Digital Citizenship

Learning and Creativity Course

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Abstract	The ability to express oneself creatively and take a more active role in the learning process increases engagement and participation, two important components of citizenship. Together, learning and creativity, allow the citizen to express some forms of creativity using several tools in different situations. Because experience is a dynamic link between learning and creativity, these two represent components of human's process in order to get knowledge or skill from doing, seeing or feeling things. Creating and constructing new things need fresh knowledge and expertise. Individuals learn through their feelings, imagination, experiences, and surroundings on a constant basis. Individual growth is aided by education, which is a human development planning activity. It allows people to build their knowledge via their experiences. Education should promote and reward students who want to be creative, and it should educate pupils not only to study information but also how to think critically and creative. From producing, consuming, sharing, playing, and socializing to investigating, communicating, learning, and working, digital citizenship and involvement encompass a wide range of activities. People who are capable of responding to new and everyday difficulties connected to study, employment, employability, leisure, inclusion and involvement in society, while respecting human rights and multicultural differences, represent digital citizens.
Keywords	Model course; digital citizenship; course plan; learning; creativity; education; reflection; reflective thinking; 4-c model of creativity; creativity myths;

	creativity misconceptions; creative thinking; think outside the box; environment; community service; service learning

Acknowledgement

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Introduction

If it is no longer possible to learn at school all the knowledge you will need for the rest of your life, then how you learn becomes more important than what you learn, even more so when you consider the rapid evolutions that digital technology is bringing to the way we live. It has modified both the tools and platforms that support learning and knowledge access, replacing the traditional chalk and talk mode of knowledge transmission with interactive information and communication tools including and combining websites, e-mail exchanges, chat rooms, video conferencing, webinars, apps, robots, drones, virtual reality and more. Printed books are being replaced by eBooks, and the encyclopaedia by Wikipedia and the like.

What are learning and creativity

Cambridge Dictionary mentions that *learning* is 1. the activity of obtaining knowledge; 2. knowledge or a piece of information obtained by study or experience; 3. the process of getting an understanding of something by studying it or by experience.

The same dictionary defines *creativity* as 1. the ability to produce or use original and unusual ideas.

Learning and creativity refer to the willingness and the attitude of citizens towards learning in digital environments over their life course, both to develop and express different forms of creativity, with different tools, in different contexts. It covers the development of personal and professional competences as citizens prepare for the challenges of technology-rich societies with confidence and in innovative ways.

Why do we need learning and creativity

Being an active citizen involves being a participative citizen who can put forward ideas, formulate opinions, and add unique perspectives to any argument, whether at school, among friends, or in online or offline communities. This necessitates mastery of a variety of higher cognitive skills, ranging from data analysis to data sorting, reflection, and interpretation. All of these higher cognitive talents are acquired through exploration-driven learning and experience rather than through knowledge transmission. They rely on a certain amount of creativity, which is an important component of problem-solving. They also rely on young people's ability to communicate coherently and listen to others' viewpoints.

What role do learning and creativity play

The possibility to express creativity and take on a more active role in the learning process encourages engagement and participation, two essential building blocks in citizenship.

Learning and creativity are intrinsically linked. All learning, like creativity, begins with the learner receiving information, ideas, feelings and/or sensations that he or she processes through an activity that can range from thought to individual or collaborative action. For the most effective outcomes, as with creativity, the learner needs to be motivated, and not restricted by time, space, pressure or fear. Learning through play and self-directed technology-based learning generally meets these requirements, and therefore can result in creative outcomes. When learners are able to satisfy their immediate goals, they are encouraged to set more ambitious goals and thereby map their own path of further learning.
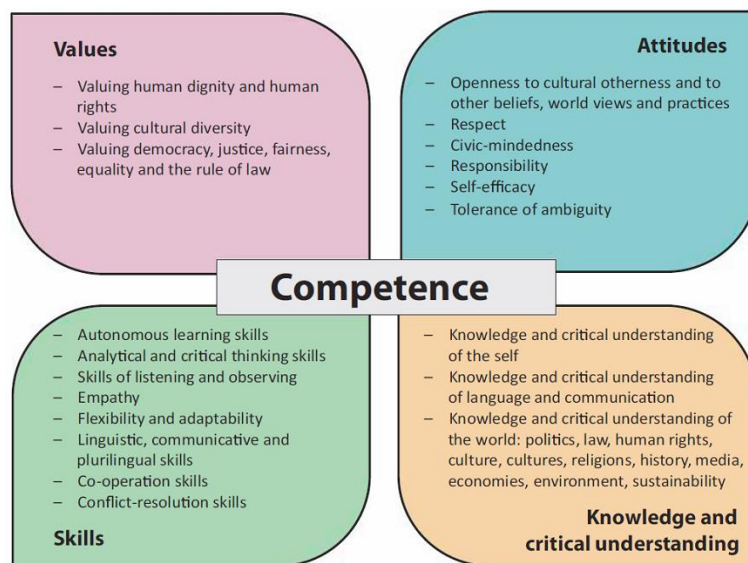
The butterfly of competences

The Council of Europe's competences for democratic culture (CDC), illustrated in figure below, provides an overview of the competences that people need to learn if they are to engage successfully in a culture of democracy. These are not gained naturally, but must be trained and mastered instead. The role in education is essential to this.

The 20 competences for democratic culture, also referred to as the "butterfly" of the CDC, occupy four main areas: values, attitudes, skills and knowledge and critical understanding. In order to put these competencies in the digital environment in which young people are now growing up, a set of 10 digital domains has been described as underpinning the overarching definition of digital citizenship (Council of Europe, 2019). Learning and creativity (this course) are one of these domains.

Values
- Valuing human dignity and human rights
- Valuing cultural diversity
- Valuing democracy, justice, fairness, equality and the rule of law

Attitudes
- Openness to cultural otherness and to other beliefs, world views and practices
- Respect
- Civic-mindedness
- Responsibility
- Self-efficacy
- Tolerance of ambiguity

Competence

Skills
- Autonomous learning skills
- Analytical and critical thinking skills
- Skills of listening and observing
- Empathy
- Flexibility and adaptability
- Linguistic, communicative and plurilingual skills
- Co-operation skills
- Conflict-resolution skills

Knowledge and critical understanding
- Knowledge and critical understanding of the self
- Knowledge and critical understanding of language and communication
- Knowledge and critical understanding of the world: politics, law, human rights, culture, cultures, religions, history, media, economies, environment, sustainability

Source: Council of Europe

If a person shall act competently in situations involving known or unknown challenges, the interplay between skills, knowledge, attitudes and values is necessary. This is the reason why the notion of competence clusters is highlighted in the framework. To give an example: a person can have extensive knowledge about democratic institutions and have good analytical and critical thinking skills; however, when faced with concrete situations of democratic decision-making, civic mindedness might be necessary in order to motivate this person to actually use his/her knowledge and analytical thinking, and cooperation skills are necessary in order to actively participate in the actual decision-making process. Vice versa, fostering attitudes and values for democratic culture require a certain set of knowledge and skills in order to make a meaningful contribution to society

In our fast-paced society, creativity aids citizens in adapting to new circumstances, responding to evolving societal requirements, and finding answers to the various issues that technology poses. As a result, creativity generates jobs, propelling economic progress and pushing society to reach its full human potential.

1. Module 1 - Education, learning and citizenship

Upon completing this module, you will be able to:

- Characterize the learning process;
- Describe learners' characteristics;
- Justify the importance of education.

General education

When people speak about education, they sometimes associate it with schooling. When seeing or hearing the word, many think of places such a schools or universities. Education, however, is more than that – it is a social process of living, not a preparation for future living (Dewey, 1916). In this view, education is an act with people rather on them.

Education is a process that promotes learning or the development of knowledge, skills, values, morality, beliefs and habit. In broad terms, education may be:

- Formal – in school, for example;
- Non-formal – this course is a good example;
- Informal – in your everyday life.

Field experts consider that we are learning all the time, and that we may not be aware of this happening. Learning is considered in two ways:

- as a process it is part of living in the world, part of the way our bodies work.
- as an outcome it is a new understanding or appreciation of something.

Citizenship refers to individuals working together, locally, nationally and internationally, to create meaningful changes in the community in which they live. This process is good for people and necessary for the strengthening and preservation of our democracy and our democratic way of life. It comes without saying that citizenship is not just about getting one country's passport. Moreover, over the last couple of decades, a new concept emerged along with the advancements of computer, internet smartphone technologies: digital citizenship. Digital citizenship refers to the responsible use of technology by anyone who uses computers, the Internet, and digital devices to engage with society on any level.

Citizenship education includes the creation of awareness, skills and trust to allow individuals to make their own choices and take responsibility for their own lives and communities (including those online). Citizenship education is becoming more and more relevant in many countries, where democratic society and its institutions face threats.

As you can imagine, education, learning and (digital) citizenship are not just separate concepts, but are part of a bigger picture of our everyday life. In fact, there are numerous examples of thought leaders who combined these, including Aristotle, Socrates, Rousseau, Leonardo da Vinci, Einstein, Gandhi and Sugata Mitra. In the following, read the case study of Malala Yousafzai, Nobel Prize winner and activist for girls' education.

Case study - Malala Yousafzai

Malala Yousafzai is a Pakistani female education activist and the youngest recipient of the Nobel Prize. Malala's fight for education started at the age of 11 when she wrote an anonymous online diary about the life of a schoolgirl in Pakistan's Swat Valley under the Taliban. A New York Times documentary about her life as the Pakistani military interfered in the area was made by journalist Adam Ellick the following summer.

A masked gunman boarded her school bus on 9 October 2012 and asked, "Who is Malala?" Then, in an assassination attempt in revenge for her activism, the Pakistani Taliban gunman shot Malala and two other girls. Badly injured on the left side of her head, Malala woke up in a hospital in Birmingham, UK, 10 days later.

Following her recovery, Malala became a prominent activist for the right to education. She co-founded the Malala Fund, a non-profit organization. In 2013, she co-authored *I Am Malala*, an international best seller.

"For her struggle against the suppression of children and young people and for the right of all children to education", Malala was co-awarded the Nobel Peace Prize in 2014, thus becoming the youngest ever Nobel laureate. She graduated with a degree in Philosophy, Politics and Economics from the University of Oxford in 2020 and continues her fight for the right of girls to education.

Watch Malala's story here:

Source: https://www.youtube.com/watch?v=6by9NEhT9GM

Self-reflection: What are the links between education and citizenship in the case of Malala Yousafzai?

A world without education

What if there weren't any more schools? Compulsory schooling is the standard in almost every culture on Earth. In the EU, most countries require children to go to school from 5 to at least 16 years of age. What would happen, though, if primary and secondary schools, high schools, technical institutes and universities were all gone?

The benefit of the human brain is its innate capacity to learn from other experiences, making it possible for people to learn faster and learn more by transferring skills from one person to another. This helps you develop your skills quicker and frees up time to learn other skills. Education institutions develop their curricula so that you can learn quicker, better and more effectively. This is especially important given the rapid development of (digital) technology.

Without school education, people would need to rely solely on apprenticeship and job shadowing. This would be detrimental for your personal and professional growth for two reasons: lack of opportunities to learn, because you would actually need to get into a trainee job to start learning that job and much slower learning because you would need to experience each task, skills, etc.

These results at the individual level will be replicated on a larger scale in our culture. Without schools, our society will not be able to meet the intellectual demands of existing and emerging technologies. Instead, we would be forced to abandon most of our inventions and return to a more primitive and simple age, with no intellectual demands on the individual.

Although formal schooling would vanish, it is possible that we would instead see the return of the Middle Ages and later apprenticeships for most of the professions with young children entering the workforce in order to acquire the lifelong skills required for their careers: vehicles, planes, rockets, and other devices needing years and years of engineering and technical training would be a thing of the past.

But with the loss of schools, there would also be a disappearance of choice and personal independence, as individuals would be forced to choose and train only within the work immediately available to them. So, note that the mobile phone in your hand, the satellite to which it communicates, and the rocket that carried the satellite into space all exist because of the schools.

Watch the video What if all the schools disappeared:

Source: https://www.youtube.com/watch?v=_OE2rNP8fb0

The learning process

Learning is the process of acquiring new knowledge, understanding, behaviors, skills, values, attitudes and preferences through study, experience, or being taught. It is believed that learning is much deeper than memorization and knowledge retrieval. Deep and long-lasting learning includes comprehension, connecting ideas and ties between prior and current experience, independent and critical thinking, and the ability to use knowledge to new and different contexts. Learning is a process that:

- **builds on prior knowledge** - involves enriching, building on and changing existing understanding. For example, learning how to use the Instagram App is based on prior knowledge on how to use smartphones and to take photos.
- **is active** – includes engaging and manipulating objects, experiences, and conversations to build mental models. For example, it is not enough to read a blogpost about how to edit a video; you need to start doing it, interact with the video camera, with the processing app, with colleagues for help and feedback, etc.
- **is situated in an authentic context** - provides learners with the ability to engage with unique ideas and principles on a need-to-know or a desire-to-know basis. For instance, you need an online or face-to-face context which supports your learning; you are reading this now on your free will and comfort.
- **occurs in a complex social environment** – you need to think of learning as a social activity involving people, the things they use, the words they speak, their cultural context and actions. For example, when learning how to use Google Maps, you need to relate the app to the physical environment, local guides, language and your needs as a user.
- **requires learners' motivation and engagement** - since considerable mental effort and persistence are necessary, you need to find your motivation and to engage in the learning process

Source: Luana, 12 years old. Creativity word cloud

Learner's attributes

You may wonder what are the learning habits you need to be successful in school, higher education, the workplace and life in general. Research indicates that good learners habitually approach learning by being confident, responsible, reflective, innovative and engaged (UCLES, 2018). In order to effectively control their performance, they are able to skillfully use a wide range of cognitive skills and socio-emotional skills (including personality attributes such as resilience, self-motivation and self-regulation). **Confident** – Learners are confident, comfortable in their understanding, reluctant to take anything for granted and able to take academic risks. In an organized, critical and reflective manner, they are keen to discuss and test ideas and arguments. They will interact and defend beliefs and views as well as respect those of others.

Responsible – Learners take control of their education, set goals and focus on intellectual integrity. They are collaborative and positive. They know that their conduct has an effect on others and on the world. They understand the meaning of history, context and society.

Reflective – Learners identify themselves as learners. They care about their learning processes and products and build knowledge and strategies to be life-long learners.

Innovative – Learners embrace and meet new challenges resourcefully, creatively and imaginatively. To solve new and unknown problems, they are able to apply their experience and understanding. They will adapt to new circumstances that involve new ways of thinking in a versatile way.

Engaged – With curiosity, learners are alive, possess a spirit of inquiry and want to explore deeper. They are ready to learn new skills and are open to fresh ideas. They act well independently, but with others as well. They are trained, locally, nationally and internationally, to engage constructively in society and the economy.

Confident	Confident in working with information and ideas – their own and those of others.
Responsible	Responsible for themselves, responsive to and respectful of others.
Reflective	Reflective as learners, developing their ability to learn.
Innovative	Innovative and equipped for new and future challenges.
Engaged	Engaged intellectually and socially, ready to make a difference.

Source: authors, based on (UCLES, 2018)

The attributes are interdependent and should be regarded as a whole. For instance, confidence needs to be grounded in reflection and accountability so that the learner shows capacity and modesty to assess how sure they can be that they are correct. In order to be creative, able to take academic risks and not afraid to make mistakes, learners need to be willing because they see them as a learning opportunity.

Learning from failure

Many active learners see failure as both necessary and desirable, since it is difficult to develop as a human being without learning from failure. Humans are born with an instinct to learn from mistakes in a way that does not give rise to fear or stress. This changes if young people are pushed to be competitive, focused on performance rather than learning.

One of the goals of the learner attributes is to inspire learners to be risk-taking, optimistic in taking on new tasks and learning from mistakes. This requires learners not to be afraid to ask for support and assistance, and not to worry about losing face to others. It is important to have an innate self-motivation to become a flexible, independent learner. Supported by instructors, coaches and schooling, the resilient would have coping strategies to deal with disappointment.

"Failure is not falling down but refusing to get up." -Chinese proverb

Across the entire globe and in all periods of history there are numerous examples of people who failed, learnt from their failures and got up again and again. Here are some examples:
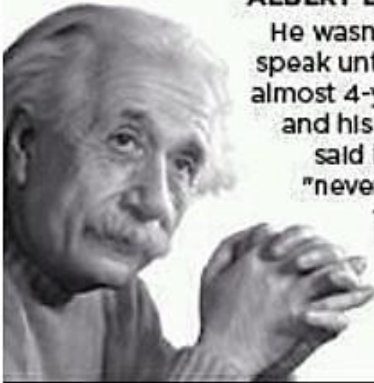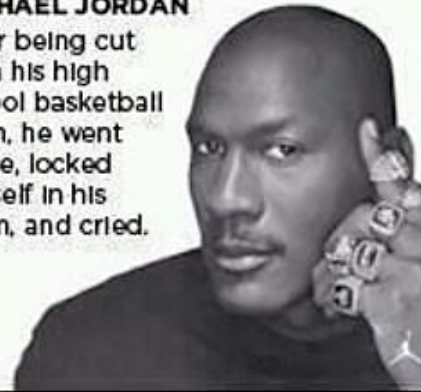
FAMOUS FAILURES

ALBERT EINSTEIN
He wasn't able to speak until he was almost 4-years-old and his teachers said he would "never amount to much"
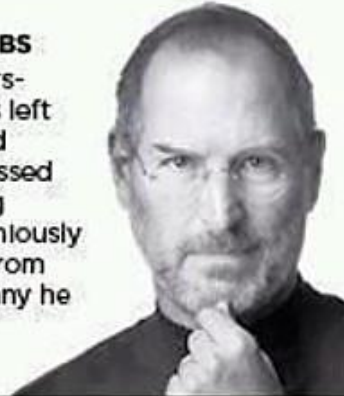
MICHAEL JORDAN
After being cut from his high school basketball team, he went home, locked himself in his room, and cried.

WALT DISNEY
Fired from a newspaper for "lacking imagination" and "having no original ideas."

STEVE JOBS
At 30-years-old he was left devastated and depressed after being unceremoniously removed from the company he started.

OPRAH WINFREY
Was demoted from her job as a news anchor because she "wasn't fit for television."

THE BEATLES
Rejected by Decca Recording Studios, who said "We don't like their sound—they have no future in show business."

IF YOU'VE NEVER FAILED,
YOU'VE NEVER TRIED ANYTHING NEW

Source: Pinterest

Case study - J.K. Rowling

The author of Harry Potter, J.K. Rowling is one of the richest women in the world with a net worth of $1 billion. But before publishing her first novel, "Harry Potter and the Stone's Philosophers," she had suffered a personal failure on an epic scale. Not only did her marriage fail, but she was a single mother on welfare.

Source: Wikipedia

When she finished her first Potter Novel, she has sent it to 12 publishing houses, all of which rejecting the text. A year later, Rowling found a publisher, but was told to get a day's work because she probably wouldn't make money from children's books. But that wasn't stopping her.

She ultimately wrote seven books in the series and gained a worldwide following. She says, "Failure taught me things about myself that I could have learned no other way. I discovered that I had a strong will, and more discipline than I had suspected." (Cherry, 2020)

Guiding questions

We hope that these examples will equip you with the extra motivation to embrace failure, get up and make it part of your learning process:

"The secret of life is to fall seven times and to get up eight times." Paulo Coelho

But how to learn from failure? A good way to begin this process is by asking yourself some tough questions:

1. What can I learn from this?
2. What could I have done differently?
3. Do I need to acquire or improve some skills?
4. Who can I learn from?
5. What will I do next?

Self-reflection: Please think about an example of failure you faced and ask yourself the 5 guiding questions for learning from failure.

Intelligence

Some may ask themselves what is the relationship between learning and intelligence. But let's first see what intelligence is. Narrow definitions focus on problem-solving and mental agility in specific analytical problem-solving tasks and are often associated with intelligence quotient (IQ).

Howard Gardner suggested that standard IQ definitions and tests could not be used to assess or describe cognitive abilities (Gardner, 1983). In turn, he suggested the presence of multiple intelligences: musical-rhythmic, visual-spatial, verbal-linguistic, logical-mathematical, bodily-kinesthetic, interpersonal, intrapersonal and naturalistic.
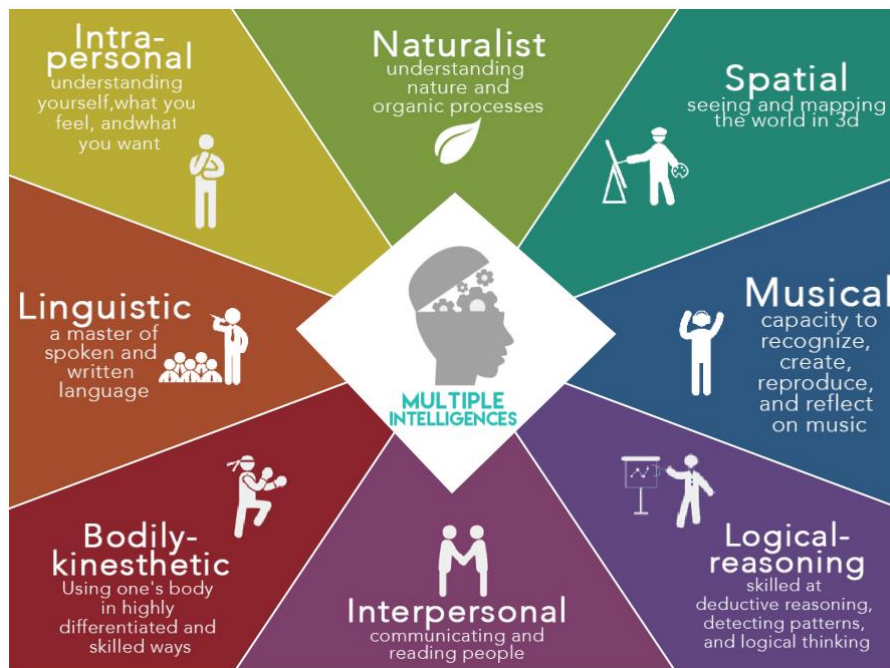
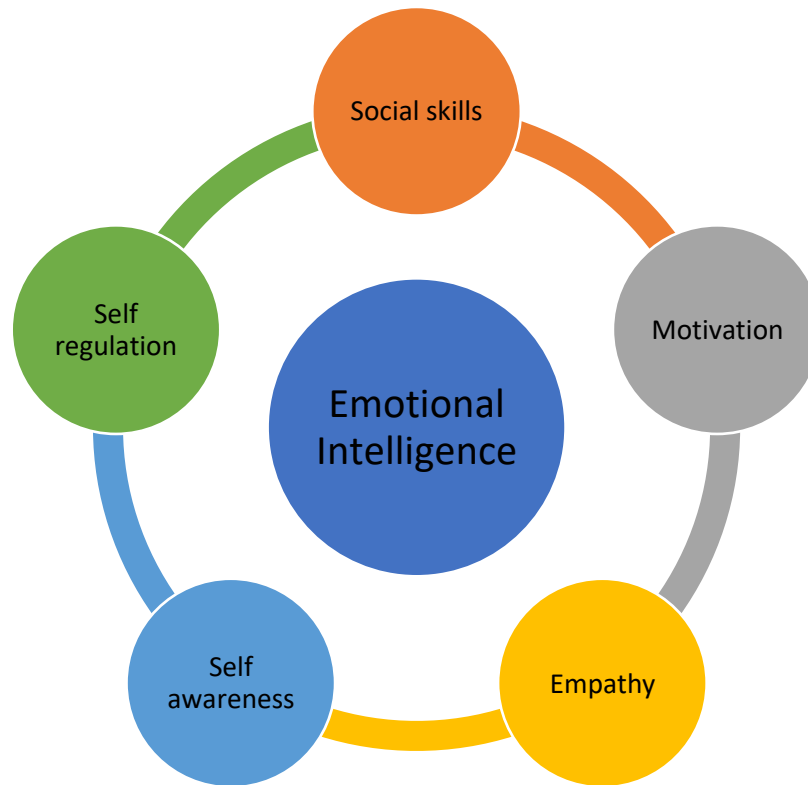Source: simplypsychology.org/ Multiple Intelligences of Howard Gartner

Daniel Goleman advocated the concept of emotional intelligence as the ability to understand one's own and other people's emotions and modify one's behaviour appropriately (Goleman, 1995).

Source: Authors, adapted from (Goleman, 1995)

Robert Sternberg viewed intelligence as the ability to accomplish life goals by capitalizing on strengths and compensating for weaknesses in order to communicate efficiently in various situations using analytical, creative and practical skills (Sternberg, 2009). This may be the reason why successful people are not necessarily those with the highest grades but those that demonstrated practical intelligence combined with wisdom and creativity. The concept of wisdom is very relevant to the learner attribute of being responsible, which is very important in the digital environments.

In a wider sense, therefore, intelligence can be understood as a person's ability to adapt to the world and learn easily from experience, showing successful problem-solving techniques in a number of contexts.

A key thing to remember from this discussion about intelligence in its different forms is that the IQ is not the only, complete indication of one's ability to learn. Also, there are many kinds of things you can learn, in many ways. Therefore, we encourage you to learn what you need and want, the way that best suits you. Fortunately, the digital environment offers you a lot of options. For example, our course includes text, photo, video, audio materials and a lot of methods, e.g. presentation, case studies, discussion forum, etc.

Exercise 1: Young people who changed the word

Objectives:

- Identify young word-changers;
- Write the story of at least one young leader.

Duration: 45 min

Tools: device with Internet connection

Methods: research, discussion

Description of the exercise: No matter the age people do have a huge impact on the society. Some people have been extremely successful with their accomplishments, and now the rest of the world can admire and even take note. Their stories could be a good example and a powerful motivation for other people too.

Tasks: Find out the stories of other young leaders of our times from internet sources. A good source you may wish to consider is the "10 Young People Who Changed the World" blog article available here: https://www.waterford.org/education/kids-who-changed-the-world/. Write down interesting facts about those who impressed you mostly.

Debriefing: Please feel free to share at least one of your findings in the discussion forum. We encourage you to write down names, 50 words bios and a link to the internet source.

Lessons learned: Youth do have power in order to change the word

Recommendation: Guide the students some ideas to follow in their research: age, place, issue, solution, impact.

Forum

Objectives:

- Analyze the impact of schools on society;
- Express their opinion about society.

Tasks:

- Do you sometimes wish that schools would disappear? How do you think it would affect society? Imagine what happens if other institutions disappeared. Let us know your thoughts in the discussion forum.

Supplementary reading

- Multiple intelligences and learning styles: https://learn-u.com/lesson/multiple-intelligences-and-learning-styles/

2. Module 2 - Reflection

Upon completing this module, you will be able to:

- Describe the reflective process;
- Develop effective learning strategy through reflection;
- Organize your thoughts in a reflective way.

About reflection

Reflection is the process of focusing your mind to concentrate on a topic or an event to focus your attention. Although it can sound awkward to formally reflect, reflection is something we do instinctively. The opportunity to reflect is to consider how we do it, and this is vital when you are actually still informally reflecting every day without even knowing it.

"Reflection is part of learning and thinking. We reflect in order to learn something, or we learn as a result of reflecting, and the term 'reflective learning' emphasizes the intention to learn from current or prior experience" (Moon, 2004). Typically, where there is no imminent response, we focus on what we witness. However, in a systematic manner, such reflections are rarely written down.

Reflection represents "…*the way that we learn from an experience in order to understand and develop practice*" (Jasper, 2003)

Reflection may be seen as the act of thought about a single topic cautiously or profoundly, usually including past life and experiences. Reflection is an important ability because it helps you to look at previous incidents and to make the best of those memories. It allows you to describe what went pretty well so that you will continue to do it, what did not go so well, and whether there was something you might do in the future differently.

Whatever you are reflecting on, here are some key things to keep in mind:

- Reflection is an exploration and interpretation of events, not just a simple summary.
- Reflection also means exposing anxieties, faults and failures, as well as strengths and successes.
- It is typically best to choose only the most appropriate aspects of the event or the concept you focus on. Don't refer to the entire thing, or you'll end up telling rather than reflecting.
- It is useful to reflect back into the past with an outlook into the future: how you might do things something differently as a result of reflecting.

Example

There are people who note in diaries or keep journals. There has been a change from paper to digital over time, but the idea remains the same: taking notes about events makes people gain better sense of it. Let's say Eva has been arguing a lot with one of her classmates on WhatsApp and she is upset about it. Writing about the experiences give her the opportunity to express her feelings and to consider some of the bigger picture ideas such as what caused their arguments, friendship and how to avoid these discussions on WhatsApp.

This was just one example of so many reasons why people reflect in their personal lives. In short, reflective writing can be a rewarding exercise of your mind.

Why to reflect

The following points are the core reasons why you may want to reflect:

- Consider our own learning process. Think of how you learn to develop this process.
- Study something objectively. Think of a single event or a personal element of it. This may be your own actions, that of others, or the result of your behavior.
- Develop the theory of findings. Reflect about your perceptions and insights in order to develop your own hypotheses. We also use the ideas of other writers, and this allows you the ability to develop your own.
- Engaging in personal or self-development. Reflection relies on generating useful results for the future. It can help you feel more self-conscious, and it can make you a happier person.
- Make choices or overcome ambiguity. Thinking about prior encounters will help you make choices about new ones.

The reflective process has a lot of positive effects on yourself and can make you a better person. Self-change areas may include:

Perks of reflection	
	Self-confidence is one the main outcomes of reflection
	Maintaining control of your own thoughts and feelings, particularly when faced with others and new circumstances.
	Building deeper perspectives
	Allowing more educated decisions
	Tracking your own results
	Identifying not just your growth, but also your speed of change
	Tapping into your real motives to do something (e.g. examining your commitment to others)
	Setting your learning habits and thought patterns
	Creating a positive picture of yourself.

Therefore, when you analyze yourself, you require the opportunity to step back and see a bigger picture. Reflection is an integral aspect of learning from experience. When drawing on our interactions, we optimize the potential of any new learning. This is especially important when contemplating the positive. They are much more difficult to remember than the bad aspects of some sort of experience.

Elements of the reflective process

Reflection is a form of thinking that seeks to increase comprehension and contribute to new learning. The following are all important elements of the reflective process:

Making sense of experience

We don't always learn from our experiences. To do that, we should evaluate experience, consciously try to "make a sense" or find the significance therein by means of reflection. This contributes to learning.

Standing back

When we are wrapped up in an activity, it can be difficult to reflect. In order to gain a better vision or viewpoint, reflection offers a means of 'standing back' from the feelings and rapid decisions made at the moment.

Repetition

It is important to focus on something, even several times, to examine what has happened from various angles.

Deeper honesty

Reflection is correlated with the pursuit of truth. With reflection, we can identify things we find difficult to consider at the time: feelings or thoughts which we might have preferred to disregard at that time, particularly if we feel confused or concerned about other people's thoughts.

Weighing up

Reflection means being even or balanced in judgment. This means not only the most apparent, but taking all into account.

Clarity

Reflection, like seeing events mirrored in a mirror, will offer greater clarity. At any point of preparation, carrying out and evaluating events, will assist you.

Understanding

On a more profound level, reflection is about learning and understanding. This means acquiring vital insights that cannot be only 'taught'.

Making judgements

In order to move on, alter or establish an approach, plan or behavior, reflection requires an element of drawing conclusions.

Source: Authors

What does reflection involve

Reflection is an active, disciplined and deliberate strategy. Essentially, it involves two things: critical thinking and self-discovery.

Critical thinking

At the core of reflection is critical thinking. This means that you have to question everything about your experiences, what you're experiencing and what you're reading. This is particularly critical in the digital environment, because it is an environment where information is created and retransmitted at very high rate and its truthfulness and quality is not always verified.

This is when and when the reflective prose comes in its own way. The more insightful and logical inquiry is used in your reflection writing, the more helpful it can be to your personal and professional growth. Also, it would be beneficial for the recipients of your reflective writing. Think about a blog article you may write about an experience of yours and how useful this may be for others to read. In order to take a true and fair view on something, you need to reflect carefully upon the evidence you have and adopt an analytical approach to what you are experiencing (online and offline). That is, question everything. Critical thinking and reflective writing go hand-in-hand.

Self-discovery

Reflective thinking and writing involve a large element of self-discovery. But the reflective process is challenging. This is because we don't really want to learn the truth about ourselves and the things we most need to know can be the hardest to hear. It takes time and preparation for someone to learn strong reflective skills. If the act of reflection does not come easily or fast, you need not be frustrated. If you face challenges in your approach to learning, then you would benefit the most.

Reflective thinking essentially involves three processes: experiencing something, thinking (reflecting) on the experience, and learning from the experience.
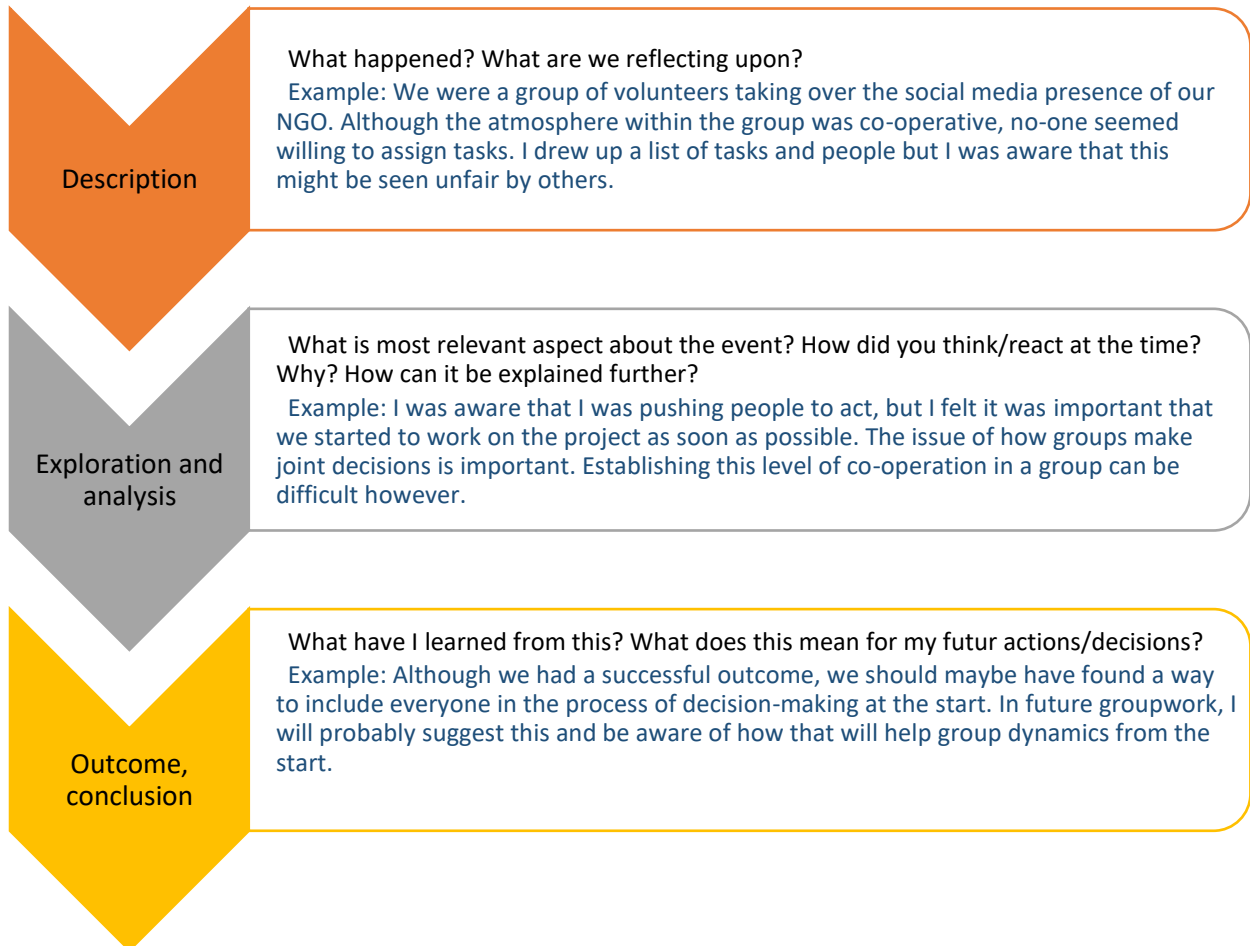
Learn

Think

Experience
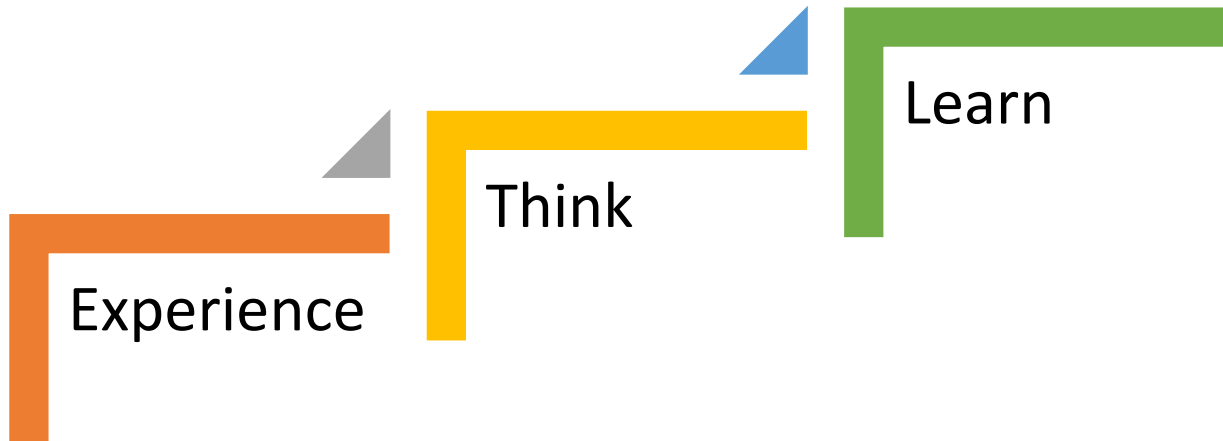
Source: Authors

Example:
Your project was rejected by the Erasmus+ national agency.

An experience/event	
Your project was rejected	Self-awareness: How you think and feel about the experience

Thinking about the experience	
You read the feedback from the project evaluators and think about what you can do to improve your proposal	Self-improvement: Learning from experience and wanting to improve on past performance

Learning from the experience	
You act on the feedback report	Empowerment: You take control of making changes in order to achieve a better outcome

Source: Authors

Erasmus+   ATHENS LIFELONG LEARNING INSTITUTE   TEAM 4 excellence   SEAL CYPRUS

Reflective writing

We mentioned earlier o about reflective writing. Reflective writing, in a diary or your own notes, can be very useful in helping you explore an idea or experience. Even in short paragraphs, you can see three broad stages: description, exploration and analysis, and outcome or conclusion:

Description

What happened? What are we reflecting upon?
Example: We were a group of volunteers taking over the social media presence of our NGO. Although the atmosphere within the group was co-operative, no-one seemed willing to assign tasks. I drew up a list of tasks and people but I was aware that this might be seen unfair by others.

Exploration and analysis

What is most relevant aspect about the event? How did you think/react at the time? Why? How can it be explained further?
Example: I was aware that I was pushing people to act, but I felt it was important that we started to work on the project as soon as possible. The issue of how groups make joint decisions is important. Establishing this level of co-operation in a group can be difficult however.

Outcome, conclusion

What have I learned from this? What does this mean for my futur actions/decisions?
Example: Although we had a successful outcome, we should maybe have found a way to include everyone in the process of decision-making at the start. In future groupwork, I will probably suggest this and be aware of how that will help group dynamics from the start.

Source: adapted from (Queen Margaret University, 2014)

Useful phrases for reflective writing:

- Looking back, I now think...
- I was uncomfortable about...
- I was aware...
- I think...
- I realized...
- I felt...
- At the time I thought…looking back, I can see that…

Example of reflective writing

Instead of: "I didn't like the way she replied me on the Facebook group. She was indiscreet and that upset me".

Do say: "At the time, the way she replied on the Facebook group annoyed me because I think I resented the way she disclosed some things that I told her in confidence. Looking back, I realize I

wasn't aware of the danger of some personal information given in confidence being made public on Facebook…"

Reflective questions

Have you noticed the kind of questions we were using for each step of the reflecting writing? There are six strategic questions (5WH) to start with in your reflective thinking:

Source: Authors.

Examples of reflective questions (University of Hull, 2020):

- What prior knowledge did I have?
- How did I act during the event?
- What did I learn from the event that I did not know before?
- What links can I make between my experience and other events/ideas?
- How can I use the knowledge I have gained from this event/experience in the future?
- Are there other interpretations of the event? Do I need to consider them?
- What are the implications of what happened?
- If I distance myself from the event and observe my reactions to it, does it change my perspective?
- Based on what I have learned, how should I act in future?
- What other information do I need in order to understand the implications of the event?
- What is the best way to go forward?
- Looking back, would I have done things differently? If so, what and why? If not, why not?

Note-taking apps

You can take notes in your physical diary or in a note-taking app. Research shows that handwriting in your notebook has some advantages because it appears that you learn and reflect better while you write by hand. However, in the digital era notetaking became more complex because you can

associate useful images, videos and links to your text. There is a dizzying array of tools and apps for taking notes. Here are some examples (Sharma, 2020):
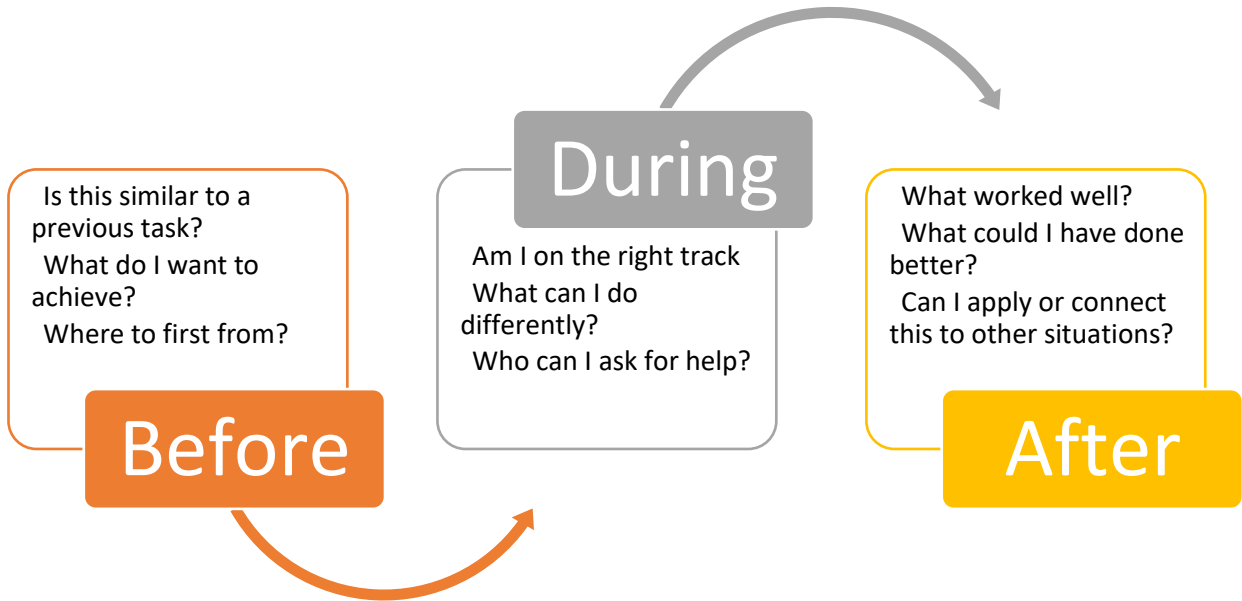
- *Evernote*. Evernote lets you take notes in a variety of formats, including text, pictures, audio and video recordings, annotated Web page clippings and more.
- *OneNote*. Being a free-form information gathering app, OneNote lets you capture just about everything and place it anywhere on a flexible digital canvas.
- *Dropbox Paper*. Dropbox Paper offers you (and your team) a collaborative workspace where you can not only add and edit notes but also brainstorm, review ideas and even handle meetings.
- *Simplenote*. Simplenote is perhaps the simplest note-taking app out on the market. It provides an easy way to maintain notes, lists and ideas. Simplenote's core experience is all about speed and efficiency.
- *Apple Notes*. From long-form textual notes to to-do lists, Notes lets you jot down everything. You can also add Web links, scanned documents and sketches to notes.
- *Zoho Notebook*. Zoho Notebook is a note-taking app that can manage different types of notes equally well through its card design.

Source: College info geek

Nine questions to improve your thinking

Especially in the digital environment, where people are connected remotely to virtual teams and carry out tasks and activities in the online environment, it is important to have the ability to critically analyse and improve the way you think. That will give you an improved self-awareness and more control of your thoughts. The following questions will help you to develop appropriate and useful thinking strategies before, during and after any activity or task.

Is this similar to a previous task?

What do I want to achieve?

Where to first from?

Before

During

Am I on the right track

What can I do differently?

Who can I ask for help?

What worked well?

What could I have done better?

Can I apply or connect this to other situations?

After

Source: Adapted from (Inner Drive, 2017)

Effective study habits

One way of looking at learning is to understand the performance, quantity and consistency of learning that takes place over a given period of time. Improving learning quality can lead to more learning, quicker, more efficient and deeper learning.

One example of lost time and effort that slows down learning productivity is that students adopt ineffective study patterns. Ineffective study is generally passive and not properly targeted or precise.

Here are some misconceptions and common practices, compared with effective study habits

Misconception and common practice	Reality and more effective practice
Learners read a material and their notes over and over again trying to memorize everything. Learners often spend time reviewing what they already understand. Because of passive revision, people get easily distracted with the illusion that they are learning.	You need to focus and practice difficult read in particular. Revision is more effective when you ask yourself questions and note the known and unknown parts. This offers a better emphasis for further study. This form of revision is active as you test your understanding and reflect on the outcome.
Learners repeatedly copy their notes and rely on remembering facts.	Learning is best separated into parts, and the facts are best taught in accordance with relevant principles.
The review is postponed and done for a large amount of information during a short period of time. Learning elements are treated separately, not as a topical whole.	Revision and practice should be constant over time. You should think of what you have learnt recently. You should build bridges in your mind between various topics and study areas. Moreover, you need to practise new skills and understandings soon after you came across them. A good strategy is to use at least one of the ideas from any class/training/online study.

Learners review and work on their own.	Reviewing is not necessarily a solitary activity. Revision can effectively be done as a collaborative activity with people working in pairs or groups. In teams, you can divide tasks, test or question each other.
Learners do not reflect on the outcome of their learning (exam, immediate application, etc.) to find out what went well and what/how it can be improved.	We encourage you to reflect on your performance using what you have learnt about reflection in this course.

Source: Authors

Learners' traits and performance

Knowledge and understanding need to be backed up with successful learning habits. Research shows that there are 10 generic competency areas: open thinking style, organization, motivation, active enquiry, self-discipline, self-reflection, coping with demands, emotional control, resilience and organization citizenship (Dale, 2011). Research shows that there is a relationship between what learners do and their learning performance.

Exercise 2: A reflective experience

Objectives:

- Express their thoughts in a reflective way;
- Write about a personal experience;
- Express a future perspective about the personal experience.

Duration: 45 min

Tools: device with Internet connection

Methods: reflective writing

Description of the exercise: Remember the content of *Reflective questions* topic. Think of an event, something that you experienced online and it was remarkable.

Tasks: Organize your thoughts into the following framework:

An experience/event	
Type in here:	Self-awareness:

Thinking about the experience	
Type in here:	Self-improvement:

Learning from the experience	
Type in here:	Empowerment:
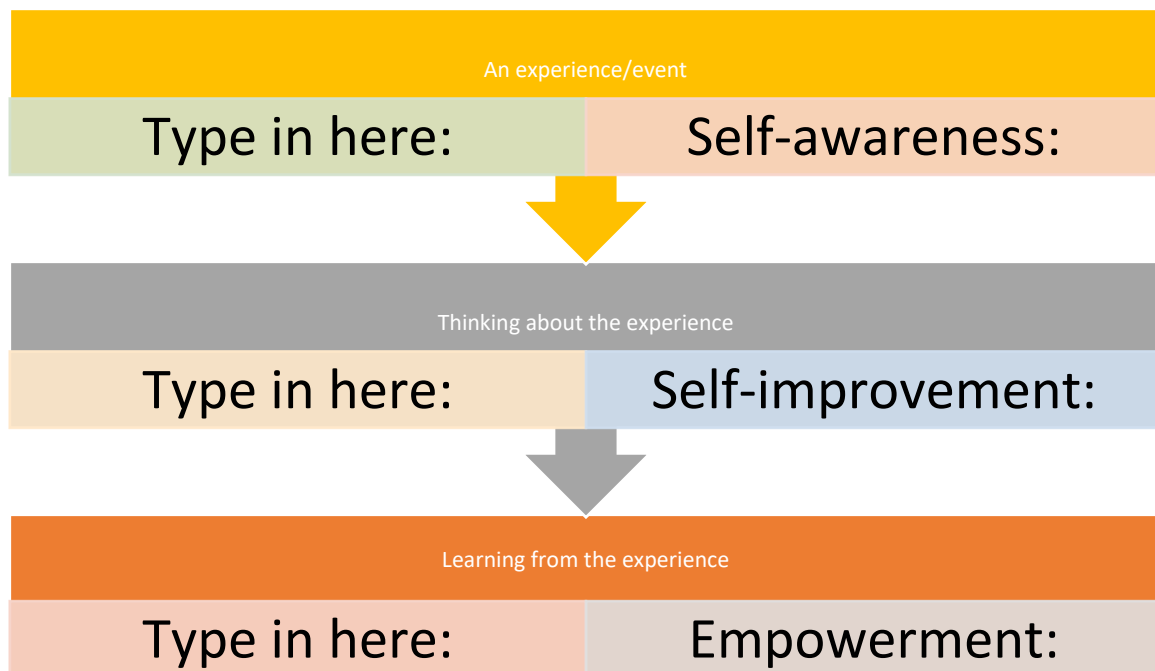
Source: Adapted from (University of Hull, 2020)

Debriefing: Answer to the question: What would you do next time in a similar situation? What would you feel next time in a similar situation?

Lessons learned: How to organize our thoughts.

Recommendation: If it is possible, use some relaxing music on the background.

Forum

Objectives:

- Recognize the presence of the reflective process in your life;
- Describe your way of reflecting.

Tasks:

- Were you doing reflections before? How were you doing it and in what kind of moments? Share your thoughts in the discussion forum!

Supplementary reading

- Reflective thinking, an insight: http://ijrar.com/upload_issue/ijrar_issue_956.pdf

3. Module 3 - Creativity

Upon completing this module, you will be able to:

- Define the concept of creativity;
- Give examples of creativity outputs;
- Explain the 4 C model of creativity.

How does the internet promote creativity

Creativity is one of the characteristics of which people seem to know, but if you ask them to describe it, they get tampered with it. A list of creative people (Leonardo Di Vinci, Isaac Newton, Mark Twain, Thomas Edison, Walt Disney, Albert Einstein and Steve Jobs) and the effects of creativity (a book, an innovation, a new way of looking at the world) is easy to come up with, but the true concept of creativity is hardly defined.

Many ancient civilizations regarded "discoveries" as ideas or progresses that we might assign to the creativity of a person. Even artworks were seen as imitations of nature rather than as types of production. All comes from our minds, whether mental or physical; all of it includes neurons in the right part of the brain shooting again and again until what you are doing becomes entrenched. The desire to transcend conventional thoughts and create new ideas is in fact creativity.

Moreover, technological progress during the 20th and 21th century changed the way we create and the tools we use. Over this period, computers, internet, smart phones, computer programs, mobile applications, photo and video cameras and processing software we developed. Currently, automated and augmented creativity and data processing and AI are making huge progress. In this sense, digital creativity has arisen to pursue innovative concepts and new ways to show your ideas, study or work using digital platforms and technology. As an example, the word cloud below is created by 12 years old:

Source: Luana, 12 years old. Creativity word cloud

You will be able to put together a toolbox of skills and be more creative and successful in your work, personal or daily life by learning the basics of creativity.

## What is creativity

The definition of creativity isn't constrained. Each of us can convey our own sense as we explain what we feel with the creation of new ideas. Creativity may be found in simple daily tasks and in ground-breaking scientific discoveries as well. In literature and academia, several definitions of creativity have been used to describe these outbreaks of inspiration.

A list of well-respected definitions is given below:

- *"Creativity is the process of change, of development, of evolution, in the organization of subjective life"* (Ghiselin, 1952).
- *"Creativity is the forming of associative elements into new combinations which either meet requirements or are in some way useful"* (Mednick, 1962).
- *"Human originality at work and leisure across the diverse activities of everyday life," which is "central to human survival" and found, to some extent, in everyone"* (Richards, 2007).
- *"Creativity is problem-solving with relevance and novelty"* (Mumaw, 2013).
- *"Creative achievement refers to the actual realization of this potential in terms of real-life accomplishment"* (Carson, Peterson, & Higgins, 2005)
- *"Creative potential refers to the individual's ability to generate something novel and useful"* (Sternberg & Lubart, 1999).
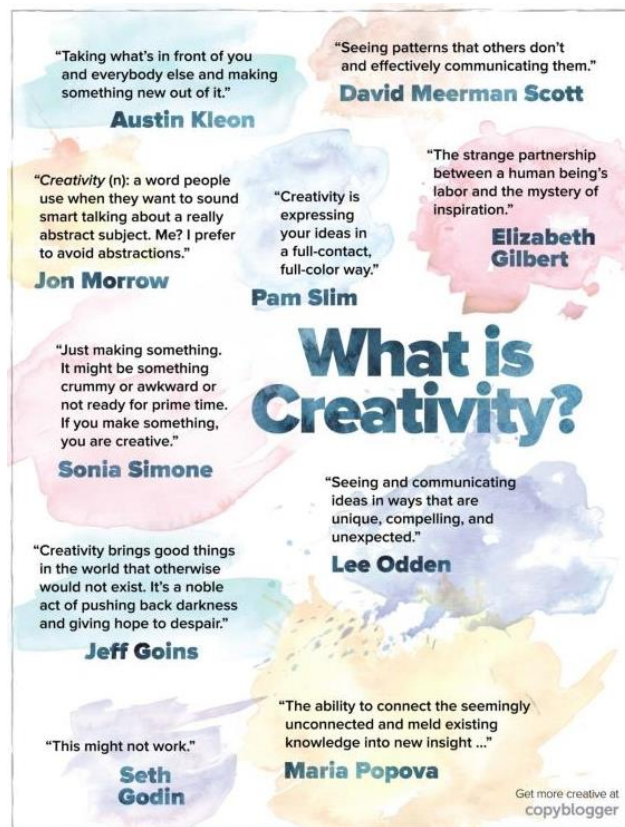
Source: (Farnworth, 2016)

Creativity, in reality, denotes the ability of a person to create new or original ideas, observations, innovations or creative products that experts recognize as being of science, esthetic, social or technological importance.

For us, creativity is the ability to approach challenges, answer questions, imagine or invent something new or value where the value may be personal, economic, social or any combination of these. In the digital context, creativity may be defined as imagination with responsibility.

What creativity is not. Creativity is not the ability to create something out of nothing, but the ability to generate new ideas by combining, changing or reapplying existing ideas. Some creative ideas are astonishing and brilliant while others are just simple good practical ideas that no one seems to have thought of yet.

Examples of creativity

The HTML Hyperlink

This was created in 1990 and lets us connect everything to anything, even the unimaginable:

```
<a href = "https://www.slate.com">Slate</a>
```

Source: Slate.com

Tim Berners-Lee changed the world when he introduced the hyperlink, a snippet of code that lets anyone jump across the World Wide Web. The concept of linking information was not especially new. What was new was the cobbled together punctuation from various computer system conventions to arrive at the colon-slash-slash format of the URL, which could name any and all of those extant items. But while Berners-Lee was concerned with backward compatibility, the hyperlink-anything concept made the idea future-proof. Berners-Lee's hyperlink was free to become a Buy It Now button, a like vote, a retweet, and much more. Those unexpected use cases should be a reminder that, when standing at the cusp of a technological revolution, the hardest thing to see is what comes next. (Duane, 2019)

The IPod

When Apple Computer comes up with a brand new product such as the iPod that no one has ever thought of before, this is an example of creativity.

Source: pxhere.com

Salvator Mundi

This is the most expensive painting ever sold, authored by the Italian artist Leonardo da Vinci (c. 1500). When a painter creates a beautiful work of art, this is an example of creativity.
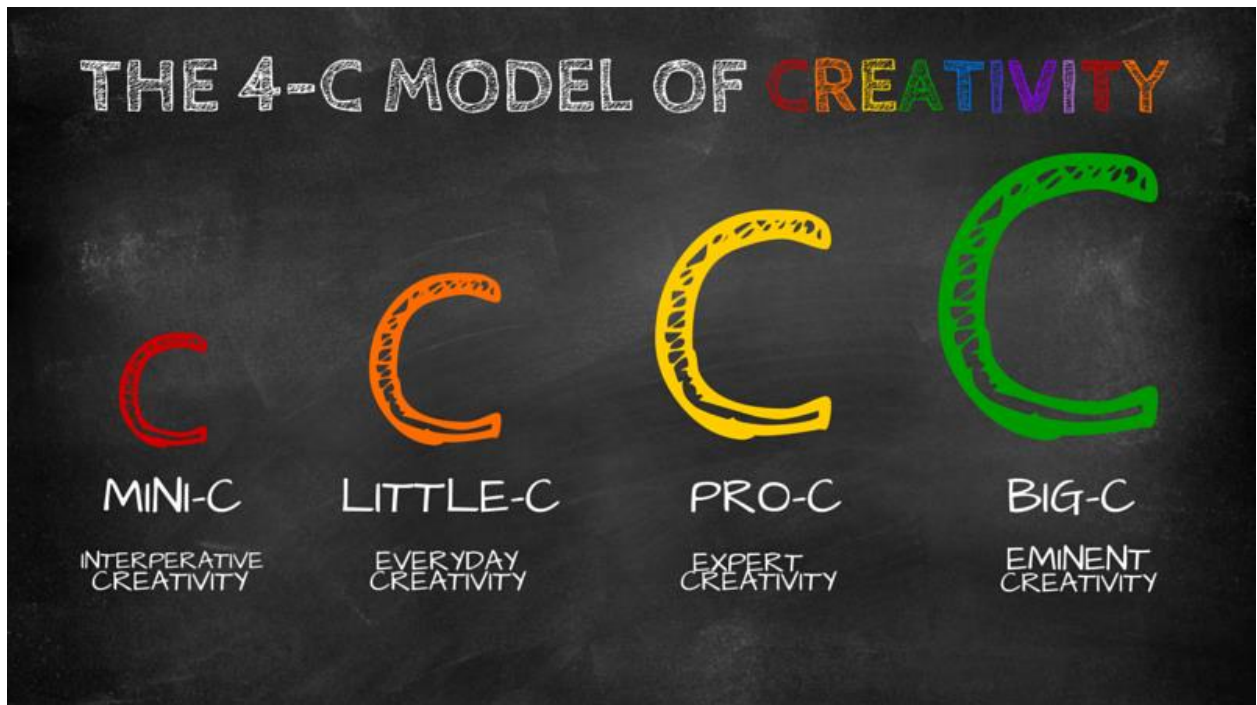
Source: Wikipedia

A simple photo

A simple photo can be an example of creativity.

Source: architecturelab.net/

Four categories of creativity

Four creativity categories were created by (Kaufman & Beghetto, 2009) to help reveal the nuances between various levels and forms of creativity.

Source: npdl.global

Mini-c creativity

Creativity is inherent in learning. There is a degree of creativity involved every time you pursue a new activity. What you make may not be groundbreaking at the mini-c innovation stage, but it is fresh and meaningful to you. Mini-c occurs when you show versatility in reasoning, intelligence and novelty. Mini-c innovation could include creating a new link between existing knowledge and a new piece of information that allows you to better understand the subject.

Examples:

- Writing an email;
- Cooking dinner;
- Re-arranging folders in your computer;
- Changing your Avatar or profile image.

Source: Authors, course logo created in a morning over a cup of coffee
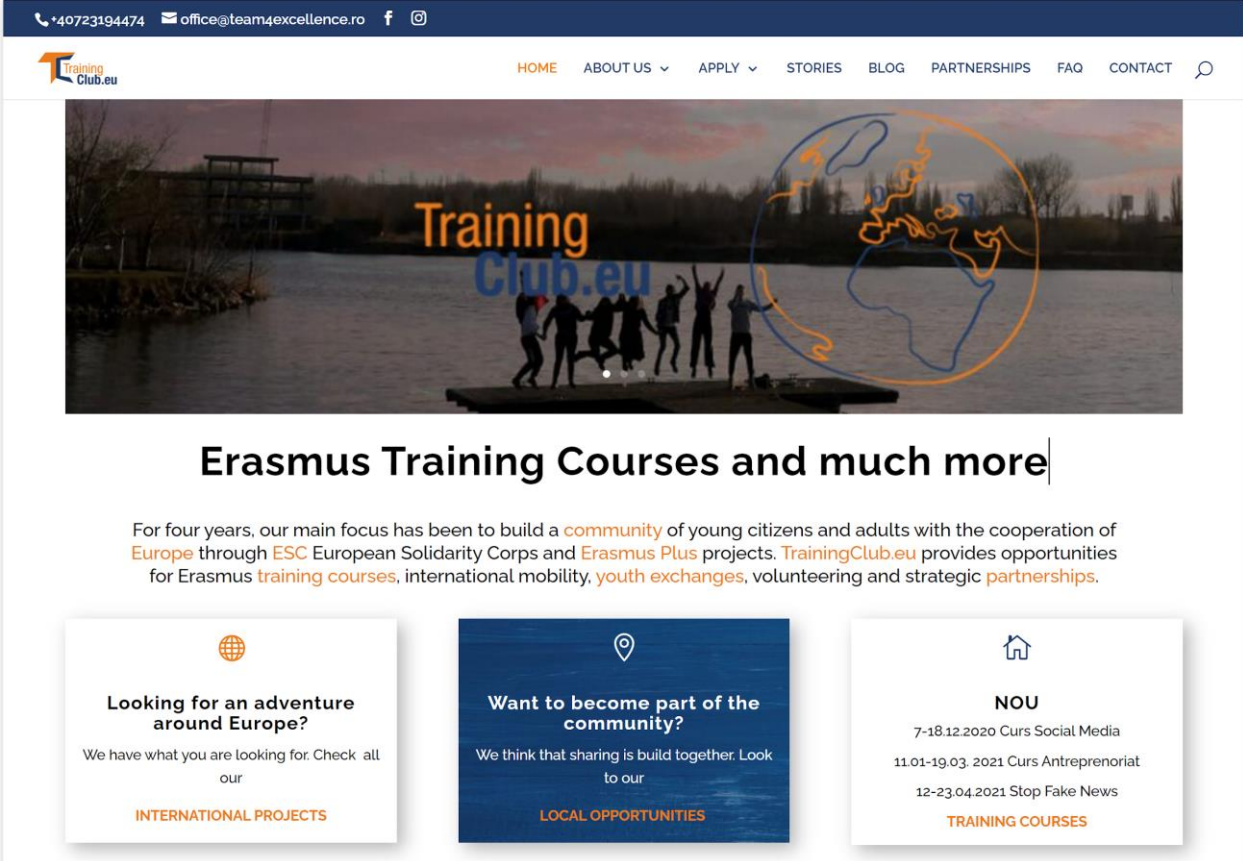
Little-c creativity

The little-c creativity represents an element of progress from the mini-c level. Little-c innovation is about behaving with versatility, intelligence and innovation in the daily world. This results in something new being produced that has originality and meaningfulness. Advances are made with sufficient input over an extended period of time and what was produced may be of benefit to others.

Facebook, Twitter, Instagram and TikTok; all these internet platforms encourage innovative individuals to share their knowledge and work.

Examples:

- A person who can resolve a complex problem at work;
- A keen coder with an eye for design;
- A photographer who takes good photos and exhibits them on a photo-sharing website.


Source: https://trainingclub.eu/ A website created by 6 volunteers over a period of 2 months

Pro-c creativity

At this level, one has the ability to be creative at a professional level and in a professional venue. At this point, one would have had many years of deliberate practice and training. Not everyone at the Pro-c level can make a living with their creative pursuit; however, it is generally the goal of those at this level to support themselves doing something they love. This kind of creativity has taken time and effort to develop (usually 10 years).

Examples:

- An artist who was gifted as a child, has graduated and can now perform in his area of specialization;
- Somebody studied art at a university and his portraits are hanging in galleries. Her works are regarded as innovative by art experts and critics.
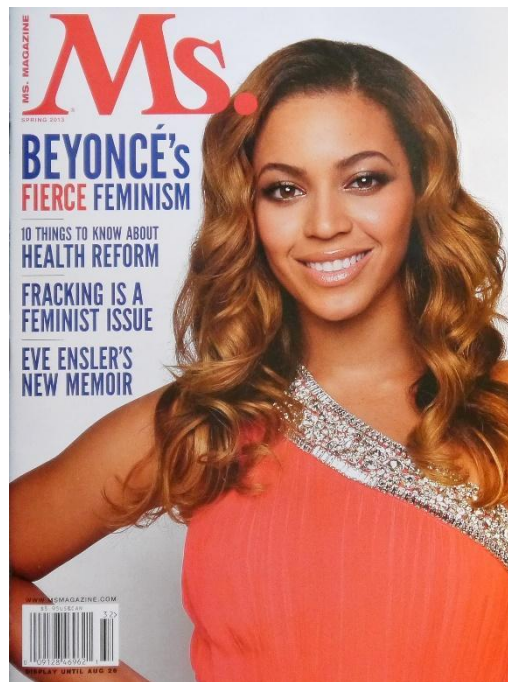
Source: Wikipedia, Beyonce world class artist and winner of over 60 awards, on the cover of MS. Magazine

Big-C creativity

Big "C" creativity goes beyond the regular problem solving. It is about giant strides achieved in, for instance, science, technology and arts. Big-C creativity describes the outcomes of an elite who have transformed their discipline with their innovations. Even if it was considered controversial when it was first produced, their work has widely been recognized as ground-breaking.

Big-C creativity is beyond the grasp of most of us, and the creators of Big-C themselves are rare birds.

Examples:

● Einstein's theory of relativity;
● Discoveries in modern cell biology by Emil Palade, Romanian Nobel Prize winner
● Picasso's Guernica painting
● Ludwig van Beethoven's Symphony No. 9 in D Minor.

● The man on the Moon.
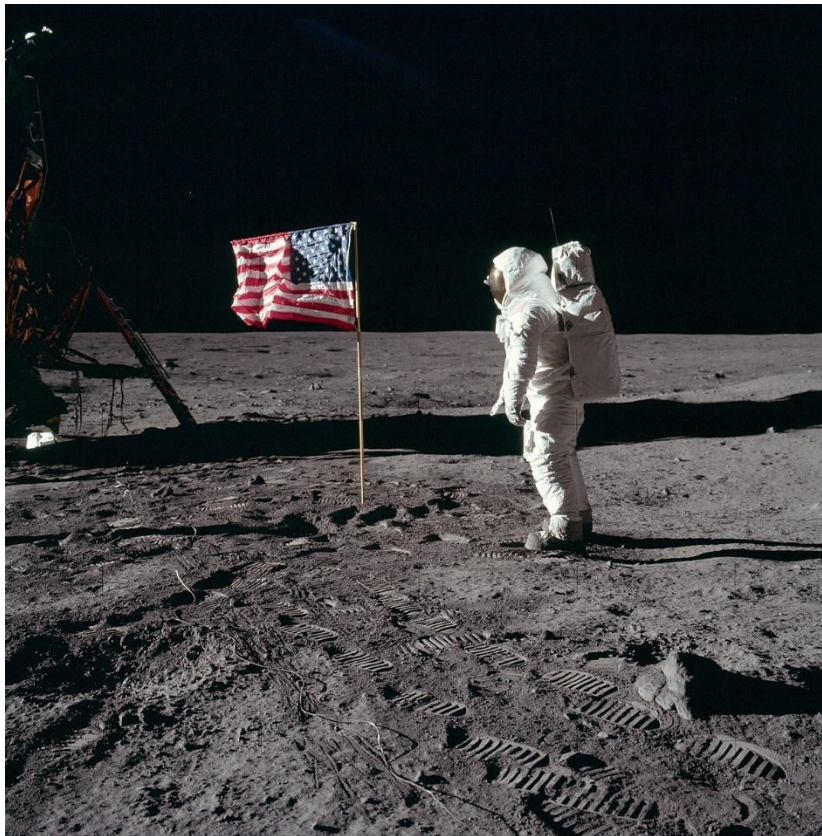
Source: Wikipedia

● Google's search engine

Source: Google.com, Largest search engine - Google

In summary, by providing a structure to identify different stages of creative expression and pointing out possible paths of creative maturation, this model reflects the developmental course of creativity

in the life of an individual. The boundaries between these categories can be blurred and they are not age specific. In different areas of their life, a person may fit into multiple categories. For example, you may be a pro-C photographer while at work and a little-c level learner while attending a web design class.

Being creative and imaginative depends on the other features. Being creative needs thoughts, involvement, trust and transparency.

Creativity myths and misconceptions

According to World Economic Forum, there is a rising demand for soft skills, such as creativity, analytical thinking, innovation and active learning. In fact, creativity is said to be related to 9 of the top 10 skills that global executives consider essential for 2021 onwards. Therefore, creativity is considered one of the key skills of the future. With the technological advancement redefining our jobs, understanding how to cultivate original ideas becomes increasingly important.

Most individuals think that creativity is divinely inspired, unpredictable and only given to a fortunate few. Some even assume that creativity belongs to the arts. We discuss the prevalent myths and assumptions about creativity in the following, and restore the objective fact about them.

Some creativity myths and facts are:

Creativity is about art. Creativity is associated with artistic expression. The capacity of any person to produce new ideas can be applied in almost every field of human life, from art to science and beyond.

Eureka myth. Fresh ideas often seem like a spark of insight. But studies suggest that such insights are, in fact, the product of previous hard work on the issue. Thoughts are then granted time to incubate in the subconscious mind as you link threads before ideas surface as new eureka-like developments. Archimedes has been thinking and working in the subject field before he linked to physics the observation that the water level rises once he steps into the bathtub.

Source: Wikipedia, Archimedes exclaiming Eureka in the bathtub

You were either born creative or not. Many people believe creativity is in our genes and that you can't teach or improve it. However, there is no such thing as a creative breed. This common belief may

38

become a self-fulfilling prophecy, because if you think that you are not creative and there is nothing you can do about it, then you will never be creative. In reality, creativity is trained and can be exercise, just like every other muscle in your body. Hard work and dedication are more linked to creativity than to talent. The time spent studying or working on something is going to shape that special ability. It's fun to be creative, so don't put limits on yourself.

Creativity means to create something from nothing. Nothing is coming out of the blue. All we can imagine is highly affected by social, cultural and other influences. Creative people prefer to see things from a different viewpoint. They put together ideas in a different way that no one has yet tried to see through. Long gone are the days of the inventors of genius. Many creative people are now focused on developing something by using what already exists.

Lone creator myth. This represents our inclination to assign breakthrough inventions and striking artistic works to a single individual, ignoring supportive work and collective preliminary efforts. You can't do it on your own, and creativity is sometimes a team effort. Many forms of creativity rely on collaborative work. Think about how local guides make Google Maps a helpful app.


Source: blog.google

Originality myth. There is a long-standing misconception that an innovative idea is exclusive to the person who thought of it. Research shows further evidence, however, that new ideas are simply variations of older ideas and that sharing them helps to create more creativity.

Constraints kill creativity. It is commonly thought that genuinely original ideas derive from creative independence and boundless capital. Research reveals, however, that creativity loves constraints. You are forced to be more resourceful and create more creative ideas, based on what you have available, when you face a certain set of rules. Constraints enlarge your views and help you think more critically. The more restrictions you get over, the better you link concepts and ideas that seem unrelated.

Creativity takes time, and I don't have any. Being busy all day doing something doesn't mean you're achieving a particular target. But if anyone takes the opportunity to exercise creative thinking in their day-to-day tasks, the process becomes methodical. Creativity takes time, which implies that it needs to be nurtured over time. However, it is an investment which pays off in time.
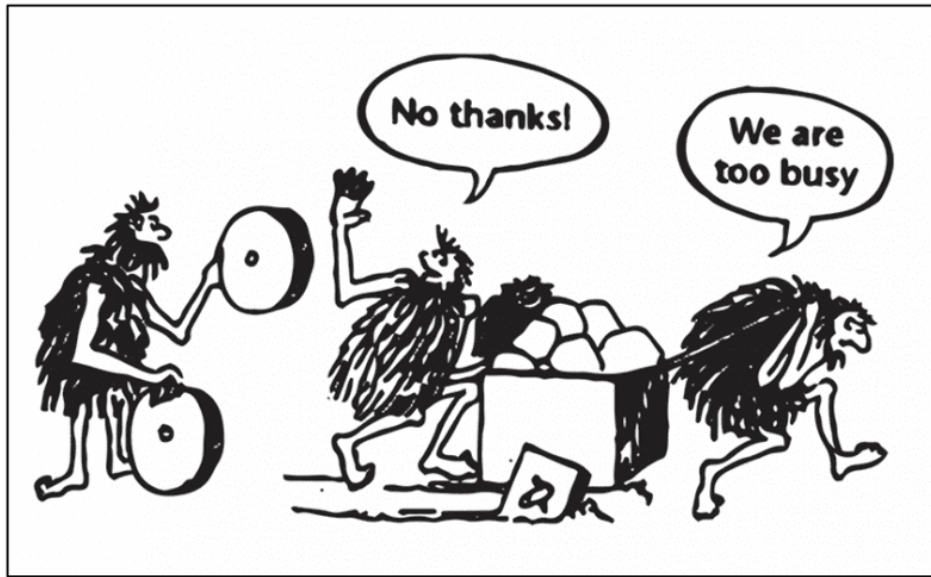
Source: Twitter

It's not my JOB to be creative. Some people also believe that innovation has only to do with graphic design, advertising or marketing. Luckily, this mentality is shifting. To thrive and survive a world of rapid change, creatively solving challenges and daily innovation is important. Being creative is everyone's job, and it can't be seen as something that only the people in the arts do. There's not a single discipline that wouldn't get a good boost from innovative ideas and imaginative problem solving, so you have to embrace creative thinking.

Expert myth. Many organizations rely on experts or expert teams to produce a supply of new ideas. Harder issues call for even more professional specialists. Conversely, research indicates that especially challenging issues also involve an outsider's viewpoint or someone who is not confined to some norms in understanding the problem and potential solutions.

Muse myth. Others mistakenly conclude that the job is finished when we have a new idea. But, more than an inspirational muse, creativity is a long-term process that involves continuous learning, hard/smart work, curiosity, experimentation, commitment, and zeal. When the "AHA-moment" actually strikes, it can sound like a sudden burst of insight. However, even if the idea can seem instant, it is the outcome of previously acquired experience and observations.

Innovation = creativity. Creativity and innovation are concepts that are frequently interchangeably used. The two are complementary and depend on one another. They are, however, not the same thing. Creativity is our cognitive capacity to find relations, laws and patterns to generate new, original ideas and to recognise possibilities. Innovation, on the other hand, is about making these ideas a reality by implementing new, viable and useful goods, processes, services or social/business models. Simply put – innovation is the implementation of creative ideas.

Source: Incidental Comics

To wrap it all up, here are the key things to remember about the creativity myths and reality:

Arts	Myth: Creativity is about art Reality: You can be creative in any sector. Think about Elon Musk.
Breed	Myth: You were either born creative or not Reality: Creativity is more about hard work and commitment, than talent
Eureka	Myth: New ideas are a flash of insight Reality: insights are the result of prior hard work
Out-of-blue	Myth: Creativity means to create something from nothing Reality: Creativity is often about bringing ideas together in a new way
Lone creator	Myth: Creative works are generated by sole individuals Reality: Creativity is often a team effort
Originality	Myth: A creative idea are entirely owned by the person who thought of it Reality: New ideas are often combinations of older ideas
Constraints	Myth: Constraints hinder our creativity Reality: Often creative ideas come from time, space, money limitations
Time	Myth: Creativity takes time, and I don't have any Reality: Creative ideas come in time, but do not necessarily take much time
Not my job	Myth: It's not my JOB to be creative Reality: Less creative jobs become automated, so creativity is your job
Expert	Myth: Creative solutions are generated by experts Reality: Tough problems often require an innocent mind
Muse	Myth: Once you have a new idea, the work is done Reality: creativity is a long-term ongoing process of learning, work and zeal
Innovation	Myth: Creativity = Innovation Reality: Innovation is the implementation of creative ideas

Source: Authors

Exercise 3: Two buckets

Objectives:

- Create a new product for a company;
- Describe the new product.

Duration: 30 min

Tools: device with Internet connection (online activity), board, marker, paper, markets (face-to-face activity)
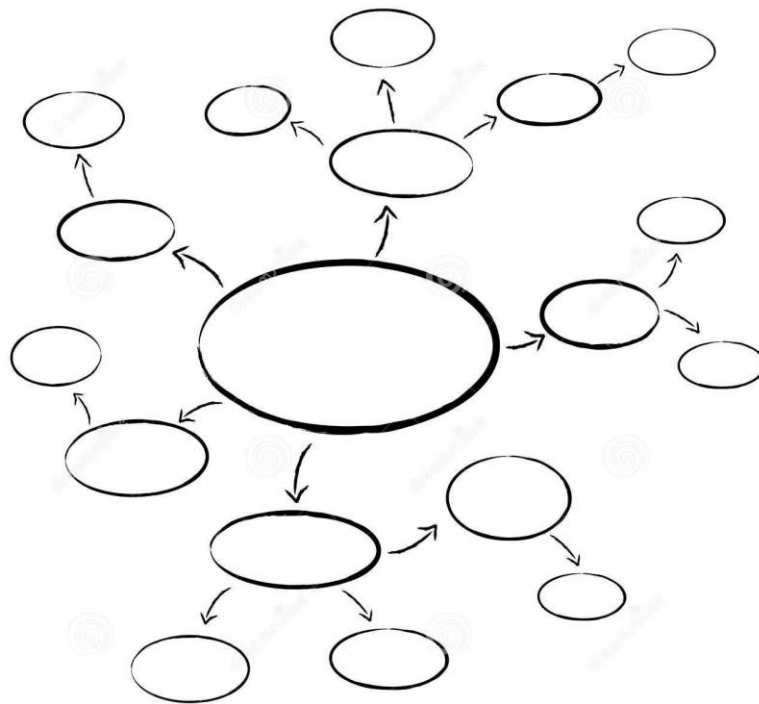
Methods: brainstorming

Description of the exercise: You work for Nike, and they now require you to develop a product for them.

Tasks: Develop the product's features, benefits, target audience, and perhaps promotional ideas.

Debriefing: Present your ideas using the brainstorming method.

Example:

Lessons learned: Forced association (combining disparate ideas) is a helpful and practical way to get ideas for potential innovation, and a skill that can be developed in students.

Recommendations (for face-to-face activity):

- Students can form teams of three to five;
- The groups are given seven to ten minutes to develop the product's features;
- One spokesperson from each team briefly presents to the class while the instructor records their ideas on the board

Forum

Objectives:

- Define creativity;
- Give examples of daily creativity.

Tasks:

- Tell us about an example of creativity in your everyday life that you experience and describe why it represents creativity for you. You can upload a photo as an example.

Supplementary reading

- Exploring the four-C model of creativity; implications for giftedness: https://s3.amazonaws.com/jck_articles/KaufmanBeghetto2009.pdf
- Creativity: https://www.blackwellpublishing.com/content/personalityandindividualdifferences/9781405130080_4_010.pdf

4. Module 4 - Creativity into practice

Upon completing this module, you will be able to:

- Enumerate strategies for creativity;
- Solve think out of the box problems;
- Explain metaphors.

Learning or unlearning creativity

In 1968, George Land (George Land & Beth Jarman, 1992) gave a 1,600 five-year-old creativity test. The test was the same as that used by NASA to select innovative engineers and scientists. He re-tested the same children when they were 10 years of age (1973), and again at 15 years of age (1978). In 1985 he tested 280,000 adults to see how creative they were.
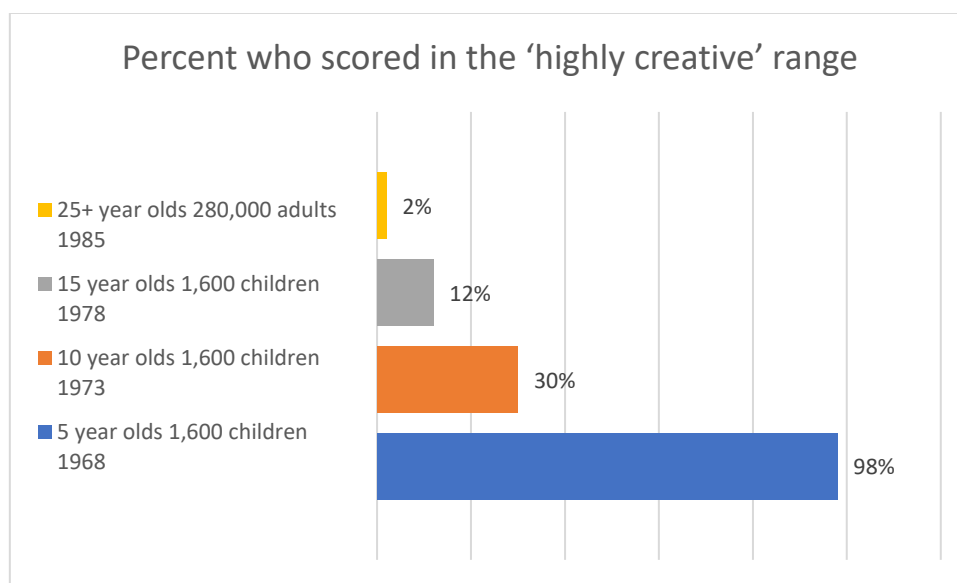
Source: (Land & Jarman, 1992)

"What we have concluded," wrote Land, "is that non-creative behavior is learned." From this, and similar research, we can conclude that creativity is therefore not learned, but rather unlearned.

As young children we are more creative because we are looking through 'unpolluted' and 'unsullied' fresh eyes. We are very inexperienced and unconstrained by existing knowledge, therefore fantasize and are unrealistic. As teenagers and adults, we start to filter everything we see, just like a polarized lens that lets in only light that is aligned one way. To reverse years of filtered thinking, we need to start connecting experiences and synthesizing new ideas. We need to teach our students the creative steps to bring out new, innovative and imaginative ideas. Ideally, creative ideas that the students themselves thought they could never have previously conceived.

Can Creativity be learnt? Yes, creativity skills can be learned. Not from sitting in a lecture, but by learning and applying creative thinking processes. Based on 70 prior studies, creativity can be better learnt by focusing on the development of cognitive skills using realistic exercises appropriate to the domain at hand (Scott, Leritz, & Mumford, 2004).

Example of learned creativity

Teaching Creativity at IBM – International Business Machines Corporation (Turak, 2011)

Louis Mobley worked for IBM and realised that that IBM 's success depended on teaching executives to think creatively rather than teaching them how to read financial reports. Therefore, he developed the IBM Executive School around six principles for greater creativity. In the coming years, IBM was a very creative organisation. Here are the six principles and their application:

Traditional teaching methodologies like reading, lecturing, testing, and memorization are useless.

Asking radically different questions in a non-linear manner is the key to creativity.

Becoming creative is an unlearning rather than a learning process.

Designing "mind-blowing experiences to demolish pre-existing assumptions and take people out of their comfort zones.

We don't learn to be creative. We must become creative people.

A Marine recruit doesn't learn to be a Marine by reading a manual, but by undergoing the rigors of boot camp.

The fastest way to become creative is to surround ourselves with creative people.

The IBM School was an unsystematic, unstructured environment based on peer to peer interaction.

Creativity is closely correlated with self-understanding.

Mobley's school was designed as a giant self-reflective mirror to reveal the biases, preconceptions, and belief systems.
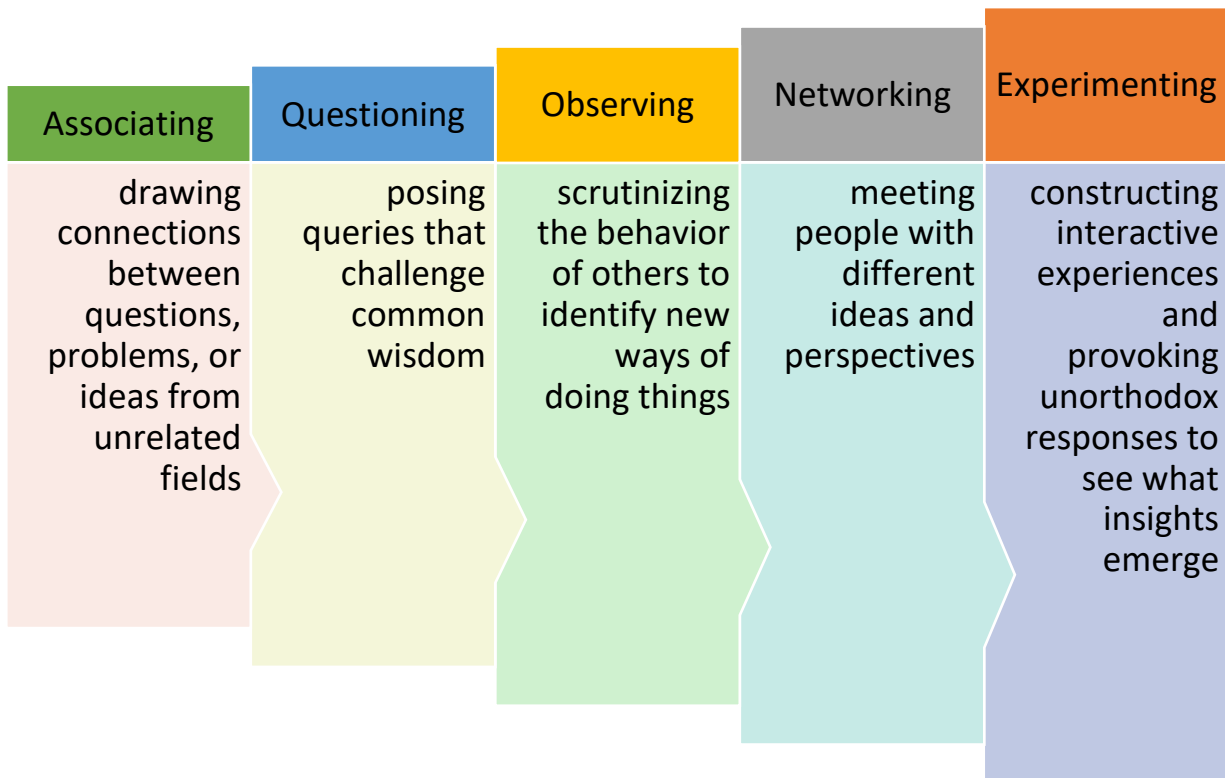
We MUST have permission to be wrong.

Every great idea emerges from hundreds of bad ones, and many of us never fulfil our creative potential because are afraid of making fools of ourselves. Every "bad" or "wrong" idea is only a building block for even better ideas.

Source: IBM Executive School
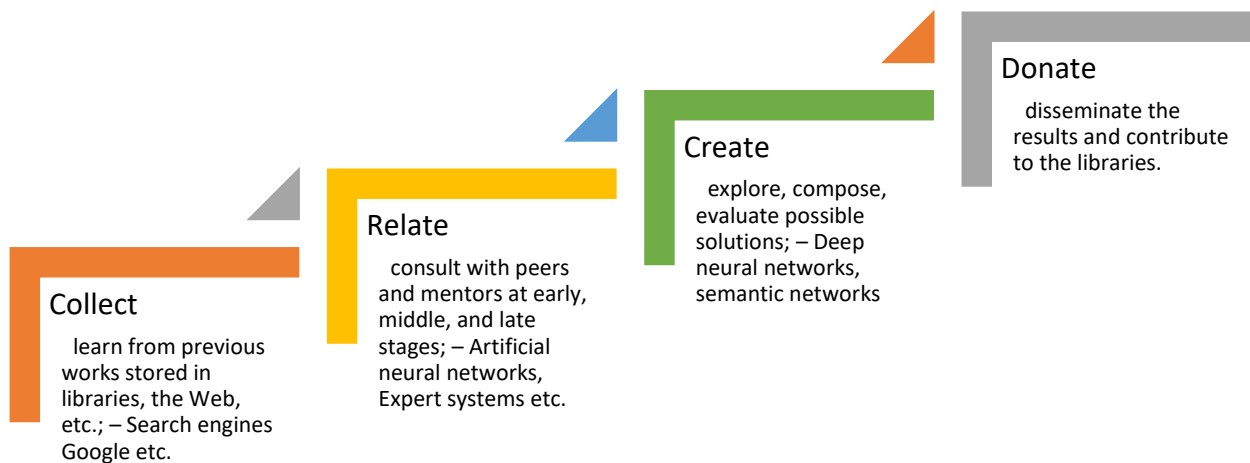
5 steps to optimize your brain for discoveries

So, we learnt that creativity is something that we can improve. Creativity is about finding new ways of solving problems and approaching situations. This isn't a skill restricted to artists, musicians or writers; it is a useful skill for everyone. These 5 steps can help you optimise your brain for discoveries and boost your creativity

Associating	Questioning	Observing	Networking	Experimenting
drawing connections between questions, problems, or ideas from unrelated fields	posing queries that challenge common wisdom	scrutinizing the behavior of others to identify new ways of doing things	meeting people with different ideas and perspectives	constructing interactive experiences and provoking unorthodox responses to see what insights emerge

Source: Authors

A 4-step evolutionary creative process

Education is moving from the learning of information, the study of current knowledge, or even the development of critical thinking, to the creation of new objects, ideas, or performances. To facilitate creative acts, (Shneiderman B. , 1999) defined an evolutionary creative process. The model reveals the near relationship between learning and creativity.

Donate
disseminate the results and contribute to the libraries.

Create
explore, compose, evaluate possible solutions; – Deep neural networks, semantic networks

Relate
consult with peers and mentors at early, middle, and late stages; – Artificial neural networks, Expert systems etc.

Collect
learn from previous works stored in libraries, the Web, etc.; – Search engines Google etc.

Source: Adapted from (Shneiderman B. 1999)

Example of the creativity process

How we created this course? We used these 4 steps:

1. Collected relevant sources, materials, examples about the topic of learning and creativity;
2. Related to other course designers, trainers and young people;
3. Created the course by writing the material, graphs, tables, presentations, etc.
4. Donated the course to you by creating an online learning platform and disseminating the course into social media and websites.

Using combinatorial creativity

Contrary to the mythology of AHA moments of creativity, most new ideas are actually combinatory in nature. To create is to merge existing bits of insight, information, thoughts, and experiences into new material and new interpretations of the world, to bind the apparently dissociated, to see patterns in which others see chaos. Here are a couple of tips:

Placing a familiar object in an unfamiliar setting	Blending two superficially different objects or genres	Comparing a familiar object to a superficially unrelated and semantically distant concept
Adding a new and unexpected feature to an existing concept	Compressing two incongruous scenarios into the same narrative to get a joke	Using an iconic image from one domain in a domain for an unrelated or incongruous idea or product

Source: Authors

Skills you need to express your creativity

The Epstein Creativity Competencies Inventory for Individuals (ECCI-i) is a test which measures four types of skills that help people express their creativity (Epstein, 2020). It is derived from more than 25 years of laboratory and field research on creativity and has been scientifically validated with a sample of more than 13,000 people in 47 countries.

According to Dr. Epstein, the four types of skills are:
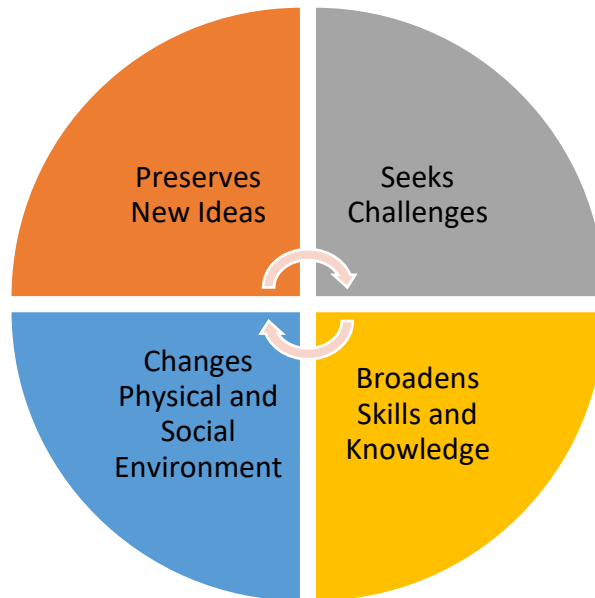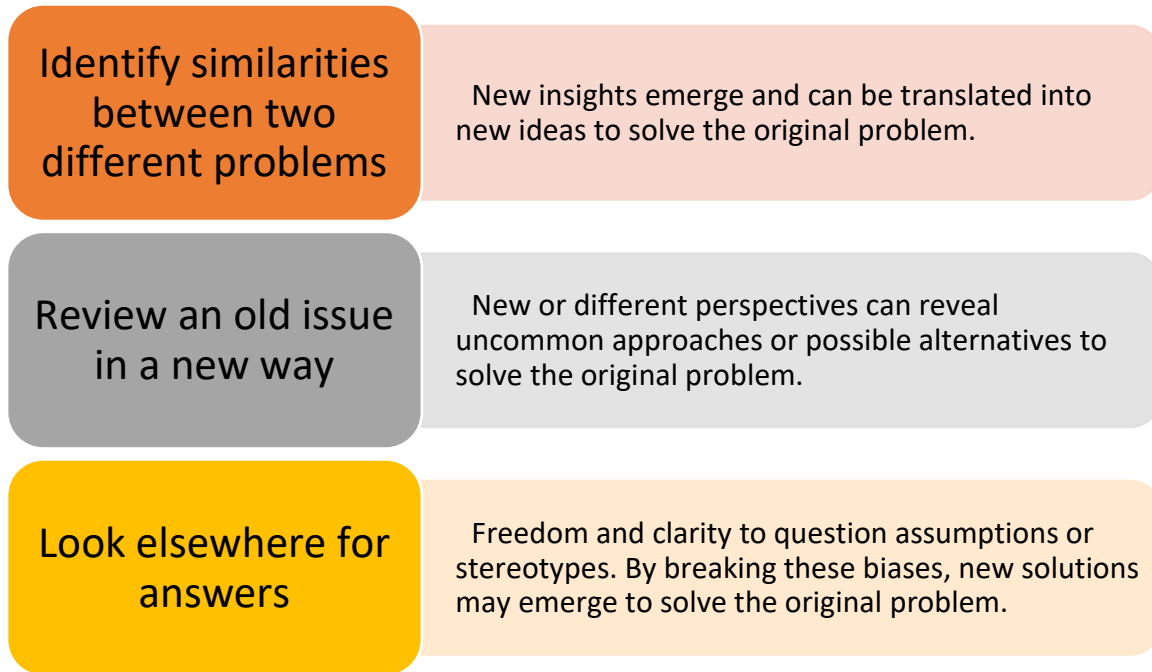
Source: Authors, based on (Epstein, 2020)

Take the test and find out how you score across the four types of skills: https://mycreativityskills.com/

Most people are able to complete the test in less than 10 minutes, and there are no right or wrong answers. Just select the response that seems best.

Metaphors to inspire creative thinking

By looking at the familiar from a new perspective, blind spots, forgotten essential element or entirely brand-new ideas may be identified. That's the key to using this style of metaphor: changing the viewpoint to gain a new insight.

A metaphor contrasts an existing issue with another problem, object or circumstance, unrelated or dissimilar. Metaphors aid creative thinking by reframing the situation or problem in three ways (Eklund, 2014):

Identify similarities between two different problems	New insights emerge and can be translated into new ideas to solve the original problem.
Review an old issue in a new way	New or different perspectives can reveal uncommon approaches or possible alternatives to solve the original problem.
Look elsewhere for answers	Freedom and clarity to question assumptions or stereotypes. By breaking these biases, new solutions may emerge to solve the original problem.

By reframing, metaphors can help making the strange familiar and, conversely, the familiar strange.

Metaphors help to make sense of the unknown by contrasting it to something understandable. The technology industry in its infancy, for example, used metaphors to describe complicated new products or services to its consumers, such as the mouse, laptop, Windows or Facebook.
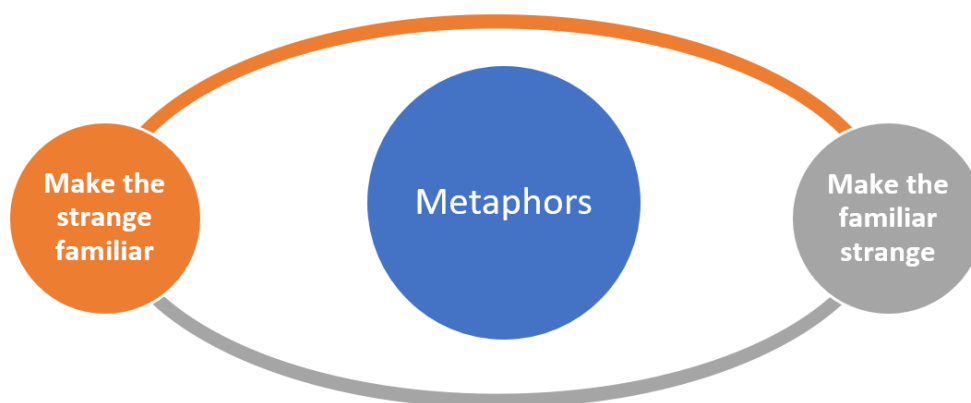
Source: Authors

Example of using metaphors

Researchers (Lockton, et al., 2019) looked into designing workshops to help generating ideas and reframing problems. They used 75 photographic and 75 text cards which were given to 180 participants in different workshops. The text cards represented an abstract concept which is difficult to visualize, but which might be possible to do through using a metaphor while the photographic cards were an arbitrarily chosen mixture of natural and artificial phenomena.

Participants simply browsed sets of image and text cards which they combined in creative ways to suggest possible metaphors and then they thought further about how a concept could be developed around the new metaphors they have generated. The 180 participants validated the feasibility of the

text-photography juxtaposition as a generative metaphor process for inspiring new concepts and creativity.

Interestingly, in some cases various groups identified different photos for the same text concept, while in other cases the same photo was chosen as a metaphor for two different text concepts.

The figure below, Shadows and Adaptors were used as metaphors to address the Power relations between people. One group focused on shadows as a metaphor (below left), envisaging an augmented reality display which would enable people within to 'see' the influence or power that people had over each other. Another group (below) used adaptors as a metaphor to see how teams fit together and how different components (people) transform power in different ways to achieve the end result.

Source: (Lockton, et al., 2019)

In contrast, groups in different workshops, used the same photo (Waves) as a metaphor for different things: The balance of flavors in a meal and People's accents.

Source: (Lockton, et al., 2019)

The association between flavors and waves represented a concept for an app which people can use to track and plan experiences of trying new cuisines at restaurants and match up with potential dining buddies based on a wave-like visualization of flavors and ingredients over time, which sometimes coincide and sometimes diverge. The Waves and People's accents is a concept for a language learning interface particularly focused on pronunciation, using visualizations of waves in a pool reinforcing or interfering with each other to represent coincident or different pronunciations.

Thinking outside the box

When it comes to solving a problem, we implicitly enforce limitations that have not come up with the problem. One classic example is where nine dots are arranged on the sides and in the middle of the square, as seen in the picture below.
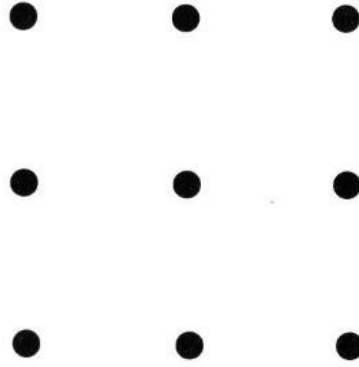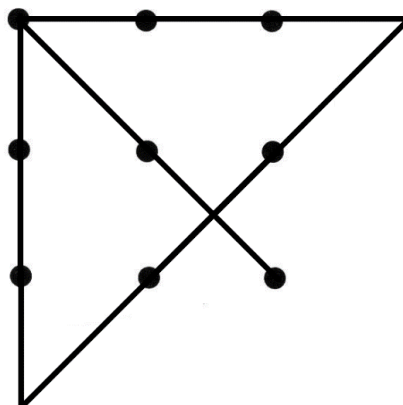
Source: Authors

The challenge is to link the dots with no more than 4 straight lines without removing the pencil from the page. The initial attempts are often disappointing, as many people may come up with five lines instead of four.
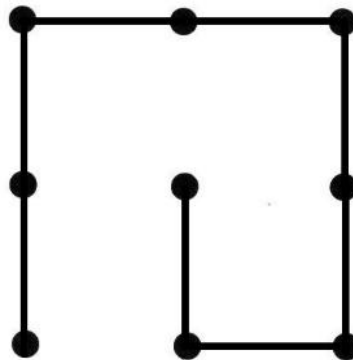

Source: Authors

The puzzle illustrates how our minds tend to apply assumptions, unnecessary perceived limitations and self-restrictions on methods of tackling problems to limit their problem-solving abilities. The most famous puzzle solution is shown below:

Source: Authors

The solution is to note that square boundaries can be crossed. Other may come up with another solution:
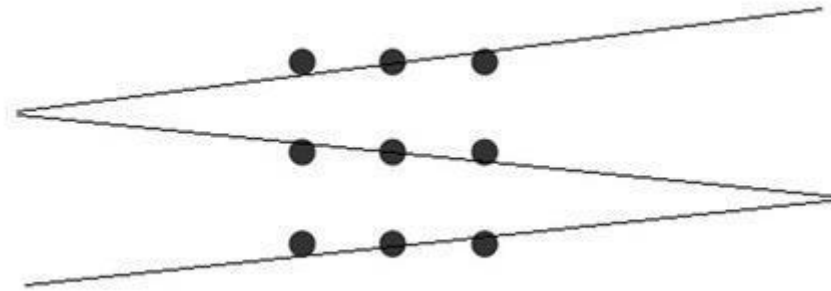
What have we learnt from this puzzle? Here are some suggestions (Innovations Infinite, 2011):

1. Look beyond the current definition of the problem.
   a) Analyze the definition to find out what is allowed and what is not.
   b) Are there any real rules to the problem?
   c) Look for other definitions of problems.
   d) Do not accept other people's definitions of problems.
   e) If a problem definition is wrong, no solution will solve the real problem.
2. Study the boundaries
   a) What are the boundaries for the solution?
   b) Are there real boundaries or just own perceptions?
   c) What are the possibilities if you push the boundaries?
   d) What are the benefits of small boundary changes?
3. Hard work does not always pay off
   a) Repeating the same wrong process does not help.
   b) You can be very close to a solution while not getting any closer to it.
   c) Sometime it is harder to find the solution than to implement it.

Clearly, solving this puzzle requires from us to "think outside the box".

Sources: Pexels.com

Why we should think outside the box

Thinking outside of the box means that the desired result can be accomplished by exploring alternative solutions and methods. Thinking differently will affect you strongly and positively. Here are some reasons to think outside the box:
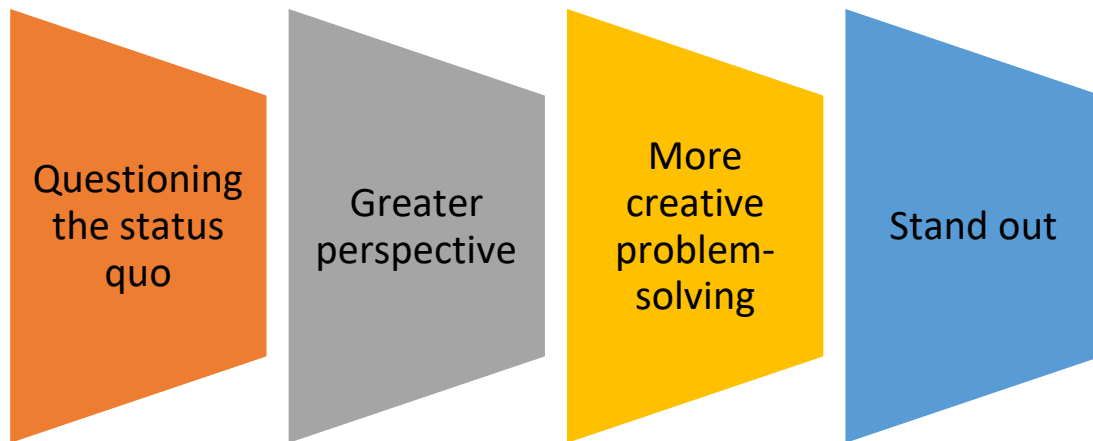
Source: authors, based on (Sykes, 2019)

Questioning the status quo. If everybody accepts things as they are, no invention or change will ever occur worldwide.

E.g. If Thomas Edison thought that gas lamps were good enough as they were, he could have never develop the light bulbs and the electricity to power. The entire world could have been a very dim (literally) place if he had not thought outside the box.

When you think outside the box and ask questions about the status quo, you continually consider how you can develop an experience, product or service. This helps you to continue growing and can contribute to wise decisions.

Greater perspective. If you are close-minded, the universe can become very limited. Thinking outside the box can expand your view of the world and give you more insight into events in your career and life.

E.g. "When all you have is a hammer, everything looks like a nail." Abraham Maslow.

You are more open to a range of points of view and alternative ideas if you are able to consider alternate views and ways of doing things. The possibilities are infinite when you are exposed to endless possibilities.

More creative problem-solving. If there are a limited number of ways things can be accomplished, then what you can accomplish is also limited. However, when you think outside the box, there are immediately a lot of possibilities and opportunities. If you allow any and all potential solutions, you might actually end up coming up with more innovative ways to solve problems.

E.g. Consider, for example, Netflix. They were able to create a worldwide phenomenon by thinking up an alternative to the traditional video store template of rentals and late fees. What imaginative ideas would you come up with if you think outside the box?

Stand out. When you were born to stand out, why would you be a face in the crowd? You ultimately encourage yourself to think differently when you are able to approach your career from an out-of-the-box point of view.

E.g. For you, the opportunity to think outside the box can be an advantage. This is understood quite well among professional leaders and innovative firms. For instance, Apple was built on this key principle: "Think different". Don't worry about being different, because it will make you stand out in a positive way.

Stay adaptable. Technology, the preferences of people and all kinds of other variables are constantly changing, and to stay relevant, you will need to be able to adapt.

> *E.g. As trainers, to stay current, we have to constantly keep changing. If, with changing times, we did not review and change our training strategies, we would quickly become outdated.*

One of the most profound results of thinking outside the box is that it will allow you to remain adaptable. Your mind will not be closed to new ideas or solutions or problems, and you will thus be better able to handle the ever-changing environment.
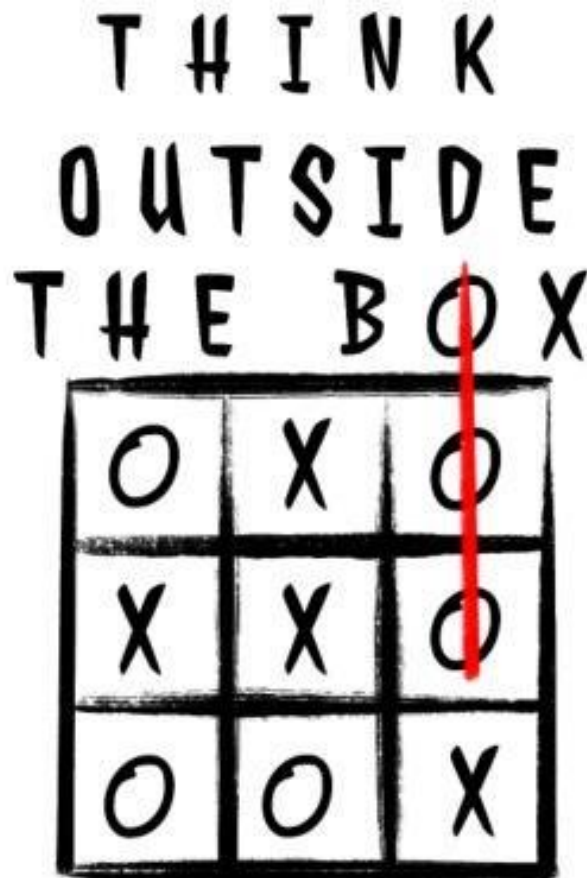
Source: Spreadshirt

Exercise 4: How creative are you

Objective:

- Identify the personal level of creativeness.

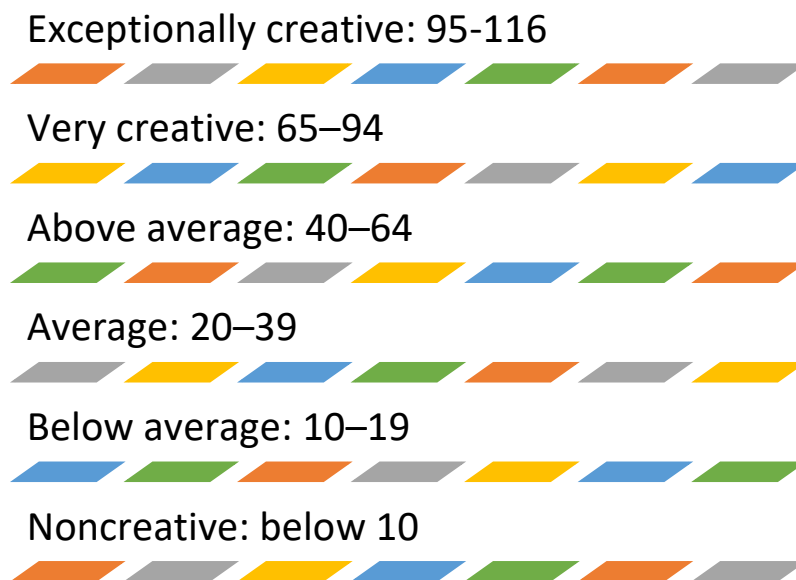**Duration**: 15 min

Tools: device with Internet connection

Methods: testing

Description of the exercise: The following test (Raudsepp, 1981) cited in (Whetten & Cameron, 2016) helps you determine if you have the personality traits, attitudes, values, motivations, and interests that characterize creativity. It is based on several years' study of attributes possessed by men and women in a variety of fields and occupations who think and act creatively.

Tasks: Do the test! (https://www.kellogg.northwestern.edu/faculty/uzzi/ftp/page176.html)

Debriefing: How do you compare with others? According to the comparison data built for 5000 subjects, the mean score is 55.99.

Exceptionally creative: 95-116

Very creative: 65–94

Above average: 40–64

Average: 20–39

Below average: 10–19

Noncreative: below 10

Source: Authors, based on (Raudsepp, 1981)

Lessons learned: Learn about yourself – how creative you are!

Recommendation:

- While answering the test questions, be as frank as possible.
- Try not to second guess how a creative person might respond.

Forum

Objectives:

- Comprehend the 4-step evolutionary creative process;
- Apply the 4-step evolutionary creative process on social media.

Tasks:

- Rewrite the *4-step evolutionary creative process* topic. In the discussion forum, use this 4-step model to describe how you post something on social media (Facebook, Instagram, TikTok, Snapchat etc.). How does this model apply to small and large creative acts?

Supplementary reading

- 5 ways to improve your creative thinking: https://www.topuniversities.com/blog/5-ways-improve-your-creative-thinking
- Creative thinking: Definition and Structure: https://research.acer.edu.au/cgi/viewcontent.cgi?article=1038&context=ar_misc

5. Module 5 - Environments

Upon completing this module, you will be able to:

- Describe different types of environments;
- Create an environment favorable for creativity;
- Identify types of service learning.

A short brief about environments

Cambridge Dictionary mentions that environment is 1. the air, water, and land in or on which people, animals, and plants live; 2. the conditions that people live, work, or spend time in and the way that they influence how they feel, behave, or work.

The forces of environment begin to influence the growth and development of the individual right from the womb of the mother. Educational process of development occurs in physical, social, cultural and psychological environment. A proper and adequate environment is very much necessary for a fruitful learning of the person. Especially the home and the school should provide the necessary stimulus for learning experience.

Rhodes (1961) 4 P's categorization is one of the most acknowledged models and one of the first to state that creativity is a confluence of four aspects: (a) the creative person; (b) the creative process; (c) the creative product; and (d) the press/environment. Soliman (2005) said that the press must be seen as the relationship between the individuals and their environments, this is important to assess the environmental conditions that inhibit or potentiate creativity.

Source: Hongkiat

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Innovative environment

The innovation environment can be made-up of how well you collaborate and network, the level of group and individual interactions, the presence and commitment of leadership towards innovation, as well as the organizational set-up and structures.

There are some steps in order to create an innovative environment (Vint, 2006):

- Create a culture of innovation through injecting creative challenges throughout teaching;
- Constant change is a prerequisite for continued success. Introduce constant change throughout your program, subject, course, class work, or project. Make sure that it is strategic, pervasive, challenging and sometimes conceptually overwhelming.
- Implement a capability approach at every level of your teaching. Coordinate the five components of teaching: strategy, assessment, learning process, student the individual, and technology, to consistently interrelate with each other so as to deliver measurable results.
- Align all stakeholders, from students to other members of staff;
- Today's most innovative students, in combination with their teachers are 'doing it right now'. Design a blueprint for creating a flexible learning experience that builds upon current successes, as it promotes rapid change and adaptability for maximizing those successes.
- Leading teachers know it is up to them to reach the next level of student and personal satisfaction. To become an educational leader, you must continuously pursue the obsolescence of your best teaching practices.
- Use information technology as a critical element to improve innovation. Technology can be used for communication, mutual understanding, organizing, design and ideation.
- Enhance one's capabilities through external partners or the blending of individual processes.
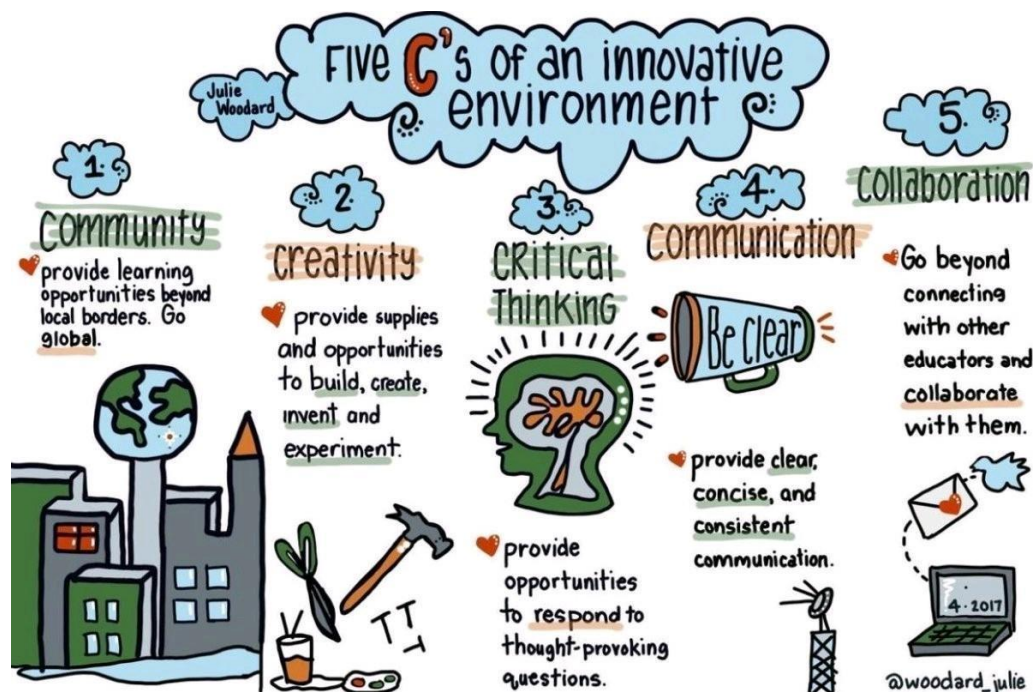
Source: Idea Spies

Creative environment

As Rhodes (1961) affirmed, creativity describes a phenomenon where an individual develops new products, with implicit cognitive thinking, and where there is an environment that potentiates that creation.

According to Batey and Furnham (2006), those who study the creative environment look to understand the physical and social circumstances in which creativity is more likely to develop. Promoting creativity is associated with the interactions of a person with its family, school, and society. So, a friendly environment to creativity development is related with the quality of those interactions and the life experiences people have in those contexts. Thus, school is an important place to the development of creative skills.

Overall, the multivariate analysis performed showed that the creative environment influences the creative process and product. Social sciences participants were better in the creative process and arts participants performed better in the creative product. Generally, these results are interesting, showing that the creative environment thus indeed influence the creative process and product, but not the creative person. Consistent with this idea, Trnova (2015) stated that creativity in students depends on the context where they are embedded. The findings suggest the importance that schools must give to their organization and goals, in order to redefine them in a way that promotes creativity. In higher education much is needed to change the current reproduction of knowledge to a more reflexive and creative way of thinking.

Source: Training Industry

How to make a creative environment at school

In order to create a creative environment, teachers need to teach creatively and to teach creativity. Teaching creatively may be described as teachers using imaginative approaches to make learning more attractive, engaging, exciting, and effective. Teaching creativity is described as using models and strategies for creative teaching that aim to foster children's creativity (Morris, 2006). Thus, to create a creative teaching environment, teachers need to be highly motivated, have high expectations, and have the ability to communicate and listen to children.

Teachers' characteristics should include openness, knowledge of the requirements, and confidence in themselves and in their particular field. Teachers also need to be familiar with techniques that stimulate children's curiosity and creativity, including motivating children to reflect, engage in dialogue and ask questions, instead of imposing on children the requirement to simply listen, dictate, and memorize, thereby preparing children to be active and discover new things. To create a creative environment, teachers need to work as a stimulus for creative thinking through brainstorming, tolerating disagreement, and encouraging children to trust their own judgements.

Teachers also need to create a 'responsive' and flexible classroom climate, where children are not afraid to express and share their ideas, and which encourages imagination and values collaborative work between children. To achieve such a creative environment, teachers should also be highly enthusiastic, appreciate individual differences, value children's efforts and ideas, provide opportunities to practise and experiment without the threat of assessment, and pay greater attention to children's self-evaluation rather than the evaluation of others. As well, children should participate actively in the learning process and have their own specific tasks and activities, and should be encouraged to be free thinking, to choose activities and make their own decision.

Finally, enhancing children's creativity requires a rich learning environment with diverse materials and a wide range of resources and tools, including technologically based resources (Beghetto & Kaufman, 2014), and with space to work independently (Stojanova, 2010).

Source: Thoughtful Learning

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Social media environment

Previously known as "social computing environments", social media environments refer to online spaces where individuals establish and maintain virtual social interactions with others. The purpose of carrying out such virtual social interactions may vary among participants.

The Internet and mobile technology offer a multitude of exciting possibilities for teachers and students to create and upload their own audio-visual content. They can also use the Internet to contact artists anywhere in the world to ask for advice and opinions on their work. Artists can use video conferencing tools1 and virtual meetings to give workshops. Using social media and dedicated social platforms in classroom learning encourages students to work together, collaborating online on shared projects. This provides a new creative outlet, and the brainstorming involved can stimulate the creative process.

Since its first appearance, social media has gained a remarkable popularity in our life. As general, it has improved the ways of communication by providing more interactivity and effective approaches in sharing information. Today, social media oriented environments are widely used in almost every place all over the world. Thanks to wide application spectrum of social media, it has been used by people in even working life. We can see that especially popular social media environments are used by many companies in order to improve effectiveness and efficiency in their works.

Social media environments are useful tools – technologies for creating Web-based communities where people can communicate and interact with other people by using Web interfaces and tools. Today's popular social media environments employ different approaches, methods, or technologies for enabling people – users to experience interactive communication and different ways of sharing, creating, and also exchanging the information. It has been expressed in the literature that social media environments have encouraged new ways to communicate and share information and they are used regularly by millions of people with a rapidly improving popularity in time.

Source: Marketing Matters

Users communicate differently on each social channel. Each social network caters to a different type of user. In order to find success with social media, it's important to have a clear understanding of how users communicate on each platform. To explain, the content you are tweeting on Twitter should not be copy and pasted into Facebook.

It is hard to keep up with so many types of social media. This picture summarizes some of the differences nicely by using a donut analogy:
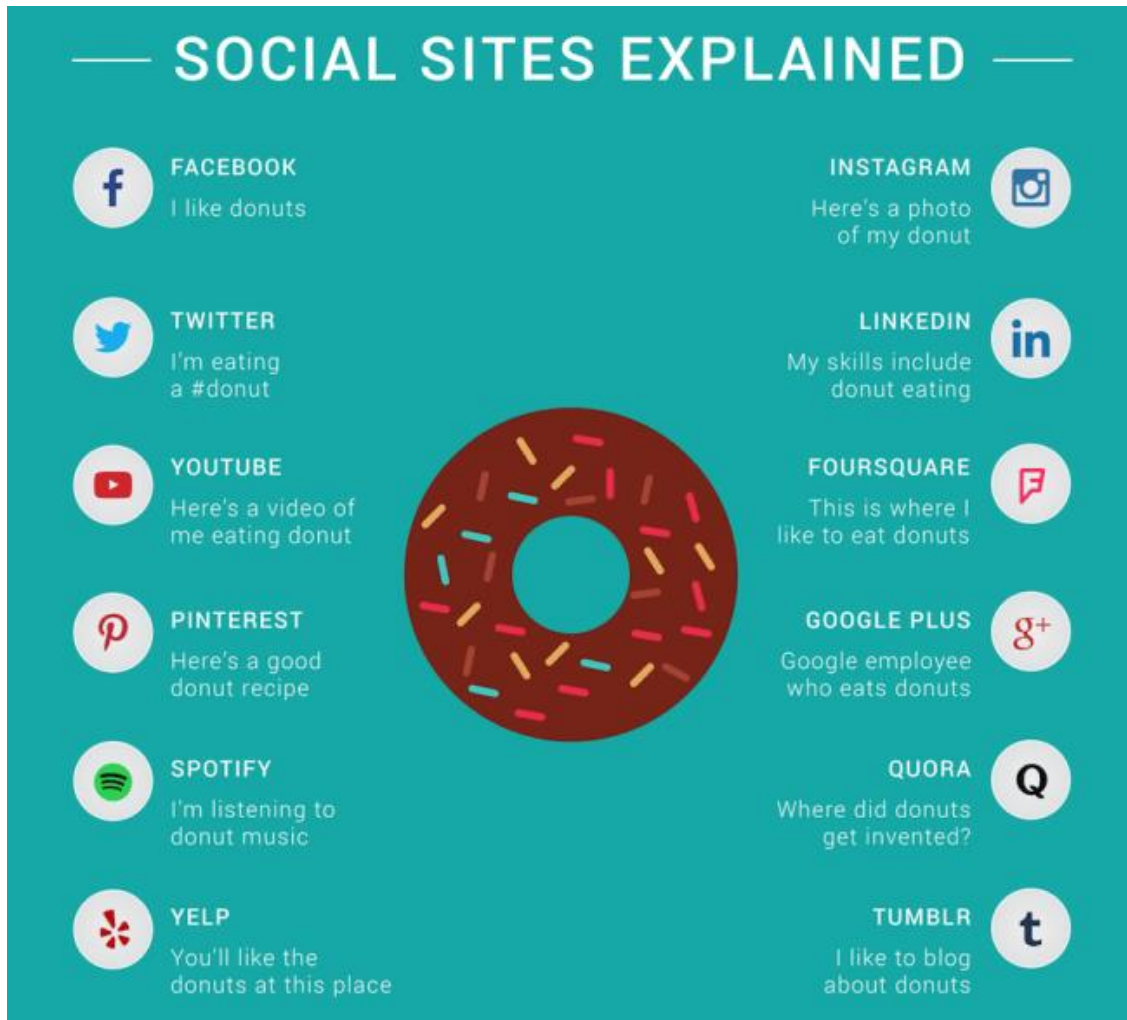

Source: Insights

Community service: service learning

The term service learning is sometimes used to describe experiential learning that occurs through meaningful, useful, structured and reflective community service. Some writers distinguish service learning from community service, emphasizing the broad learning dimensions implied in the former including personal, social and cognitive development.

Service Learning or learning by engagement represents one of the most promising methods promoting Education for Sustainable Development. It is an alternative teaching approach where students are confronted with real-world problems and try to find solutions cooperating with partners such as communities, NGOs and companies.

Students learn and develop through engaging in concrete projects by meeting the needs of communities and making personal experiences, embedded in an academic learning environment where they can reflect upon their actions. The students learn theories in the classroom and at the same time volunteer with an agency (usually a non-profit or social service group) and engages in reflection activities to deepen their understanding of what is being taught.
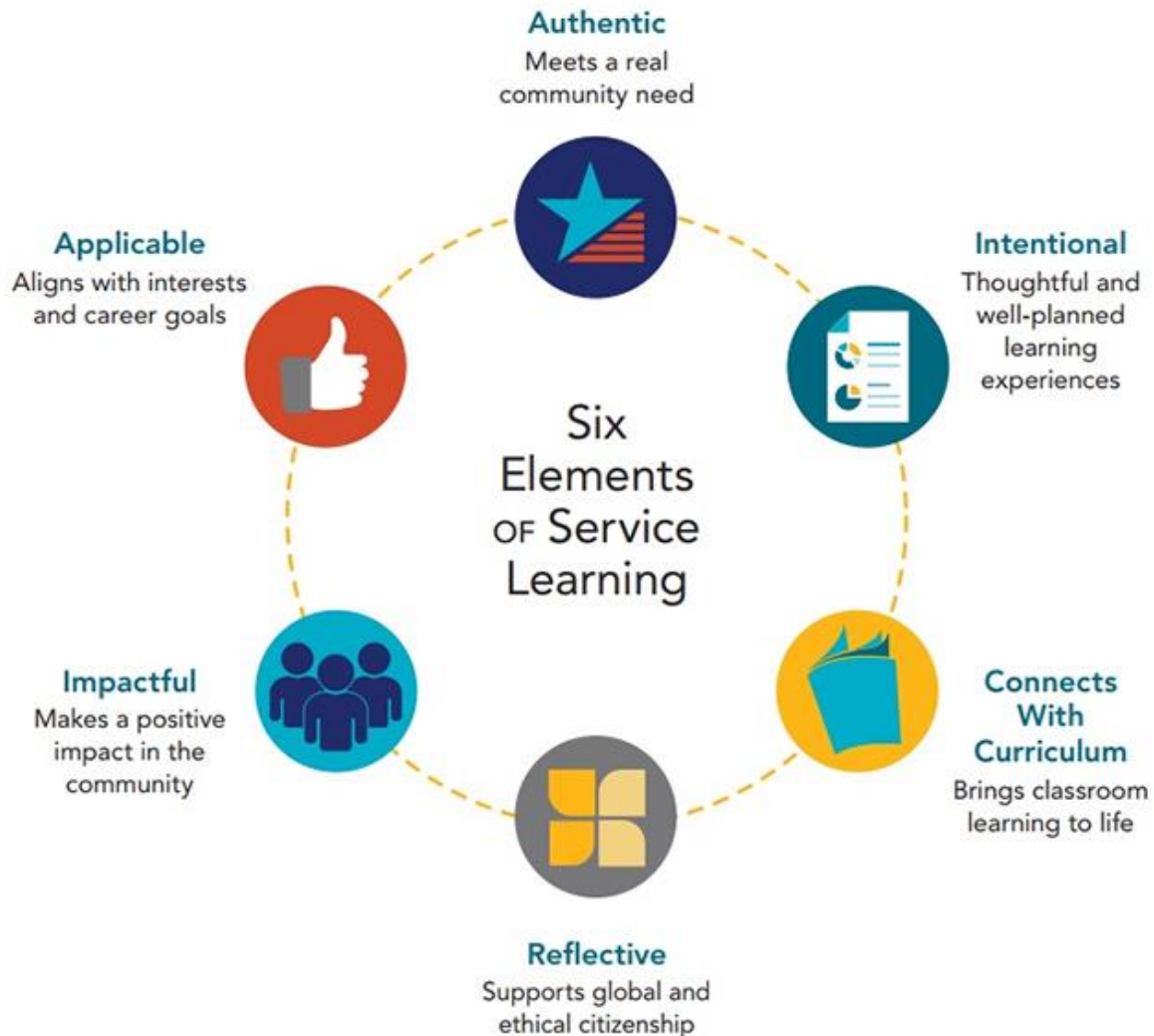
Source: CSUSM

Good service learning programs emphasize personal and community awareness as well as service. Students need to learn to understand how actions are based on personal values and to reflect on and question their own values. If learners are to grow as individuals, it is essential that they engage with their own values and do not see service as a requirement or chore. They need to spend time and effort understanding the purpose of service learning, developing a more sophisticated understanding of the individual as part of the community, developing a sense of responsibility, for themselves and others, and an appreciation of the value and rewards of giving.

Service learning ideally should be linked to a student's passions, personal goals and ambitions. There are plenty of opportunities for those with particular skills to apply them to service learning. IT skills can be used to develop helpful IT products or to train others. Students with aptitudes in disciplines like languages and mathematics can tutor others. Performing artists can provide entertainment and

have their art inspired from activities in the community. Student leadership and entrepreneurial experience can be nurtured.

At the heart of all good service learning, therefore, is reflection. Students need to think critically and creatively, individually and in groups, about service learning expectations and experiences. The intention is to equally benefit the provider and the recipient of the service. It is important for students to understand that people from different backgrounds, in particular those less privileged, will have something to teach them.

Source: YouTube: Staged of service learning

Well-planned and managed service learning and community service programs have a number of benefits to the community and the individual. These include:

● Developing a sense of wellbeing from helping others;
● Physical and mental health benefits, particularly in older volunteers (see CNCS, 2007), but starting young will help encourage students to see this as a life-long activity. Interestingly some research seems to suggest that the motivation for doing service is a critical factor in determining the health benefits to the giver. If the motivation is altruism the benefits are stronger than if it is obligation or duty;
● Engaging students with the community and increase social awareness, self-awareness and a sense of responsibility;
● Developing communication, collaboration, leadership and other intra and interpersonal skills.
● Understanding social issues relevant to their communities and developing a greater understanding of and appreciation for diversity;
● Enhancing students' applications to higher education and the workplace.

Service learning should be celebrated. The form this celebration takes needs careful thought and can vary depending on the age of students. Recognizing student accomplishments through badges or awards can be a good motivator, but only if the student values their participation intrinsically rather than seeing it as an obligation that is imposed on them. Schools can celebrate service learning, and other valued cocurricular learning activities, by making them a regular part of school communications

and discussion. Students who do creative and valuable things need to be appreciated, not just those who are high academic achievers. The culture of the school needs to evidence regular, sincere and widespread dialogue around service learning. The important role teachers play in modelling this through their behavior and actions cannot be overstated.

Source: CASE

Examples of service learning and community service activities:

Some schools timetable a fixed amount of time for community service and other co-curricular activities, for example one afternoon a week. Other schools expect this to be completed after school hours. There are numerous opportunities for community service, such as:

Innovative: overcoming barriers

- Researching then designing and/or developing solutions, products or services, for example for those with disabilities, improving environmental sustainability, renewable energy;
- Building simple databases or IT solutions, apps that serve a community function;
- Raising community awareness of health/environmental issues through research and communication/presentation of findings.

Creative and performance

- Student choir, drama, artistic activities in the local community;
- The local community is brought into the school where artistic activities such as singing, drama and art are organized;
- Students organize local community participation in artistic activities.

Instructional

- Students lead training in IT skills for the local community, in particular older citizens who may lack basic skills, using the school IT facilities and classrooms;
- Students tutor other students or community groups in languages, mathematics or other subjects
- Students participate as classroom assistants or assistant sports instructors.

Active service

- Assisting in care homes, hospitals, schools for special needs;
- Assisting in an animal welfare center.

Source: Edutopia

Environmental

- Environmental club in the school monitors wastage, organizes recycling and suggests better environmental practices.
- Students are involved in local conservation work.

Leadership/management

- School council, classroom representative, prefect.

Work related

- Work secondments;
- Research projects with relevance to the workplace completed and communicated.

Working through external agencies

- Organizations such as Oxfam and Habitat for Humanity can provide service opportunities.

Related student-led co-curricular activities

- *Model United Nations*: also known as Model UN or MUN, is an extra-curricular activity in which students typically roleplay delegates to the United Nations and simulate UN committees. Participation in this demanding club fosters and facilitates the development of more effective leadership skills, greater global awareness, enhanced public speaking skills, more developed

time-management skills and the opportunity to exchange and interact with peers from all around the world.

- *Amnesty International:* also referred to as Amnesty or AI, is an international non-governmental organization focused on human rights, with its headquarters in the United Kingdom. The organization says it has more than ten million members and supporters around the world. The stated mission of the organization is to campaign for "a world in which every person enjoys all of the human rights enshrined in the Universal Declaration of Human Rights and other international human rights instruments."

Source: UN & AI

Exercise 5: What? So what? Now what?

Objective:

- Reflect on a given situation.
- Interpret a given role.
- Describe a given situation from a personal perspective.

Duration: 45 min

Tools: paper, pen

Methods: reflection

Description of the exercise: The trainees receive a case study

CASE STUDY

"*You met Claire Roberts, the volunteer of a centre worker. Claire had been invited to talk about volunteering. This sparked your interest and you enquired further about volunteering opportunities. You met with Claire and found out more about your interests and what kind of tasks you would like to do as a volunteer.*

You informed Claire that you were interested in volunteering with older people and Claire told you about a new project which involved volunteering in care homes. Claire referred you to Siobhan Foley, the Volunteering Co-ordinator (Older People). Siobhan was co-ordinating the volunteers in care homes pilot project and arranged for you to attend the induction training at a local Residential and Nursing Home.

You volunteered once a week for 2 hours at the care home between July and December 2021. You assisted to provide social activities for elderly residents to help improve their wellbeing and quality of life, and you were able to share some of your creative skills with the residents. Also, you received support and travel expenses throughout the project, and developed good working relationships with the Activities team, care home staff, and other volunteers involved in the project. Through volunteering you have made new contacts and friends who support her positivity."

Tasks: Reflect on the case study given. Your reflection will take place in a three-fold format, answering the questions "What?", "So What?", and "Now What?". Read the prompts below for each category and use the back of this page to complete your reflection. You may express your reflections by writing in paragraph format, creating an illustrated diagram, using poetry/lyrics, or any other method of your choice. You do not necessarily have to answer all of the prompts, but be sure to express your thoughts completely.

Debriefing: Resume the reflection.

Lessons learned: Reflection is an important process in order to help other people.

Recommendation:

- Examples of "What?", "So what?", "Now what?" questions:

WHAT?
- What did you expect to get out of this experience (purpose/goals/ideals)?
- What did you learn from the experience?
- What did you observe?
- What community partner did you work with?
- What part of your experience was most challenging? What part did you find surprising?
- What did you already know about the topic you explored at the site/event?
- Describe the people you worked with
- What role(s) did you play at the site/event?
- What about myself did I share with others?

SO WHAT?
- What did you learn about others and yourself?
- How were you different when you left the community site compared to when you entered?
- How were you different/similar than other people?
- In what ways did being different help/hinder the group?
- What did I do that was effective? Why was it effective?
- What did I do that seemed to be ineffective? How could I have done it differently?
- What values, opinions, decisions have been made or changed through this experience?
- What has surprised me about the community site, the people I work with, and myself?
- What have you learned about a particular community or societal issue?

NOW WHAT?
- How will your efforts working with this community partner contribute to social change? Your career?
- What changes would you make in this experience if it were repeated?
- How do we take what we have learned and convert it into action in the community we're working in?
- How can society be more compassionate/informed/involved regarding this community?
- How can society better deal with a problem?
- Where do we go from here? What's the next step in the process?

*FEEL FREE TO ADD YOUR OWN PERSONAL REFLECTION PROMPTS

Forum

Objectives:

- Express personal opinion about creativity in schools;
- Argue personal opinion about creativity in schools.

Tasks:

- Do you consider that schools are a creative environment? Why yes? Why not?

Supplementary reading

- The Creative Environment (Press): Does it Inspire or Stifle Your Creativity: https://www.curiosity2create.org/post/the-creative-environment-press-does-it-inspire-or-stifle-your-creativity
- How to teach creativity: https://k12.thoughtfullearning.com/blogpost/how-teach-creativity

6. Assessment quizzes

Module 1

1) Education may be categorized into:
   a) Knowledge, skills, attitude
   b) Formal, non-formal, informal
   c) Kindergarten, School, University

2) What would the world be like without education?
   a) Nothing will change.
   b) People will have more knowledge and skills.
   c) Our society will not be able to meet the intellectual demands of existing and emerging technologies.

3) An example of a guiding question in order to learn from failures is:
   a) What will I do next?
   b) What is the weather like?
   c) There is not such a question. Failures make you give up.

4) What is Gardner's theory?
   a) Just some people are intelligent.
   b) There exists only one type of intelligence.
   c) There are multiple types of intelligence.

Module 2

1) What is reflection?
   a) The process of thinking carefully about a subject or idea, without allowing feelings or opinions to affect you.
   b) The process of focusing your mind to concentrate on a topic or an event to focus your attention.
   c) Knowledge or a piece of information obtained by study or experience.

2) What does reflection involve?
   a) Creative thinking and innovative environment
   b) Critical thinking and self-discovery
   c) Learning strategies and performance

3) Examples of reflective questions are:
   a) What? When? Who? Where? Why? How?

b) Did you…? Have you…?Are you…?
c) I? You? She/He/It? We? You? They?

4) An effective study habit is:
   a) Learners repeatedly copy their notes and rely on remembering facts.
   b) In order to revise, learners ask themselves questions and note the known and unknown parts.
   c) Learners review and work on their own.

Module 3

1) What is creativity?
   a) The ability to create art.
   b) The ability to create something out of nothing.
   c) The ability to generate new ideas by combining, changing or reapplying existing ideas.

2) Which are the four categories of creativity?
   a) Mini-C, Little-C, Pro-C, Big-C
   b) Tiny-C, Small-C, Medium-C, Large-C
   c) Past-C, Present-C, Future-C, Dream-C

3) An example of everyday creativity is:
   a) Einstein's theory of relativity.
   b) A person who can resolve a complex problem at work.
   c) An artist who was gifted as a child, has graduated and can now perform in his area of specialization.

4) Which one is a creativity myth and misconception?
   a) You were either born creative or not.
   b) New ideas are often combinations of older ideas.
   c) Creative ideas come in time, but do not necessarily take much time.

Module 4

1) Which statement is true about creativity?
   a) Creativity can be learnt.
   b) Creativity can't be learnt.
   c) Creativity is only for artists.

2) Which are the steps to optimize the brain for discoveries?
   a) Collecting, relating, creating, donating

b) Reading, writing, listening, learning
c) Associating, questioning, observing, networking, experimenting

3) Metaphors:
   a) Can help making the strange familiar and, conversely, the familiar strange.
   b) Can help you learn from previous works.
   c) Can help you disseminate the results and contribute.

4) Which one is a benefit of thinking outside the box?
   a) It is ambiguous.
   b) There are more creative problem-solving.
   c) Stay in line.

Module 5

1) Environment represents:
   a) The conditions that people live, work, or spend time in and the way that they influence how they feel, behave, or work.
   b) A building that people, usually one family, live in.
   c) An organization that tries to achieve social or political aims but is not controlled by a government.

2) Creativity is a confluence of the next aspects:
   a) Premise, prediction, possibility, participation
   b) Peers, place, principle, practical
   c) Person, process, product, press/environment

3) In order to have a creative environment in schools, teachers should:
   a) Value children's efforts and ideas.
   b) Use traditional teaching methods.
   c) Teach only the creative students.

4) Service learning represents:
   a) Websites and computer programs that allow people to communicate and share information on the internet using a computer or mobile phone.
   b) An alternative teaching approach where students are confronted with real-world problems and try to find solutions cooperating with partners such as communities, NGOs and companies.
   c) The regular work that a person does to earn money.

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Appendix

Assessment quiz check sheets

Evaluation quiz Module 1 check sheet – correct answers

1b

2c

3a

4c

Evaluation quiz Module 2 check sheet – correct answers

1b

2b

3a

4b

Evaluation quiz Module 3 check sheet – correct answers

1c

2a

3b

4a

Evaluation quiz Module 4 check sheet – correct answers

1a

2c

3a

4b

Evaluation quiz Module 5 check sheet – correct answers

1a

2c

3a

4b

Instructional design review checklist for youth workers

No	Criteria	Yes	No
1. Objectives			
1.1	Are objectives stated clearly for the learner?		
1.2	Are the course requirements consistent with the objectives?		
1.3	Do chapters/topics thoroughly cover the course's objectives?		
1.4	Do the learning objectives match the learning outcomes?		
1.5	Does the overall content and structure of the course meet its instructional objectives?		
2. Structure			
2.1	Does the course have a concise and comprehensive overview or syllabus?		
2.2	Does the course include examples, analogies, case studies, simulations, graphical representations, and interactive questions?		
2.3	Does the course structure use appropriate methods and procedures to measure student mastery?		
3. Content			
3.1	Does the content flow seamlessly, without grammatical, syntactical and typing errors?		
3.2	Is the content up-to-date?		
3.3	Is the content aligned with the curriculum?		
3.4	Are the desirable outcomes incorporated in the content?		
3.5	Is the content in compliance with copyright laws and all its quoted material cited correctly?		
3.6	Does the course engage students in critical and abstract thinking?		
3.7	Does the course have prerequisites or require a technical background?		
4. Assessment			
4.1	Are the assignments relevant, efficient and engage students in a variety of performance types and activities?		
4.2	Are practice and assessment questions interactive?		
4.3	Do the practice and assessment tasks focus on the course's objectives?		
5. Technology - Design			
5.1	Is the design clear and consistent, with appropriate directions?		

5.2	Are the images and graphics of high quality and suitable for the course?		
5.3	Is the course easy to navigate and offers assistance with technical and course management?		
5.4	Is the course navigation structure consistent and reliable?		
5.5	Are the course hardware and software-defined?		
5.6	Is the audio and on-screen text in sync?		
5.7	Does the architecture of the course allow instructors to add content, activities and extra assessments?		

Feedback on topic for students

Assessment of Module						
Course title:						
Module Title:						
Part A:	On a scale of 1-5 where 1 is the lowest and 5 the highest level of agreement indicate how you feel on the following					
Observations		1	2	3	4	5
1	The subject was interesting					
2	I believe the topics covered were important					
3	I would like to know more about the area					
4	I have learned new things which I am likely to apply in the future					
5	I would like to improve my skills in the area					
6	I am likely to recommend this course					
Part B:	In the space provided please feel free to include any comments and recommendations you wish to make					
Part C:	In the space provided please feel free to include your email address if you would like to be kept informed about this project					