroComPass' to certify entrepreneurial competences.

This EuroComPass proposal aims to assessing specific entrepreneurial competences which can be assessed at the individual-level, without having the student operating in a group or a team, falling into four macro-areas of competences, namely: positive attitude and initiative; communication and interaction; critical and analytical thinking; creativity and innovation. The competences are evaluated according to three levels of mastery or expertise: low, medium, and high (for further details, see SOCCES project Report "Evaluating entrepreneurial transversal competences: An assessment framework").

This EuroComPass proposal is characterized by an approach to assessment:

- referred to a multi-phased one-time assessment session, composed by a sequence of assessment tools to be administered to the person to be assessed;
- based on a reflexive circle, including self-assessment, assessment from evaluators, and multiple assessment;
- serving diagnostic, formative, summative, and certification purposes.

For each competence one or more assessment tools are proposed, with the aim of presenting a mixed-method assessment framework and obtaining multiple assessment measures. An overview about the assessment framework, comprehensive of a list of competences and assessment tools, is found in Appendix A.

The assessment tools proposed to measure the selected entrepreneurship competences are shown in Appendix B.

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## AREA OF COMPETENCE: POSITIVE ATTITUDE AND INITIATIVE

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Positive attitude and initiative have been highlighted in different forms as key to an entrepreneurial mindset, endowing people with capacities in reflecting on needs, aspirations, personal strengths and weaknesses, believing in their abilities to influence the course of events, despite uncertainty, and overcome setbacks and failures (Bacigalupo et al., 2016).

### **Phase 1: Self Assessment**

#### **Definition**

The competence of self-assessment is related to the ability of reflecting on needs, aspirations, and wants in the short, medium, and long run, to identify and elaborate on ones' strengths and weaknesses (Bacigalupo et al., 2016).

This competence can be assessed according to the following three students' mastery levels:

<b>Low level</b>	<b>Medium level</b>	<b>High level</b>
Does not recognise his/her own strengths and weaknesses	Recognises a few of his/her own strength and weaknesses but cannot find improvement strategies	Is aware of his/her own strengths and weaknesses and can find improvement strategies.

#### **Proposed assessment tool**

It is proposed to open the EuroComPass assessment test through measuring the competence of self-assessment through an adapted version of the empowerment scale elaborated by Rogers, Chamberlin, Ellison, and Crean (1997). The scale presents the following 22 items measured on a 4-points Likert scale (ranging from 1 - strongly agree, to 4 - strongly disagree):

1. I can pretty much determine what will happen in my life.
2. People are only limited by what they think is possible.
3. Getting angry about something never helps.
4. I have a positive attitude toward myself.
5. I am usually confident about the decisions I make.
6. People have no right to get angry just because they don't like something.
7. Most of the misfortunes in my life were due to bad luck.
8. I see myself as a capable person.
9. Making waves never gets you anywhere.
10. I am often able to overcome barriers.
11. I am generally optimistic about the future.
12. When I make plans, I am almost certain to make them work.
13. Getting angry about something is often the first step toward changing it.
14. Usually I feel alone.
15. Experts are in the best position to decide what people should do or learn.
16. I am able to do things as well as most other people.
17. I generally accomplish what I set out to do.
18. You can't fight bureaucracy.



- 19. I feel powerless most of the time.
- 20. When I am unsure about something, I usually go along with the rest of the group.
- 21. I feel I am a person of worth, at least on an equal basis with others.
- 22. I feel I have a number of good qualities.

A suggested version of the instrument to be administered can be found in Appendix B.

The items are set to account for the following factors:

- Self-esteem and self-efficacy (items n. 4, 5, 8, 10, 12, 16, 17, 21, 22)
- Power-powerless (items n. 6, 7, 14, 15, 18, 19, 20)
- Optimism and control over the future (items n. 1, 2, 11)
- Righteous anger (items n. 3, 9, 13)

The assessment score is obtained by summing and averaging the raw scores on all items. Scores in the range 2.51-4.00 are considered low level of competence; scores in the range 1.51-2.50 as medium level; and scores in the range 1.00-1.50 as high level.

## **Phase 2: Growth Mindset**

### **Definition**

People have implicit theories of intelligence, which can be “entity theories”, which view intelligence as fixed, or “incremental theories”, which view intelligence as malleable (Dweck, 1999). People having an incremental implicit theory of intelligence have a “growth mindset” and believe that intelligence can be learned and that the brain can grow from exercise and practice. This determines the goals they pursue, their responses to difficulty, and their task performance (Dweck, 2006).

This competence can be assessed according to the following three students’ mastery levels:

<b>Low level</b>	<b>Medium level</b>	<b>High level</b>
Believes that intelligence is static; does not apply for improvement; avoids effort, criticism and challenges and feels threatened by the success of others.	Considers intelligence both static and dynamic; sometimes applies for improvement; can afford a few effort and moderate challenges; does not care about criticism and the success of others.	Believes that intelligence is dynamic; applies for improvement; sees effort as a path to mastery; embraces challenges, learns from criticism; feels inspired by the success of others.

### **Proposed assessment tools**

After the student has filled in the Self-assessment questionnaire (Phase 1), we propose the student to engage in a “storytelling interview”. Starting from the results on the self-assessment in Phase 1, students are requested to give evidence of how they deal with each dimension of the overall construct (i.e., self-esteem/self-efficacy, powerless, optimism, righteous anger) in their life, providing examples (e.g., about studies, work experience, private life).

The evaluator of the “storytelling interview” grades the answers by looking at the marks in the empowerment scale in light of the brief Mindset test scale (Dweck, 2006). The evaluator listens to the narrative and asks questions to assess student’s beliefs about transversal competences, attitudes and implicit theories of intelligence.

The brief Mindset scale (Dweck, 2006) measures on a 10-points scale the extent to which the respondent:

1. Avoids challenges vs. embraces challenges
2. Gives up easily when faced with obstacles vs. persists in the face of setbacks
3. Sees effort as fruitless or worse vs. sees effort as the path to mastery
4. Ignores criticism or useful negative feedback vs. learns from criticism
5. Feels threatened by success of others vs. finds lessons and inspiration in the success of others
6. Considers intelligence/competences as static vs. incremental

A suggested version of the tool can be found in Appendix B.

The assessment score is obtained by summing and averaging the raw scores on all items. Scores in the range 1.00-6.50 are considered low level of competence in using a growth mindset; scores in the range 6.51-8.50 as medium level; and scores in the range 8.50-10.00 as high level.

### ***Phase 3: Perseverance and Coping strategy***

#### ***Definitions***

The competence of perseverance refers to the ability to sustain goal-directed action and energy when confronting difficulties and obstacles impede goal achievement (Morris, Webb, Fu, & Singhal, 2013).

This competence can be assessed against the following three students’ mastery levels:

<b>Low level</b>	<b>Medium level</b>	<b>High level</b>
Abandons an assignment when tired or under distraction; abandons a task when experiencing failure; does not work with clear goals.	Risks to abandon an assignment when tired or under distraction; risks to abandon a task when experiencing failure; does not always work with clear goals	Finishes an assignment even if tired of; keeps on working in a concentrated way even if there is a distraction; continues with the task even after a setback or failure; works with clear goals

Coping refers to the activation of specific behaviors aimed at solving problems and stressful situations. A coping strategy is an action (both behavioral and cognitive) that a person is able to perform to deal with a stressful or difficult situation (Horney, 1939).

This competence can be assessed according to the following three students’ mastery levels:

Low level	Medium level	High level
Cannot find ways to cope with difficult situations; does not see growth possibilities when dealing with difficult situations; cannot control reactions; cannot ask for help.	Cannot always find ways to cope with difficult situations; does not always see growth possibilities when dealing with difficult situations; can control reactions only in some cases; can ask for help only under certain conditions.	Looks for creative ways to alter difficult situations; believes that positive growth is possible when dealing with difficult situations; can control reactions; asks for help when needed.

### ***Proposed assessment tools***

In this phase it is proposed to have the student self-assessing their competence of perseverance and coping strategies through two validated scales. First, the perseverance scale developed by Kyndt and Baert (2015) as part of their entrepreneurial competences scale. The perseverance scale is measured as a 7-items Likert scale ranging from 1 to 6 (with 1=Never, and 6=Always):

1. If I start an assignment, I finish it, even if I am tired of it
2. Even if there is distraction, I keep on working in a concentrated way
3. I place high demands on myself when I am working
4. Even after a setback or failure I continue with the task at hand
5. I work with clear goals
6. Only important reasons can make me change my plans
7. Even if the assignment is difficult, I start working on it immediately

The assessment score is obtained by summing and averaging the raw scores on all items. Scores in the range 1.00-3.50 are considered low level of perseverance; scores in the range 3.51-5.00 as medium level; and scores in the range 5.01-6.00 as high level.

The assessment of coping strategy is carried out through the self-assessment of the planning for future scale developed by Kyndt and Baert (2015). This is a 4-item scale measured on 6-points Likert scale (ranging from 1 – Never, to 6 – Always), regarding the following items:

1. If a situation changes, I adjust my plans
2. If I notice that I do not obtain the necessary results, I adjust my plans immediately
3. I adjust my planned approach when new opportunities arise
4. If my plan goes differently than expected, I make a new plan

The assessment score is obtained by summing and averaging the raw scores on all items for each scale. Scores in the range 1.00-3.75 are considered low level of competence in using coping strategies; scores in the range 3.76-5.25 as medium level; and scores in the range 5.26-6.00 as high level.

A suggested version of the tool to measure these two competences can be found in Appendix B.

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## AREA OF COMPETENCE: COMMUNICATION AND INTERACTION

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Competences in communication refer to the capacity to convey effective messages to external audiences, either orally or in written form. As shown by literature, competences in communication are key to successful entrepreneurs and managers (Florés, 2006; Hood & Young, 1993) (e.g., Hood & Young, 1993) because an effective communication is the base for persuasion, negotiation, and leadership (Bacigalupo et al., 2016).

### ***Phase 4: General communication and Presentation***

#### ***Definitions***

“Communication is a process by which information is exchanged between individuals through a common system of symbols, signs, or behavior” (Webster, 1983, p. 266). We define the competence in general communication as that of being able to transmitting and receiving messages clearly, in such a way to engage the audience and helping them to retain the message (Harvard University, 2014).

This competence can be assessed according to the following three students’ mastery levels:

Low level	Medium level	High level
Is not aware about the components of communication (verbal, non verbal and paravaerbal); does not listen and does not understand messages someone is sending; cannot send clear and concise messages to others.	Is partially aware about the components of communication (verbal, non verbal and paravaerbal); partially listens and understands messages someone is sending; can send clear and concise messages to others only if a few conditions are satisfied.	Is aware about the components of communication (verbal, non verbal and paravaerbal); listens and correctly understand messages someone is sending; always sends clear, concise messages to others.

The competence of presentation can be defined as preparing and delivering ideas effectively to individuals or groups, demonstrating of being cognizant of audience response and able to adapt content and style accordingly to characteristics and needs of the audience, exhibiting mastery of materials, comfortable delivery style and handling of enquiries (Harvard University, 2014).

This competence can be assessed according to the following three students’ mastery levels:

Low level	Medium level	High level
Structure lacks coherence. Speaker unfamiliar with topic. Transitional elements largely missing.	Evidence of a standard three part structure and some use of transitional elements. Maintains contact with the audience. Level is appropriate, but the listener is not totally convinced that the presenter knows his/her topic well.	Is thoroughly familiar with the topic and can respond confidently and spontaneously to complex questions. Presentation is well structured, uses transitional elements, and follows the conventions of the field. Good eye contact, no reading from his/her paper. Level appropriate for intended audience.

### ***Proposed assessment tools***

In this phase we propose to measure the competences of communication and presentation through a speech that the student has to prepare and deliver about the “importance of perseverance and coping strategy in my life”. The goal of the student is to prepare a speech to present his/her beliefs on this topic in any manner he/she deems appropriate, trying to persuade the audience about his/her competences and point of view. We propose that the student has maximum 15 minutes to prepare the speech, and maximum 5 minutes to deliver it.

The evaluator will assess the contents of the speech by assessing the consistency of students’ self-evaluations on the Perseverance and Coping strategy scales presented in Phase 3.

A suggested version of the proposed assessment tools can be found in Appendix B.

## ***Phase 5: Persuasion***

### ***Definition***

The competence of persuasion is key to entrepreneurship because it refers to the capacity of fairly convincing others of own point of view, plan, or products (Kyndt & Baert, 2015).

This competence can be assessed according to the following three students’ mastery levels:

<b>Low level</b>	<b>Medium level</b>	<b>High level</b>
Utilises facts to support claims. Helps to find solutions that contribute to positive outcomes. Contributes to resolving differences with other staff or parties. Responds to conflict without worsening the situation and refers to a supervisor where appropriate. Knows when to withdraw from a conflict situation.	Negotiates from an informed and credible position. Leads and facilitates productive discussions with staff and stakeholders. Encourages others to talk, shares and debates ideas to achieve a consensus. Recognises and explains the need for compromise. Influences others with a fair and considered approach and sound arguments. Shows sensitivity and understanding in resolving conflicts and differences. Manages challenging relations with internal and external stakeholders. Pre-empts and minimises conflict	Engages in several approaches to generate solutions, seeking expert inputs and advice. Uses sound arguments, strong evidence, and expert opinion to influence outcomes. Determines and communicates the organisation’s position and bargaining strategy. Represents the organisation in critical negotiations, achieving effective solutions in challenging relationships, ambiguous and conflicting positions. Pre-empts and avoids conflict across organisations and with senior internal and external stakeholders. Identifies contentious issues, directs discussion and debate; steers parties towards effective resolution.

### ***Proposed assessment tools***

In this phase of the assessment, after the speech delivered by the student, it is proposed to measure the competence of persuasion through the Ability to persuade scale developed by Kyndt and Baert (2015), used both as self-assessment and evaluator-assessment.

The Ability to persuade scale is a 10-item scale, measured on a 6-points Likert scale (anchored 1 – Never to 6-Always), accounting for the following items:

1. I can build a strong line of argumentation
2. I convince others with arguments
3. I explain my ideas in a clear and coherent manner
4. I am able to make people enthusiastic for my idea
5. I make it clear to others what I want to achieve
6. I can name to pros and cons of my idea
7. I adjust my arguments to the person I am talking to
8. I explain to others why I took a certain decision
9. I can convey my message in an enthusiastic manner
10. When I decide something, I know exactly why

A suggested version of the self- and etero-assessed tool can be found in Appendix B.

The assessment score is obtained by summing and averaging the raw scores on all items for each scale. Scores in the range 1.00-3.50 are considered low level of competence in persuasion; scores in the range 3.51-5.00 as medium level; and scores in the range 5.01-6.00 as high level.

## ***Phase 6: Interaction***

### ***Definition***

The competence of interaction refers to a person's ability to manage interpersonal relationships in communication settings (Rubin & Martin, 1994).

This competence can be assessed according to the following three students' mastery levels:

<b>Low level</b>	<b>Medium level</b>	<b>High level</b>
Has marked difficulty in keeping up with the discussion and contributes only occasionally.	Keeps up with the discussion and can justify an opinion; responds and interacts adequately with other speakers; uses communication strategies well when unsure about (e.g., idiomatic use).	Can present ideas articulately in a complex discussion; can use sophisticated arguing and turn-taking strategies; has no difficulty in understanding idiomatic language use or different registers

### ***Proposed assessment tools***

In this phase of the assessment journey, the student is requested to sit for two self-assessment tasks. First, the student is invited to fill in a questionnaire containing a shortened version the Interpersonal Communication Competence Scale developed by Rubin and Martin (1994). Second,

the student is asked to produce a narrative content about his/her interaction competences through listing what are his/her strengths, his/her weaknesses, and whether and how he/she can to improve his/her competences.

The Interpersonal Communication Competence Scale is a multi-item scale as described in the following, measured on a 5-points Likert scale (anchored 1 – Strongly disagree to 5 – Strongly agree):

1. I can put myself in others' shoes
  2. I don't know exactly what others are feeling (R)
  3. Other people think that I understand them.
  4. When I've been wronged, I confront the person who wronged me.
  5. I stand up for my rights.
  6. I have trouble standing up for myself. (R)
  7. My conversations are pretty one-sided (R)
  8. My communication is usually descriptive, not evaluative
- Items indicated as (R) are reverse scored.

The listed items were set to account for the following factors:

- Empathy (items n. 1, 2, 3)
- Assertiveness (items n. 4, 5, 6)
- Altercentrism (item n. 7)
- Supportiveness (item n. 8)

A suggested version of the proposed scale and the narrative tool can be found in Appendix B.

With regard to the narrative report of the strengths, weaknesses, whether they can be improved and how, the evaluator has the task to assess the extent to which the student perceives his/her interaction competences as adaptable and improvable. It is proposed to evaluate how students elaborate on "whether and how can my competences be improved" according to students' reported beliefs on communication competences – fixed vs. incremental – and the capacity to elaborate creative solutions.

The assessment score is obtained by summing (1) the raw scores of the Interpersonal Communication Competence Scale (transforming those reverse coded) on all items for each scale; (2) the doubled raw scores of the fixed vs. incremental approach to interaction competences (scores are doubled in order to assign to etero-evaluation a greater score than self-evaluation); and dividing the final score by twelve. Scores in the range 1.00-2.00 are considered low level of competence in general communication; scores in the range 2.01-3.50 as medium level; and scores in the range 3.51-5.00 as high level.

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## **AREA OF COMPETENCE: CREATIVITY**

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Creativity and innovation have been highlighted as extremely relevant area of entrepreneurial and social competences (e.g., Bacigalupo et al., 2016; Moberg et al., 2014). Creativity encompasses the development of new ideas to create value, including better solutions to existing challenges

(Bacigalupo et al., 2016), and innovation concerns those processes regarding the introduction and application of new or improved ideas, processes, products or procedures (West, 2002).

### **Phase 7: Creativity and lateral thinking**

#### **Definition**

The competence of creativity and lateral thinking refers to solving problems through an indirect and creative approach, using reasoning that is not immediately obvious and involving ideas that may not be obtainable by using only traditional step-by-step logic (De Bono, 1970).

This competence can be assessed according to the following three students' mastery levels:

<b>Low level</b>	<b>Medium level</b>	<b>High level</b>
Can only see the immediate problem and easy connections between topic or ideas, prefers traditional models, even if outdated, does not challenge the status quo, gets lost in the detail and cannot see the bigger picture.	Can see alternative and innovative solutions to problems but cannot always apply it, can imagine good but not necessarily innovative ways to tackle problems, adopt lateral thinking if accompanied.	Considers different approaches, disciplines and points of view when generating solutions, uses resources creatively, originates alternatives to conventional thinking, produces imaginative or unique responses to a problem

#### **Proposed assessment tools**

This phase starts with a self-assessment of creativity and lateral thinking according to a self-assessment psychometric measure represented by the Creative problem solving scale – Producing creative solutions scale (Morris et al., 2013). This tool is a multi-item scale, measured on a 5-points Likert scale (ranging from 1 – Strongly disagree, to 5 – Strongly agree), comprising the following statements:

1. I demonstrate originality in my work
2. I am creative when asked to work with limited resources.
3. I identify ways in which resources can be recombined to produce novel products.
4. I find new uses for existing methods or equipment.
5. I think outside of the box.
6. I identify opportunities for new services/products.
7. Freedom to be creative and original is extremely important to me.

The assessment score is obtained by summing and averaging the raw scores on all items for each scale. Scores in the range 1.00-1.50 are considered low competence level; scores in the range 1.51-3.00 as medium level; and scores in the range 3.01-5.00 as high level.

After this self-assessment task, the student is required to engage in a creativity exercise, imagining how many uses he/she can imagine for a shoe. The student is required to write as many uses as he/she can imagine in 15 minutes. The evaluator will assess the creativity of the student by (1)



counting the number of proposed solutions and evaluating the extent to which the proposal is innovative and shows divergent thinking; and (2) the Creative problem solving scale.

The assessment score is obtained by summing and averaging the raw scores on all items for the Creative problem solving scale. Scores in the range 1.00-2.25 are considered low level of competence in recognizing opportunities scores in the range 2.26-3.75 as medium level; and scores in the range 3.76-5.00 as high level.

The final assessment score on this competence is obtained by averaging self- and etero-assessment scores.

A suggested version of the tools to be used with students can be found in Appendix B.

## **AREA OF COMPETENCE: CRITICAL AND ANALYTICAL THINKING**

A fundamental area of entrepreneurial competence regards decision-making capabilities with regard to new ideas and opportunities in an uncertain environment (Bacigalupo et al., 2016; Chell, 2013).

### ***Phase 8: Recognizing opportunities***

#### ***Definition***

The competence of recognizing opportunities refers to the capacity to perceive changed conditions or overlooked possibilities in the environment that represent potential sources of profit or return for an individual or an organization (Morris et al., 2013).

This competence can be assessed according to the following three students' mastery levels:

<b>Low level</b>	<b>Medium level</b>	<b>High level</b>
Is poorly aware of data/information/research available to inform and develop areas of work; seldomly keeps up to date with information and its quality in order to make judgements; tends to treat information from different pieces of information as separate.	Is aware of data/information/research available to inform and develop areas of work; moderately keeps up to date with information and its quality in order to make judgements; is able to see some new connections and patterns from available data.	Is an avid information seeker, always carrying out activities of search for new information/data/research; is good at "connecting the dots", seeing links between seemingly unrelated pieces of information; has ideas about developing novel products, policies, and strategies for the future.

#### ***Proposed assessment tools***

It is proposed to start this phase assessing the competence of recognizing opportunities through a self-assessed psychometric measure developed by Morris et al. (2013), namely the opportunity recognition scale. The items represented in the scale, which are measured on a 5-points Likert scale (ranging 1 – Strongly disagree, to 5 – Strongly agree) are the following:

1. I often make novel connections and perceive new or emergent relationships between various pieces of information.
2. I see links between seemingly unrelated pieces of information.
3. I am good at “connecting dots”.
4. I often see connections between previously unconnected domains of information.

A suggested version of the tool can be found in Appendix B.

The assessment score is obtained by summing and averaging the raw scores on all items for each scale. Scores in the range 1.00-2.00 are considered low level of competence in recognizing opportunities scores in the range 2.01-3.00 as medium level; and scores in the range 3.01-5.00 as high level.

After this self-assessment task, the student is required to engage in a presentation exercise to show his/her competences in recognizing entrepreneurial opportunities. The student has to pick his/her best idea about “how to use a shoe” from the previous Phase 7. The student is then required to prepare a presentation about how this use could be commercialized in the market or used by other people. The student has to prepare the presentation in 20 minutes and using maximum 50 words.

The evaluator will assess the competence in recognizing opportunities through etero-assessed version of the Opportunity recognition scale by Morris et al. (2013), described above. The assessment score is obtained by summing and averaging the raw scores on all items of the scale. The assessment score is obtained by summing and averaging the raw scores on all items for each scale. Scores in the range 1.00-2.25 are considered low level of competence in recognizing opportunities scores in the range 2.26-3.75 as medium level; and scores in the range 3.76-5.00 as high level.

The final assessment score on this competence is obtained by averaging self- and etero-assessment scores.

## APPENDIX A – OVERVIEW OF THE EUROCOMPASS PROPOSAL

Area of competence	Specific competence	Low level	Medium level	High level	Assessment tool	
					Phase #	Method and measure
Positive attitude and initiative	Self assessment	Does not recognise his/her own strengths and weaknesses	Recognises a few of his/her own strength and weaknesses but cannot find improvement strategies	Is aware of his/her own strengths and weaknesses and can find improvement strategies.	1	Method: self-assessment  Measure: Empowerment scale (Rogers et al., 1997)
	Growth mindset	Believes that intelligence is static; does not apply for improvement; avoids effort, criticism and challenges and feels threatened by the success of others.	Considers intelligence both static and dynamic; sometimes applies for improvement; can afford a few effort and moderate challenges; does not care about criticism and the success of others.	Believes that intelligence is dynamic; applies for improvement; sees effort as a path to mastery; embraces challenges, learns from criticism; feels inspired by the success of others.	2	Method: Phase 2: storytelling interview followed by evaluator-assessment of mindset beliefs  Measure: short Mindset scale (Dweck, 2006)
	Perseverance	Abandons an assignment when tired or under distraction; abandons a task when experiencing failure; does not work with clear goals.	Risks to abandon an assignment when tired or under distraction; risks to abandon a task when experiencing failure; does not always work with clear goals	Finishes an assignment even if tired of; keeps on working in a concentrated way even if there is a distraction; continues with the task even after a setback or failure; works with clear goals	3	Method: self-assessment  Measure: Perseverance scale (Kyndt & Baert, 2015)

	<b>Coping Strategy</b>	Cannot find ways to cope with difficult situations; does not see growth possibilities when dealing with difficult situations; cannot control reactions; cannot ask for help.	Cannot always find ways to cope with difficult situations; does not always see growth possibilities when dealing with difficult situations; can control reactions only in some cases; can ask for help only under certain conditions.	Looks for creative ways to alter difficult situations; believes that positive growth is possible when dealing with difficult situations; can control reactions; asks for help when needed.	3	Method: self-assessment  Measure: Coping strategy scale (Kyndt & Baert, 2015)
<b>Communication and interaction</b>	<b>General communication</b>	Is not aware about the components of communication (verbal, non verbal and paraverbal); does not listen and does not understand messages someone is sending; cannot send clear and concise messages to others.	Is partially aware about the components of communication (verbal, non verbal and paraverbal); partially listens and understands messages someone is sending; can send clear and concise messages to others only if a few conditions are satisfied.	Is aware about the components of communication (verbal, non verbal and paraverbal); listens and correctly understand messages someone is sending; always sends clear, concise messages to others.	4	Method: speech exercise, evaluator-assessed  Measure: Perseverance and Coping strategy scale (Kyndt & Baert, 2015)

	<b>Presentation</b>	Structure lacks coherence. Speaker unfamiliar with topic. Transitional elements largely missing.	Evidence of a standard three part structure and some use of transitional elements. Maintains contact with the audience. Level is appropriate, but the listener is not totally convinced that the presenter knows his/her topic well.	Is thoroughly familiar with the topic and can respond confidently and spontaneously to complex questions. Presentation is well structured, uses transitional elements, and follows the conventions of the field. Good eye contact, no reading from his/her paper. Level appropriate for intended audience.	4	Method: speech exercise, evaluator-assessed  Measure: Perseverance and Coping strategy scale (Kyndt & Baert, 2015)
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	<b>Persuasion</b>	<p>Utilises facts to support claims. Helps to find solutions that contribute to positive outcomes. Contributes to resolving differences with other staff or parties. Responds to conflict without worsening the situation and refers to a supervisor where appropriate. Knows when to withdraw from a conflict situation.</p>	<p>Negotiates from an informed and credible position. Leads and facilitates productive discussions with staff and stakeholders. Encourages others to talk, shares and debates ideas to achieve a consensus. Recognises and explains the need for compromise. Influences others with a fair and considered approach and sound arguments. Shows sensitivity and understanding in resolving conflicts and differences. Manages challenging relations with internal and external stakeholders. Pre-empts and minimises conflict</p>	<p>Engages in a range of approaches to generate solutions, seeking expert inputs and advice to inform negotiating strategy. Uses sound arguments, strong evidence, and expert opinion to influence outcomes. Determines and communicates the organisation's position and bargaining strategy. Represents the organisation in critical negotiations, including those that are cross jurisdictional, achieving effective solutions in challenging relationships, ambiguous and conflicting positions. Pre-empts and avoids conflict across organisations and with senior internal and external stakeholders. Identifies contentious issues, directs discussion and debate, and steers parties towards an effective resolution.</p>	5	<p>Method: self-assessment and evaluator-assessment</p> <p>Measure: Ability to persuade scale (Kyndt &amp; Baert, 2015)</p>
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	<b>Interaction</b>	Has marked difficulty in keeping up with the discussion and contributes only occasionally.	Keeps up with the discussion and can justify an opinion; responds and interacts adequately with other speakers; uses communication strategies well when unsure about (e.g., idiomatic use).	Can present ideas articulately in a complex discussion; can use sophisticated arguing and turn-taking strategies; has no difficulty in understanding idiomatic language use or different registers	6	Method: (1) self-assessment; (2) narrative, followed by evaluator-assessment  Measure: adapted Interpersonal Communication Competence Scale (Rubin & Martin, 1994)
<b>Creativity and Innovation</b>	<b>Creativity</b>	Can only see the immediate problem and easy connections between topic or ideas, prefers traditional models, even if out-dated, does not challenge the status quo, gets lost in the detail and cannot see the bigger picture.	Can see alternative and innovative solutions to problems but cannot always apply it, can imagine good but not necessarily innovative ways to tackle problems, adopt lateral thinking if accompanied.	Considers different approaches, disciplines and points of view when generating solutions, uses resources creatively, originates alternatives to conventional thinking, produces imaginative or unique responses to a problem	7	Method: (1) self-assessment; (2) creativity exercise, followed by evaluator-assessment  Measure: Creative problem solving scale (Morris et al., 2013)

<p><b>Critical and analytical thinking</b></p>	<p><b>Recognizing opportunities</b></p>	<p>Is poorly aware of data/information/research available to inform and develop areas of work; seldomly keeps up to date with information and its quality in order to make judgements; tends to treat information from different pieces of information as separate.</p>	<p>Is aware of data/information/research available to inform and develop areas of work; moderately keeps up to date with information and its quality in order to make judgements; is able to see some new connections and patterns from available data.</p>	<p>Is an avid information seeker, always carrying out activities of search for new information/data/research; is good at “connecting the dots”, seeing links between seemingly unrelated pieces of information; has ideas about developing novel products, policies, and strategies for the future.</p>	<p>8</p>	<p>Method: (1) self-assessment; (2) opportunity recognition exercise, followed by evaluator-assessment.</p> <p>Measure: Opportunity recognition scale (Morris et al., 2013)</p>
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## APPENDIX B - ASSESSMENT PHASES AND TOOLS

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### Phase 1 Self-assessment

**Instructions for students**

Please read the following statements relating to one’s perspective on life and with having to make decisions. For each of the following statements, please indicate whether you strongly agree (1), agree (2), disagree (3), or strongly disagree (4). Indicate how you feel now. First impressions are usually best. Do not spend a lot of time on any one question. Please be honest with yourself so that your answers reflect your true feelings.

	1 Strongly Agree	2 Agree	3 Disagree	4 Strongly Disagree
1. I can pretty much determine what will happen in my life. 2. People are only limited by what they think is possible. 3. Getting angry about something never helps. 4. I have a positive attitude toward myself. 5. I am usually confident about the decisions I make. 6. People have no right to get angry just because they don’t like something. 7. Most of the misfortunes in my life were due to bad luck. 8. I see myself as a capable person. 9. Making waves never gets you anywhere. 10. I am often able to overcome barriers. 11. I am generally optimistic about the future. 12. When I make plans, I am almost certain to make them work. 13. Getting angry about something is often the first step toward changing it. 14. Usually I feel alone. 15. Experts are in the best position to decide what people should do or learn. 16. I am able to do things as well as most other people. 17. I generally accomplish what I set out to do. 18. You can’t fight bureaucracy. 19. I feel powerless most of the time. 20. When I am unsure about something, I usually go along with the rest of the group. 21. I feel I am a person of worth, at least on an equal basis with others. 22. I feel I have a number of good qualities.				

**Instructions for evaluators**

Have the student filling in the questionnaire. Items in the scale are set to account for the following factors:

- Self-esteem and self-efficacy (items n. 4, 5, 8, 10, 12, 16, 17, 21, 22)
- Power-powerless (items n. 6, 7, 10, 14, 15, 18, 19, 20)

- Optimism and control over the future (items n. 1, 2, 11, 27)
- Righteous anger (items n. 3, 7, 9, 13)

The assessment score is obtained by summing and averaging the raw scores on all items.

Scores in the range 2.51-4.00 are considered low level of competence; scores in the range 1.51-2.50 as medium level; and scores in the range 1.00-1.50 as high level.

## Phase 2 Growth mindset

### Instructions for students

The self-assessment questionnaire that you have just filled contains a set of mixed questions about four factors that influence your sense of empowerment. Please go back to the questionnaire and find out what questions refers to each factor:

- 1) Self-esteem and self-efficacy: questions n. 4, 5, 8, 10, 12, 16, 17, 21, and 22.
- 2) Sense of power/powerless: questions n. 6, 7, 10, 14, 15, 18, 19, and 20.
- 3) Optimism and control over the future: questions n. 1, 2, 11, and 27.
- 4) Righteous anger: questions n. 3, 7, 9, and 13.

You can write and group them down in this sheet, if you feel more comfortable in re-reading them in such an order.

Now we propose you a “storytelling interview”. Starting from the results on the self-evaluation of the previous questionnaire, you are requested to give evidence of how you deal with each dimension (i.e., self-esteem/self-efficacy, powerless, optimism, righteous anger) in your life, providing examples (e.g., about studies, work experience, private life).

### Instructions for evaluators

In this phase you will interview the student through a “storytelling interview”. Starting from the results on the self-evaluation of the previous questionnaire, the student are requested to give evidence of how he/she deals with each dimension (self-esteem/self-efficacy, powerless, optimism, righteous anger) in his/her life, providing examples (e.g., about studies, work experience, private life).

Please notice that the four dimensions emerge from the following questionnaire items:

- 1) Self-esteem and self-efficacy: questions n. 4, 5, 8, 10, 12, 16, 17, 21, and 22.
- 2) Sense of power/powerless: questions n. 6, 7, 10, 14, 15, 18, 19, and 20.
- 3) Optimism and control over the future: questions n. 1, 2, 11, and 27.
- 4) Righteous anger: questions n. 3, 7, 9, and 13.

You are required to listen to the student storytelling and to evaluate the extent to which he/she presents a static vs. an incremental mindset, according to the questions in the following table.

In the table, the bar represents the student’s disclosed beliefs and attitudes. For each sentence, please place the bar at the closest point that you feel as representative of the student’s behaviour.

Avoids challenging situations	1...2...3...4...5...6...7...8...9...10...	Embraces challenging situations
When faced with obstacles, gives up easily	1...2...3...4...5...6...7...8...9...10...	When faced with obstacles, persists in the face of setbacks
Sees effort as fruitless or worse	1...2...3...4...5...6...7...8...9...10...	Sees effort as the path to mastery
Ignores negative feedbacks or criticisms, even if useful	1...2...3...4...5...6...7...8...9...10...	Learns from negative feedbacks and criticism
Feels that the success of others threatens him/her and his/her image	1...2...3...4...5...6...7...8...9...10...	Finds lessons and inspiration in the success of others

Considers intelligence/ competence as static (e.g., talents, gifts)	1...2...3...4...5...6...7...8...9...10...	Considers intelligence / competences as incremental (e.g., anything can be learned)
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The assessment score is obtained by summing and averaging the raw scores on all items. Scores in the range 1.00-6.50 are considered low level of competence in using a growth mindset; scores in the range 6.51-8.50 as medium level; and scores in the range 8.50-10.00 as high level.

### Phase 3 Perseverance and coping strategy

**Instructions for students**

Please read the following statements and indicate the extent to which you practice them in your daily life from Never (1) to Always (6). Please be honest with yourself so that your answers reflect your true behaviours.

	1 Never	2 Seldom	3 Sometimes	4 Often	5 Most of the times	6 Always
1. If I start an assignment, I finish it, even if I am tired of it 2. Even if there is distraction, I keep on working in a concentrated way 3. I place high demands on myself when I am working 4. Even after a setback or failure I continue with the task at hand 5. I work with clear goals 6. Only important reasons can make me change my plans 7. Even if the assignment is difficult, I start working on it immediately 8. If a situation changes, I adjust my plans 9. If I notice that I do not obtain the necessary results, I adjust my plans immediately 10. I adjust my planned approach when new opportunities arise 11. If my plan goes differently than expected, I make a new plan						

**Instructions for evaluators**

Have the student filling in the questionnaire.

Items in the scale are set to account for the following factors:

- Perseverance (items 1-7)
- Coping strategy (items 8-11)

Each factor has to be assessed separately by summing and averaging the raw scores on its items.

For perseverance, scores in the range 1.00-3.50 are considered low level of perseverance; scores in the range 3.51-5.00 as medium level; and scores in the range 5.01-6.00 as high level.

For coping strategy, scores in the range 1.00-3.75 are considered low level of competence in using coping strategies; scores in the range 3.76-5.25 as medium level; and scores in the range 5.26-6.00 as high level.

## **Phase 4**

### **General communication and Presentation**

#### **Instructions for students**

The questionnaire that you just filled in refers to people's competences in perseverance and in being able to deal with adverse events through a coping strategy. Now that you have reflected on the importance of these competences in your life, we propose you to prepare a "speech" with the goal of

- 1) Presenting your beliefs about the importance of these two competences for people's lives
- 2) Presenting your competences in perseverance and coping strategy

You can use any presentation or speech technique that you deem appropriate.

You have 15 minutes to prepare the speech. The speech can last maximum 5 minutes.

#### **Instructions for evaluators**

In this phase, after the student has filled in the self-evaluation of their perseverance and coping competences, he/she is asked to prepare a "speech" with the goal of

- 1) Presenting his/her beliefs about the importance of these two competences for people's lives
- 2) Presenting his/her competences in perseverance and coping strategy

He/she can use any presentation or speech technique that he/she deems appropriate. He/she has 15 minutes to prepare the speech, which can last maximum 5 minutes.

As evaluator, you are asked to assess to which extent the competences discussed by the student in the speech are consistent with the scores that he/she marked in the questionnaire about perseverance and coping strategy. At the end of the speech, you can ask probing and clarification questions. You will mark on the questionnaire filled by the student (using a red pen or a different marking symbol) the correct score – thus either agreeing with the student's one or marking a new one.

At the end of this phase, you will re-calculate the correct scores for perseverance and coping strategy by averaging your marks and students' marks.

Each factor has to be assessed separately by summing and averaging the raw scores on its items.

For perseverance, scores in the range 1.00-3.50 are considered low level of perseverance; scores in the range 3.51-5.00 as medium level; and scores in the range 5.01-6.00 as high level.

For coping strategy, scores in the range 1.00-3.75 are considered low level of competence in using coping strategies; scores in the range 3.76-5.25 as medium level; and scores in the range 5.26-6.00 as high level.

## Phase 5 Persuasion

### Instruction for students

After having carried out your speech, we ask you to reflect on your performance and your persuasion abilities in general.

Please read each of the following statements related to persuasion competences and show to which extent you practice them in your life.

	1 Never	2 Seldom	3 Sometimes	4 Often	5 Most of the times	6 Always
1. I can build a strong line of argumentation						
2. I convince others with arguments						
3. I explain my ideas in a clear and coherent manner						
4. I am able to make people enthusiastic for my idea						
5. I make it clear to others what I want to achieve						
6. I can name the pros and cons of my idea						
7. I adjust my arguments to the person I am talking to						
8. I explain to others why I took a certain decision						
9. I can convey my message in an enthusiastic manner						
10. When I decide something, I know exactly why						

### Instruction for evaluators

After the student has delivered his/her speech, he will fill in a self-evaluation of his/her persuasion competences. Once he has completed it, the assessment score is obtained by summing and averaging the raw scores on all scale items. Scores in the range 1.00-3.50 are considered low level of competence in persuasion; scores in the range 3.51-5.00 as medium level; and scores in the range 5.01-6.00 as high level.

As evaluator, you can also assess his/her ability to persuade on the basis of his/her speech. Please use the following scale referred to the evaluated student.

	1 Strongly disagree	2 Disagree	3 Almost disagree	4 Almost agree	5 Agree	6 Strongly agree
1. <b>STUDENT NAME</b> can build a strong line of argumentation						
2. <b>STUDENT NAME</b> convinces others with arguments						
3. <b>STUDENT NAME</b> explains his/her ideas in a clear and coherent manner						
4. <b>STUDENT NAME</b> is able to make people enthusiastic for his/her idea						
5. <b>STUDENT NAME</b> makes it clear to others what						

<p>he/she wants to achieve</p> <p>6. <b>STUDENT NAME</b> can name to pros and cons of his/her idea</p> <p>7. <b>STUDENT NAME</b> adjusts his/her arguments to the person he/she is talking to</p> <p>8. <b>STUDENT NAME</b> explains to others why he/she took a certain decision</p> <p>9. <b>STUDENT NAME</b> can convey his/her message in an enthusiastic manner</p> <p>10. When <b>STUDENT NAME</b> decides something, he/she knows exactly why</p>						
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Your assessment score is obtained by summing and averaging the raw scores on all items for each scale. Scores in the range 1.00-2.50 are considered low level of competence in persuasion; scores in the range 2.51-4.50 as medium level; and scores in the range 4.51-6.00 as high level.

The final score on persuasion competences is obtained by averaging students' self-assessment score and your scores.



## Phase 6 Interaction

### Instructions for students

Please read the following statements and indicate the extent to which you practice them in your daily life from Never (1) to Always (6). Please be honest with yourself so that your answers reflect your true behaviours.

	1 Strongly disagree	2 Disagree	3 Nor Agree, Nor Disagree	4 Agree	5 Strongly disagree
1. I can put myself in others' shoes 2. I don't know exactly what others are feeling 3. Other people think that I understand them 4. When I've been wronged, I confront the person who wronged me. 5. I stand up for my rights. 6. I have trouble standing up for myself. 7. My conversations are pretty one-sided 8. My communication is usually descriptive, not evaluative					

Now take a moment to think about your communication and interaction competences. In the following, elaborate and describe in depth what are your strengths and weaknesses in this area. Elaborate then on whether there is anything that you can do to change these competences, and if yes what.

<b>Competences in communication and interaction which are my strengths</b>
<b>Competences in communication and interaction that I need to improve</b>

<b>Can you improve your competences in communication and interaction? If yes, how?</b>

**Instructions for evaluators**

The student has carried out a self-assessment of his/her competences in interaction. Please read carefully the narrative report of the strengths, weaknesses, and eventual improvement strategies elaborated by the student. Specifically focusing on the contents answered to the question “Can you improve your competences in communication and interaction? If yes, how?”, you will evaluate how students elaborate on “what can I do to improve” according to the displayed beliefs on communication competences – fixed (e.g, there is nothing or very few things that he/she can do to improve) vs. incremental (e.g., describing several possible, concrete strategies for improvement). Please evaluate students’ beliefs by using the following scale:

<b>STUDENT NAME</b> considers communication competence as static	1...2...3...4...5	<b>STUDENT NAME</b> considers communication competence as incremental
<b>STUDENT NAME</b> cannot find any improvement strategy	1...2...3...4...5	<b>STUDENT NAME</b> can find many and diverse/creative improvement strategies

The final assessment score is obtained by summing

- (1) the raw scores of the self-assessed Interpersonal Communication Competence Scale (transforming questions n. 2, 6, 7 which are reverse coded) on all items for each scale;
- (2) the doubled raw scores of the fixed vs. incremental approach to interaction competences (scores are doubled in order to assign to etero-evaluation a greater score than self-evaluation)

And dividing the total score by twelve.

Average scores in the range 1.00-2.00 are considered low level of competence in general communication; scores in the range 2.01-3.50 as medium level; and scores in the range 3.51-5.00 as high level.

## Phase 7 Creativity

### Instructions for students

#### TEST N. 1

Please consider each of the following statements as if applies to you at present.

For each of the statements, please place an "X" in the space that best describes you.

	1 Strongly Disagree	2 Disagree	3 Nor agree nor disagree	4 Agree	5 Strongly Agree
1. I demonstrate originality in my work. 2. I am creative when asked to work with limited resources. 3. I identify ways in which resources can be recombined to produce novel products 4. I find new uses for existing methods or equipment. 5. I think outside of the box. 6. I identify opportunities for new services/products. 7. Freedom to be creative and original is extremely important to me.					

#### TEST N. 2

Now think about a shoe.

How many uses can you imagine for a shoe? Try to be as creative as possible and list them below. Produce one line for each use that you imagine. You have 15 minutes to list as many uses as possible.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

.....

### Instruction for evaluators

#### TEST N. 1

The student is asked to fill in a self-evaluation of his/her creativity competences. Once he has completed it, the assessment score is obtained by summing and averaging the raw scores on all scale items. Scores in the range 1.00-1.50 are considered low competence level; scores in the range 1.51-3.00 as medium level; and scores in the range 3.01-5.00 as high level.

#### TEST N. 2

The student is asked to list as many potential uses for a shoe that he/she can creatively imagine. He/she has 15 minutes to complete the test. At the end of the exercise, count the number of solutions generated by the student and evaluate, on a scale from 1=not creative/disruptive at all, to 5=very creative/disruptive the extent to which he/she demonstrate originality and divergent thinking, using the following table.

Idea #	1 Not at all	2 Little	3 Neutral	4 A lot	5 Very much
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
.....					

Now that you have an overall idea of students' creativity level, please evaluate him/her on the base of the following scale:

	1 Strongly Disagree	2 Disagree	3 Nor agree nor disagree	4 Agree	5 Strongly Agree
1. <b>STUDENT NAME</b> demonstrates originality in his/her work.					
2. <b>STUDENT NAME</b> is creative when asked to work with limited resources.					
3. <b>STUDENT NAME</b> identifies ways in which resources can be recombined to produce novel products					
4. <b>STUDENT NAME</b> finds new uses for existing methods or equipment.					
5. <b>STUDENT NAME</b> thinks outside of the box.					
6. <b>STUDENT NAME</b> identifies opportunities for new services/products.					
7. Freedom to be creative and original is extremely important to <b>STUDENT NAME</b> .					

Your assessment score is obtained by summing and averaging the raw scores on all scale items. Scores in the range 1.00-2.25 are considered low competence level; scores in the range 2.26-3.75 as medium level; and scores in the range 3.76-5.00 as high level.

The final score is obtained by averaging the student self-assessment and your assessment.

## Phase 8 Opportunity recognition

### Instructions for students

#### TEST N. 1

Please consider each of the following statements as if applies to you at present.

For each of the statements, please place an "X" in the space that best describes you.

	1 Strongly Disagree	2 Disagree	3 Nor agree nor disagree	4 Agree	5 Strongly Agree
1 I often make novel connections and perceive new or emergent relationships between various pieces of information.					
2. I see links between seemingly unrelated pieces of information.					
3. I am good at "connecting dots".					
4. I often see connections between previously unconnected domains of information					

#### TEST N. 2

Referring to the potential uses for a shoe that you have listed in the previous Phase, choose what you think is your best idea for "how to use a shoe".

Now prepare a short presentation about how this "original use of the shoe" could be commercialized to the market or used by other people. You have 20 minutes to prepare the presentation. Your presentation will have to use maximum 50 words.

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### Instruction for evaluators

#### TEST N. 1

The student is asked to fill in a self-evaluation of his/her competences in recognizing opportunities. Once he has completed it, the assessment score is obtained by summing and averaging the raw scores on all scale items. Scores in the range 1.00-2.00 are considered low level of competence in recognizing opportunities scores in the range 2.01-3.00 as medium level; and scores in the range 3.01-5.00 as high level.

#### TEST N. 2

The student is asked to choose his/her best idea about "how to use a shoe" from the list produced before. Then he/she has 20 minutes to prepare a short presentation (using maximum 50 words) about how this

“original use of the shoe” could be commercialized to the market or used by other people. After listening to his/her presentation, assess student’s perceived competences in creativity and recognizing opportunities, using the following scale.

	1 Strongly Disagree	2 Disagree	3 Nor agree nor disagree	4 Agree	5 Strongly Agree
1. <b>STUDENT NAME</b> makes novel connections and perceives new or emergent relationships between various pieces of information. 2. <b>STUDENT NAME</b> sees links between seemingly unrelated pieces of information. 3. <b>STUDENT NAME</b> is good at “connecting dots”. 4. <b>STUDENT NAME</b> often sees connections between previously unconnected domains of information					

Your assessment score is obtained by summing and averaging the raw scores on all scale items. Scores in the range 1.00-2.25 are considered low competence level; scores in the range 2.26-3.75 as medium level; and scores in the range 3.76-5.00 as high level.

The final score is obtained by averaging the student self-assessment and your assessment.

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## BIBLIOGRAPHY

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- Bacigalupo, M., Kampylis, P., Punie, Y., & Van den Brande, G. 2016. *EntreComp: The Entrepreneurship Competence Framework*. Luxembourg. <http://doi.org/10.2791/593884>
- Chell, E. 2013. Review of skill and the entrepreneurial process. *International Journal of Entrepreneurial Behaviour & Research* 19(1) 6–31. <http://doi.org/10.1108/13552551311299233>
- Curtis, D. 2010. *Defining, assessing and measuring Generic Competences*. University of South Australia.
- De Bono, E. 1970. *Lateral thinking: creativity step by step*. New York: Harper & Row.
- Dweck, C. 1999. *Self-Theories: Their Role in Motivation, Personality, and Development*. Philadelphia: Psychology Press.
- Dweck, C. 2006. *Mindset: The new psychology of success*. Random House.
- EACEA/Eurydice. 2012. *Developing key competences at school in Europe: Challenges and opportunities for policy*. Brussels. Retrieved from [http://eacea.ec.europa.eu/education/eurydice/documents/thematic\\_reports/145en.pdf](http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/145en.pdf)
- European Commission. 2003. *Green paper: Entrepreneurship in Europe*.
- European Commission. 2006. *The Oslo agenda for entrepreneurship education in Europe*. Brussels. Retrieved from <http://ec.europa.eu/DocsRoom/documents/8968/attachments/1/translations/en/renditions/native>.
- European Commission. 2008. *“Think small first” — A “small business act” for Europe*. Brussels.
- European Commission. 2012. *Rethinking Education: Investing in skills for better socio-economic outcomes*. Strasbourg.
- European Commission. 2016. *A new skills agenda for Europe. Working together to strengthen human capital, employability and competitiveness*. Brussels.
- European Parliament and Council. 2006. *Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning*.
- Florés, H. 2006. Managerial work in small firms: summarising what we know and sketching a research agenda. *International Journal of Entrepreneurial Behaviour and Research* 12(5) 272–288.
- Gibb, S. 2014. Soft skills assessment: Theory development and the research agenda. *International Journal of Lifelong Education* 33(4) 455–471.
- Harvard University. 2014. *Competency dictionary*.
- Hood, J., & Young, J. 1993. Entrepreneurship’s requisite areas of development: a survey of top executives in entrepreneurial firms. *Journal of Business Venturing* 8(2) 115–135.
- Horney, K. 1939. *New ways in psychoanalysis*. Routledge.
- International Bureau of Education. 2016. *A conceptual framework for competencies assessment*.
- Ketchagias, K. 2011. *Teaching and assessing soft skills*. Thessaloniki.
- Kyndt, E., & Baert, H. 2015. Entrepreneurial competencies: Assessment and predictive value for entrepreneurship. *Journal of Vocational Behavior* 90(January 2016) 13–25. <http://doi.org/10.1016/j.jvb.2015.07.002>
- Moberg, K., Vestergaard, L., Fayolle, A., Redford, D., Cooney, T., Singer, S., ... Filip, D. 2014. *How to assess and evaluate the influence of entrepreneurship education: A report of the ASTEE project with a user guide to the tools*. Retrieved from [http://archive.ja-ye.org/Download/jaye/ASTEE\\_REPORT.pdf](http://archive.ja-ye.org/Download/jaye/ASTEE_REPORT.pdf)

- Morris, M. H., Webb, J. W., Fu, J., & Singhal, S. 2013. A competency-based perspective on entrepreneurship education: Conceptual and empirical insights. *Journal of Small Business Management* 51(3) 352–369. <http://doi.org/10.1111/jsbm.12023>
- Packer, M. J., & Goicoechea, J. 2000. Sociocultural and constructivist theories of learning: Ontology not just epistemology. *Educational Psychologist* 35(4) 227–242.
- Pellegrino, J. W., Chudowsky, N., & Glaser, R. 2011. *Knowing what students know: The science and design of educational assessment*. National Academies Press.
- Rogers, E. S., Chamberlin, J., Ellison, M. L., & Crean, T. 1997. A consumer-constructed scale to measure empowerment among users of mental health services. *Psychiatric Services* 48(8) 1042–1047. <http://doi.org/10.1176/ps.48.8.1042>
- Rubin, R. B., & Martin, M. M. 1994. Development of a measure of interpersonal communication competence. *Communication Research Reports* 11(1) 33–44.
- Segers, M., Dochy, F., & Cascallar, E. 2003. *Optimising new modes of assessment: In search of qualities and standards*. Dordrecht: Kluwer Academic Publishers.
- Terzieva, L., Luppi, E., & Traina, I. 2015. Teaching and assessing transferable/transversal competences. The case of Socces. *Journal of Science & Research* 8 25–56.
- West, M. A. 2002. Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation implementation in work groups. *Applied Psychology* 51(3) 355–387.
- Wiggins, G. 1998. *Educative assessment: Designing assessments to inform and improve student performance* ((1st ed.)). Jossey-Bass.