

Guidebook for



A 'Craftorship' education

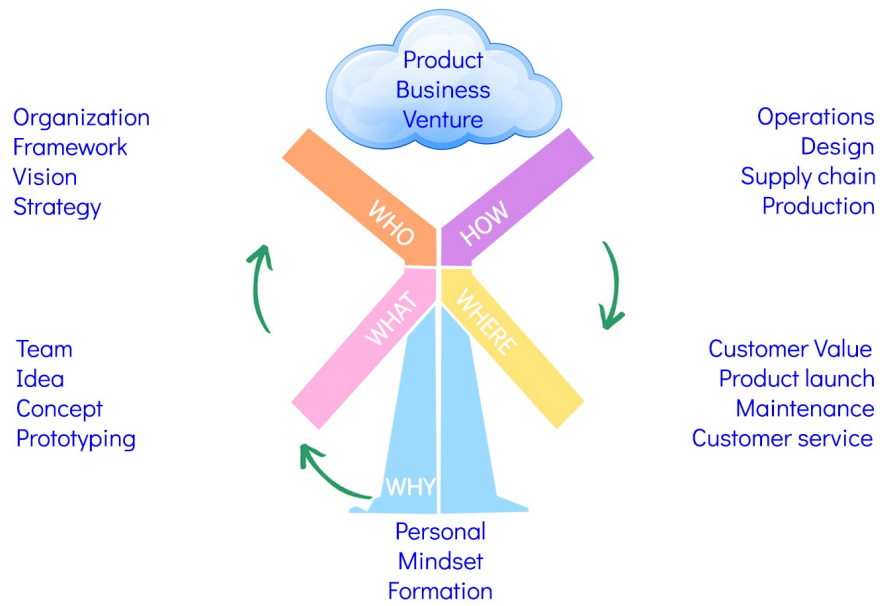


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The IEE structure



The IEE modules

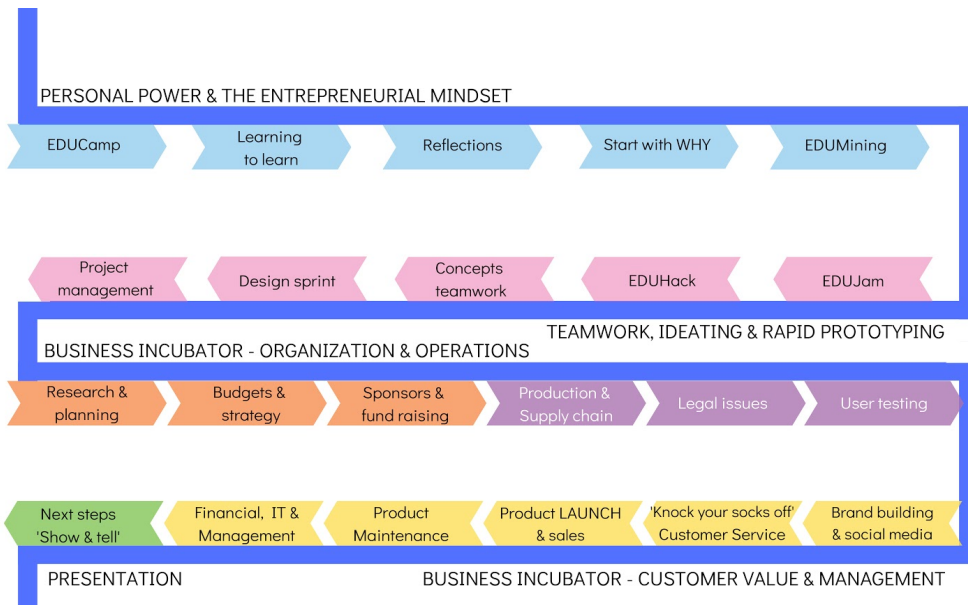


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Foreword

The project description

Our main priority has been to create a new educational program which will bring entrepreneurial skills into focus. Students will decide the topics they wish to learn, and learn through experience. They might code software, compose music or launch a business. Faculty will serve as facilitators, mentors and coaches, and teach students to live a more fulfilled life. The goal is for students to be exposed to a wide range of subjects as they discover how to learn about skills or subjects that personally interest them.

This new curriculum and method will improve the competencies of the students both in the areas of personal skills such as initiative, resilience, responsibility, risk-taking and creativity, and also social skills such as team- and networking skills and skills of collaboration as well as learning skills – learning how to learn and how to organize the learning. It will include basic and soft skills, it will teach the students how to apply what they learn and enhance their entrepreneurial mindset and their digital skills. It is intended as a curriculum and method which will open possibilities for use in an international school setting which will focus on the diversity and cross-cultural benefits of the students.

This education is intended as a '*bridge-builder*' for young people to get clear on their choice of higher education. It is intended to enhance the quality and relevance of students' knowledge and skills, and promote student-centered learning approaches, as well as support the student in a better use of ICT. In that sense it will provide a better link both to the student's choice of higher education as well as insight into the world of business and enterprise, allowing the students to put themselves in the shoes of employers.

This education and innovative teaching method will promote the acquisition of skills and competencies, which will foster entrepreneurial and critical thinking, and have a holistic approach to math, science and languages, teaching these skills and skills such as programming, design, art and project management in an environmental and cultural context. Parts of the curriculum will build on thematic and phenomenon-based learning using the phenomenon-based approach in particular with regards to learning in accordance with inquiry learning, problem-based learning as well as project and portfolio learning and their practical implementations.

The project partners

The project partners believe in the sharing of innovative ideas and practices and we believe and know that the game development processes of creating a '*jam-session*' (such as also with music), in what is known as game jams, where people with innovative ideas come together to create, can be transferred to education.

Educraftor Oy Ab has taken this practice and molded it to fit in the educational setting. Educraftor have had a lot of experience with creating and describing new curricula for the educational field especially in Finland and Estonia. Educraftor works with education and learning innovation projects at all levels, learners, teachers, organisations, municipalities, ministries and regionally as well as globally.

Promoting the acquisition of skills and competences as well as promoting entrepreneurship in education is a strong suit to Educraftor, who have worked with; curriculum development, coaching changing operational models and by bringing innovative methods into education.

Peter Fagerström is the Founder and CEO at Educraftor (Finland), partner in the IEE program. He's also a Co-founder and CEO at Teach million, Co-chair of the Nordic Edtech Forum N8, Advisor to Edtech Finland and Education lead for the Global Help Desk at the People Centered Internet (PCI). Peter is an experienced consultant for regional development and management systems as well as a coach for team learning, blended learning, phenomenon-based learning and the use of ICT as tools for learning and innovation (edtech). Together with his teams, he implements innovation and learning processes globally [sic], helping organisations and networks to become learning organisations and purpose driven innovation and learning ecosystems.

Peter has a phenomenal ability to perceive large, complex systems, and finds connections where none are apparent, enabling situations where the whole is greater than the sum of the parts. He can work on a vision no matter how big. Peter is not afraid to challenge the conventional mindsets and the way we work, and he brings positive disruption into any process.

Juhani Koivuviita is the co-founder and CLO at Educraftor (Finland), and a partner in the IEE program. Juhani is an experienced team coach in various settings, language teacher on all education levels, school principal on primary level, program and project manager in national and international context, with high communication and language skills, a diplomat and a lifelong learner and leader.

Juhani helps learners to challenge their thinking and actions. He inspires and ignites a learning and maturity process inside the learners, and does it by supporting the exploration of different tools and methods and enabling a space for dialogue.

Juhani's big goal is to help people reach their fullest potential and to bring understanding into communication and interaction, also when crossing the lines between sectors, borders and cultures. The key is to listen to understand, not just wait for your turn. Juhani's patience and compassion sets a foundation for this to happen.

Promoting the acquisition of skills and competences and promoting entrepreneurship education and social entrepreneurship among young people is a core competency of VitaTiim NGO. This non-formal learning center has extensive experience in creating exactly those tailor-made programs that will enhance the necessary key competencies

of the learners in the community. The IEE has made use of and further developed these excellent programs to make them available to an even wider user base.

Galina Kushanova is project manager at VitaTiim (Estonia) and has been the main partner in the IEE program from VitaTiim. Galina has intensive experience in the field of youth work and non-formal education, including running both local and international youth projects (youth exchanges, training, seminars, strategic partnerships, voluntary service). She has been working with different educational and life-long learning programmes, such as Youth in Action, Comenius, Leonardo da Vinci, Grundtvig, Erasmus+, Nordplus, ESF.

Galina is also a qualified adult educator/andragogue (Level 7) and has been involved in adult education for the last 10 years as a trainer, mentor, study counsellor, project manager and a foreign language teacher (English, Polish, Russian).

Nino Kapanadze is also a project manager at VitaTiim (Estonia) and a partner in the IEE program. Nino has immense international and multicultural experience. She has been involved in different international projects, such as youth exchanges, training, seminars and internships. She has been working as a youth worker in the association for social promotion. Nino is a specialist in content and language integrated learning. She has good multilingual skills and she's involved in adult education as a foreign language teacher. Besides this, she is a co-founder of Young Diplomats Club of Georgia and has been running different educational projects. Nino has been working as a researcher and assistant in the Georgian parliament and in the European Integration Coordination Department.

The main goal for Nino is to help youngsters to broaden their horizons, to express themselves and their needs, to stimulate their creativity and critical thinking and to promote their active participation in local and international communities.

Ingerlil Teute from IAmTrading ApS has extensive experience with training young people in acquiring entrepreneurial skills and creating support structures for their setting up their own businesses. Ingerlil Teute is the founder of MillCamp Academy and the person behind the idea of the IEE program. She has participated as a coach and administrator with more than a dozen startups. Ingerlil has coached and delivered personal development programs for both young people and adults for many years. She is also a vocal coach and an inspirational speaker.

Margarita Popova is a researcher and professor in pedagogy and psychology, Ph.D. She is associate professor of the department of psychology of education at Roskilde University and has contributed greatly to the structuring of this guidebook. She has been working as a developer of scientific, educational and recreational projects for children, youth and also for teachers and educators. In addition to that she specializes in international projects and experience exchanges in educational fields.

Comment to the order of things

As human beings we have a tendency to want to be able to put everything into boxes, to think in a time and space linear way, to give labels to everything. And then we wonder why we are so disconnected.

In nature everything is connected. Everything is part of the whole. This is what holistic is all about. As a holistic thinker, you approach everything as a part of the whole. Nothing stands alone and nothing is linear in time or in space. This means that things can happen at the same time, alternating, never independently but always as a reaction to some form of stimulation which is all part of the whole.

It also means that what happens in one spot can have an effect on something in a totally different unrelated spot. Holistic thinkers approach things differently than linear thinkers. They do not focus on just the one thing but assess the impact that one thing can have on all the systems around it. This type of thinking cannot be put in a linear format and still have the same impact. The linear format can only function by constraining time and space.

Time and space are concepts put into place by humans to make sense of things. But there is no time and space. So little we know. We build our knowledge upon those who came before us, but still, we know nothing. We need more holistic thinkers, more people that can see the whole picture and the amazing interaction between all the elements in a system. Nature in its infinite wisdom is so far ahead of us, we are nothing but little specks of dust before her.

The IEE is a holistic program, and as such the methodology, principles, philosophy and approaches are all intertwined into one paradigm. This can of course not be a linear description, therefore, when writing this guidebook, some concepts will appear in many different places in the text. The descriptions have, however, been put into an order and a format that should also make sense in a linear world.

Holistic education

Any approach to education must ask itself, what is the goal of education? Holistic education aims at helping students be the most that they can be. Abraham Maslow referred to this as '*self-actualization*'. Education with a holistic perspective is concerned with the development of every person's intellectual, emotional, social, physical, artistic, creative and spiritual potentials. It seeks to engage students in the teaching/learning process and encourages personal and collective responsibility (en.wikipedia.org).

How is holistic related to entrepreneurship?

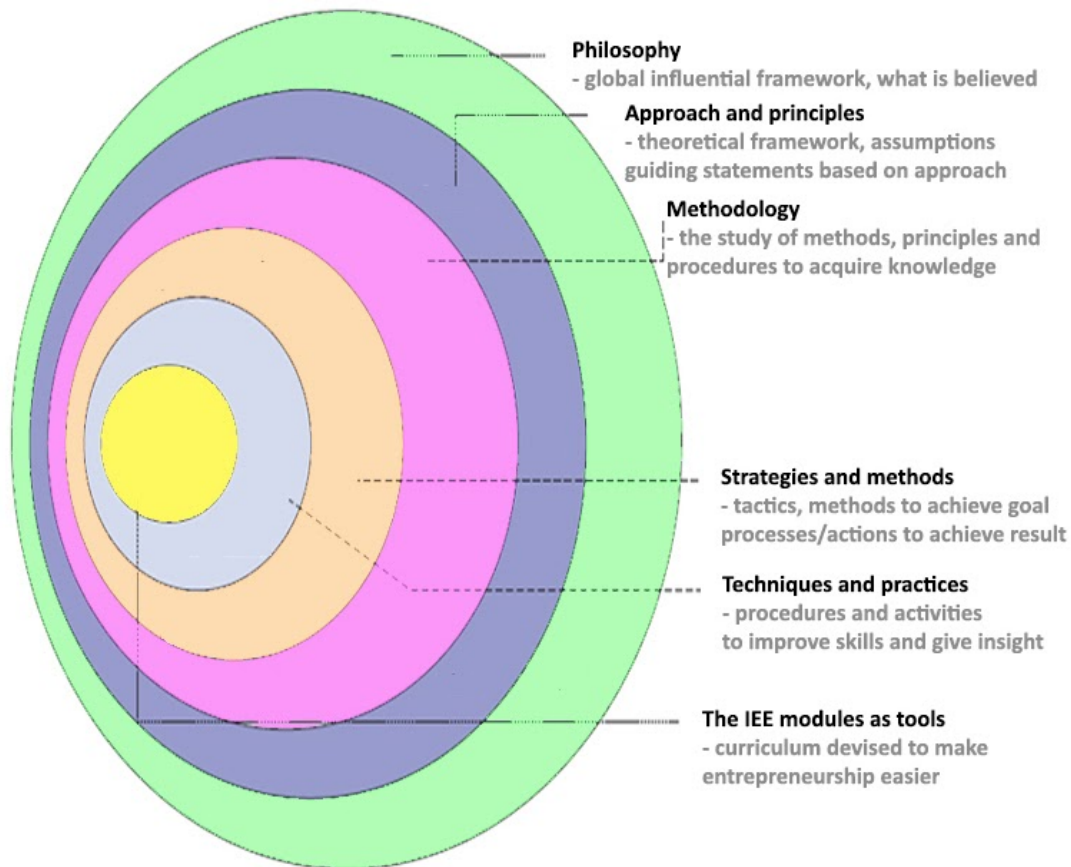
A holistic approach to entrepreneurship means that one is aware of things inside and around and can be present. Entrepreneurs tend to feel stressed and at those moments everything shrinks down to the task at hand that one just wants to push forward faster and faster. This only increases the amount of stress and if a long-term situation, can

also cause severe health issues. Therefore, having a holistic approach means that one can observe the situation and take a look at the whole: life with family, friends, nature, arts, hobbies etc. Through this, one is able to live in the moment and not rush to the future. Meditation is a practice that helps in this.

Besides one's holistic approach to one's own life, a holistic approach is needed when managing the business. Every area and decision is interconnected with another. When one plans marketing, it's not just about advertising the new product. One needs to think about the *'why'*, is this ad aligning with our mission or not. What are the costs, how ethical is this, how will this help us develop our customer relationship, who will do this in our team, what kind of profit do we predict to have etc. A successful business can operate with a holistic view, and when a routine, is very much as described above: natural, then there is a balance that doesn't need to be forced anymore. This is holistic entrepreneurship (medium.com/@thedistillerylife/).

Being a holistic entrepreneur means there is no separation between your love, life, work and spirituality. It's a way of life that lends to serving in whatever capacity you're living in that very moment (www.blog.swiha.edu).

Overview of guidebook contents



Philosophy

Why?

Why create an International Entrepreneurship Education that differs from other alternatives in the way that creating, developing and unfolding an '*entrepreneurial mindset*' has a dominant focus? Because '*craftorship*' is about the creative urge, cohesion and enlightenment, and the foundation for this is a mindset.

Core values and education ethics

Human beings differ from other species in that they think to create. In that sense all are creators inherently, each wanting to create the best life possible. People are different and in this diversity there is great strength. People need positive experiences of their own power, knowledge and abilities.

The International Entrepreneurship Education is an education supporting creatorship.

Creativity and innovation is often dependent on the support from others, and through creating together and thinking more in terms of 'we' and the greater good, greater ideas are generated. Young people must feel they are part of life in their society and culture in order to get a sense of agency and social responsibility which are central aspects of creativity.

The basic intention and attitude of this education is therefore to stimulate self-esteem, by giving the individual appropriate challenges both professionally and as human beings, in order to develop the whole human being.

True enlightenment consists of three elements: *rational*, *emotional* and *spiritual* or *'eternal'*. Our science has explored *'rational'* for decades now, but rational cannot stand alone. We perceive the world sensually and we process sensory impressions emotionally or aesthetically, so *'emotional'* must be taken into account. However, rational plus emotional is not enough either. We as human beings have a knowing that there is something greater than us, we have a need to relate to the world, we have a desire to explore the *'spiritual'* and *'eternal'*.

The International Entrepreneurship Education facilitates learning and enlightenment by bringing people together and nudging them gently through a two-part process: formation (*'dannelse'*) and education. Formation orients itself towards the eternal, the *'who am I'*, where *'man'* as human being is the goal. Education orients itself towards information and the goal of the human being. Linked together, it evokes a desire for action (from conversation with Brian Degen Mårtensson, cand.pæd., Pedagogical philosophy).

Purpose

The purpose of the International Entrepreneurship Education (from here on referred to as IEE) is to give young people a framework and insight into what it takes to become an entrepreneur – either as an innovator or as a self-employed person.

IEE provides young people with support for creative innovation and support to test innovative ideas. IEE first and foremost invigorates self-confidence, courage and eagerness in the learners¹, as well as develops self-awareness and belief in their own abilities. It also provides information about rules, laws and legal requirements and possible established avenues in addition to a comprehensive overview of the milestones that will be necessary on the way to self-employment and leadership.

Learning objectives and outcomes

The IEE program gives young people methods and tools to try out their own ideas and through practical guidance reveal possible pathways for the individual. The methodology of the program demonstrates the learner's most suitable qualities to build

¹ Learner is a broad term used to indicate the subject of lifelong learning. It refers to pupils, students, jobseekers, employees, entrepreneurs and citizens alike. (EntreComp Framework, 2016)

on for the future. This education gives the individual better clarification regarding their choice of career path and way in life. It provides a bridge between elementary school, upper secondary or vocational education and higher education, or a direct way to self-employment.

Core of IEE and teaching idea

The core of the IEE is its foundation in the learner's interests. Everything must spring from there. First of all '*it must be fun to learn*' and '*what's taught has to make sense*' are both very fundamental attitudes to what a good education is. Using game development as an example shows how it can be both fun and make sense. A good game development team is rich in diversity.

This IEE offers a teaching idea based on methods and tools from the game development processes. Built around 5 pillars of game development: *project management, design, programming, visual expression* and *auditory expression*, the IEE learners will work with tools for project management as well as experience the project management tasks in different ways. They will experience and work with design and design-thinking processes. Whether they will do hands-on programming will depend on their own interests and business ideas. They will practice different kinds of visual expression and have the opportunity to also work with auditory expression.

The IEE honors diversity and divergent thinking, which gives access to many directions onward in life.

Formation and democracy

The IEE is based on a way of thinking about the formation of democracy, community, society and education, which was first introduced in the Nordic countries by the Danish folk high school tradition.

The folk high school played an important role in the development of democracy and the transformation of the Danish society in the 19th century, including collaborations, as well as changes in political, educational, religious and judicial systems.

The idea of formation (*'dannelse'*) was first introduced by N.F.S. Grundtvig (1789-1872). He was a bard, poet, pedagogical thinker, politician and priest, and he was the founder and visionary genius of the folk high school movement, but it was most notably Kristen Kold (1816-1870) who transformed Grundtvig's visionary ideas into educational practice. For Grundtvig, schools were to provide enlightenment for life rather than formal or vocational training. Therefore, they should be free from any kind of examinations. The teaching style was based on '*free, open poetic-historical talks*', without fixed syllabi, but with emphasis on human enlightenment. The learning environment would make a strong cultural impact, by means of '*the living word*', creating in young people a receptive attitude, and bringing the students into a concrete relationship with the practical aspects of life.

Formation (*'dannelse'*) usually means a person's set of general knowledge, cultural behavior and insight that the traditional society considers to be high-quality and fine. Formation (*'dannelse'*) is a linguistic, cultural and historically conditioned term of

complex importance, but can often be replaced by synonyms such as '*refinement*', '*culture*', '*fostering*' and '*good education*'.

Community and mentoring

This IEE uses the boarding school form as the best way to build a community, and through community, networking and interaction, develop an entrepreneurial mindset. It is important and necessary to learn to focus on one's own strengths by getting to know oneself inside the framework of such a community. This community teaches learners to apply positive psychology and strength-based management, where wellbeing creates efficiency and results create wellbeing. When learners learn to allocate energy and time to tasks where their strengths come into play, they will find it pays off with regard to performance, innovation, wellbeing and efficiency, and that this will ultimately be readable on the bottom line of their businesses.

This IEE uses successful entrepreneurs as mentors. It is important to '*walk the talk*' and '*practice as you preach*' in every respect, so that the learners experience alignment between the ideas and their implementation.

The overall purpose of the education is to give the learners the opportunity to become well-founded, empathic, creative, visionary and socially well-functioning young people with powerful ideas and zest to bring those ideas into the world.

Craftorship

The IEE is a *craftorship* education and presents a new combination of known elements with added new ingredients.

Definitions:

To *craft* is to make or produce with care, skill, or ingenuity. *Creatorship* is the state or condition of being a creator; the function or power of a creator. *Entrepreneurship* is the creation or extraction of value, and is viewed as change, generally entailing risk beyond what is normally encountered in starting a business. In the field of economics, the term entrepreneur is used for an entity which has the ability to translate inventions or technologies into products and services.

The IEE defines *craftorship* as the willingness to discover, unfold, explore and reach new ideas and levels of skills and ingenuity in order to create, produce and extract value by translating ideas, inventions or technologies into products or services.

'Education is the kindling of a flame, not the filling of a vessel.'

— **Socrates**

'The easiest and noblest way is not to be crushing others, but to be improving yourselves.'

— **Socrates**



Ikigai: The Japanese Secret to a Long and Happy Life

Dr. P.G. Nutting wrote on the principles of education in *The Scientific Monthly* nov. 1918: Education is as long and as broad as our lives - welfare requires that it be recognized and treated as such. Education should be such as to develop and bring into action all the latent possibilities in every individual.

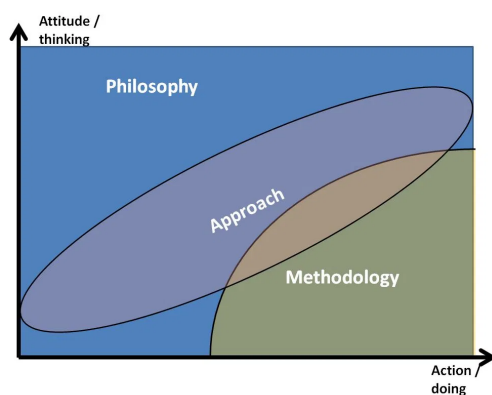
So these are not new thoughts, but merely a refinement of - and expansion on thoughts.

What's new?

The approach implemented within the framework of the IEE model has a number of significant differences from existing entrepreneurship or business education programs. The first difference is that the program has the first basic part focused on preparing the learner's personal, psychological, creative and cognitive readiness for the new role, for the new quality - of being an entrepreneur.

This is no coincidence. Studies (2018) show that the main obstacle in the formation of entrepreneurs lies precisely in fear, that is, in psychological, personal reasons, and not in the absence of knowledge.

The second part of the IEE is the search for and creation by the learner of his/her own entrepreneurial product and applying the appropriate knowledge provided by an expert. This is another one of the IEE differences, the extensive use of field-experts and the finished product in the hands of the graduate. Thirdly, there is a difference in the training methods offered by the program.

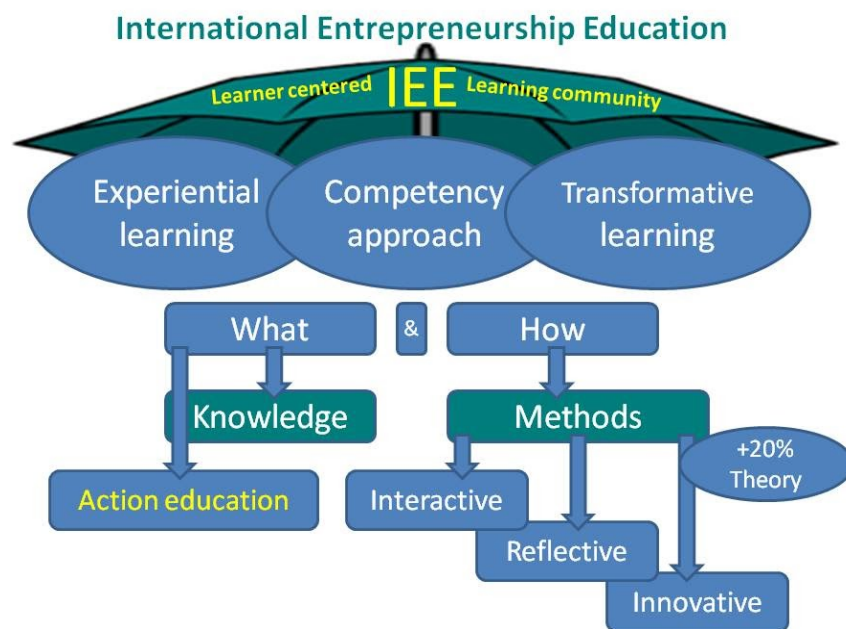


The structure of this guidebook looks at philosophy, approach or methodology somewhat like this depiction, where arguments can be made for one or the other or a combination of the three.

Approach and principles

The IEE is a learner-centered, community driven action education.

The building blocks and more widely known and accepted ideas and theories of the IEE are those of 'learner-centered learning', 'learning community' and 'action learning'.



Action education

Action education and action learning

Education in action => Action Learning => Action Education

Action education provides an appropriate set of methods for learning about the complexities of communities and start-up-processes. The business idea and start-up-process provides the framework to organise learning opportunities for learners interested in solving challenges in the real world.

The learners are immersed in practical phenomena at the business start-up level, and these phenomena determine what theory is necessary and relevant. Teachers are converted from lecturers to leaders, facilitators and catalysts in the learning process.

Learners will have knowledge of business start-up processes, and the skills necessary to handle complexity and change, to link theory to real life situations, to communicate and facilitate in an effective way, and to be autonomous in their learning. The learning

community and start-up of businesses are good places for training in these skills. Such skills will be vital for learners to proactively deal with the challenges of modern society.

Action education proposes interactive dialogue-based teaching together with the use of didactic tools aimed at creating a learning framework where the participants are active in the teaching situation and thus promote learning potential.

The IEE puts dialogue at the center of the learning processes. *'Learning is a social process that takes place in interaction with others'*. Illeris' *'Developed Learning Theory'* proposes three basic learning dimensions:

1. The content (cognitive and motor) dimension that is about the acquisition of what is learned.
2. The psychodynamic (emotional, will and motivational) dimension that revolves around the driving forces of learning.
3. The social (interaction and social) dimension that concerns the interaction between the individual and the environment.

In the social dimension, it is central that the individual is part of a large number of cooperating communities that function through the interaction and social activities of the individuals. In relation to inclusion, it is the social dimension in interaction with the other two dimensions that is the decisive factor, as together they continuously develop our knowledge, skills, understanding, sensitivity, sociality - ie. all that we as a whole, in a modern word, describe as our competencies. (Illeris 2006, 2007) and *'Competence'* (Illeris, 2012).

Thus the learning takes place through interaction, negotiation, and collaboration in solving authentic problems while emphasizing learning from experience and discourse, which is similar to that of Olga Dysthe's understanding of a sociocultural learning perspective (Dysthe 1997, 2003).

The participants are seen as the constructors of their own learning, and at the same time the learning is seen as a process constructed through social interaction in concrete contexts. This is linked to an understanding of the participants as whole human beings and not just intellects to be developed. This means that active interactive teaching suggests several aspects together: the cognitive, the emotional, the social and the bodily aspect.

The teaching situation is seen from a holistic perspective, where the role of the teacher is not just the professional expert, who mediates professionalism, but also acts as a facilitator, initiator, moderator, etc. of learning processes that engage and create social and professional dialogue (Ulstrup and Haugaard Jeppesen).

Action education is a two-way learning and teaching process, where the facilitator is also learning from the students, and where the students acquire the competencies to go out and *'do for themselves'*.

When the best leader's work is done the people say, '*We did it ourselves*'.

— Lao Tzu

Learning as activity

Ever since Dewey (1916) insisted that students should be given something to do, rather than something to learn, there has been – at least on a rhetorical level – an unquestioned belief in the connection between learning and activity.

Within sociocultural theory, several attempts have been made to describe learning contexts that may be conducive for the learning process (Lave and Wenger 1991; Wenger 1998; Boud and Garrick 1999; Wenger, McDermott, and Snyder 2002), with a focus on how to structure learning environments that promote activities.

Still, too little is known about how participants in learning communities or communities of practice actually act when they learn. How do their activities within sociocultural communities actually enhance their learning, or how do they do learning? (Koschmann et al. 2005)

Action learning is a systematic process through which individuals learn by doing. It is based on the premise that learning requires action and action requires learning. It engages individuals in just-in-time learning by '*providing opportunities for them to develop knowledge and understanding at the appropriate time based on immediate felt needs*' (Lewis and Williams, 1994).

Action learning is a process that involves a small group working on real problems, taking action, and learning as individuals, as a team, and as an organization. It helps organizations develop creative, flexible and successful strategies for pressing problems.

Action learning is also a process of insightful questioning and reflective listening. Action learning tackles problems through a process of first asking questions to clarify the exact nature of the problem, then reflecting and identifying possible solutions, and only then taking action. The process is an iterative process of '*do-notice-reflect-plan new action*'.

Learner centered

Learner-centered learning

Learner-centered approach in education is a framework that positions learners at the heart of the instructional process, not as passive recipients of information as in a traditional teacher- or content-centered approach. When instruction is learner-centered, the focus shifts from instructors only delivering content and controlling the learning environment to actively engaging students in creating their own learning (Mahendra, Bayles, Tomoeda and Kim. 2005).

Education Reimagined calls this a paradigm shift and presents this in their visioning document: *'The learner-centered paradigm changes our very view of learners themselves. Learners are seen and known as wondrous, curious individuals with vast capabilities and limitless potential. This paradigm recognizes that learning is a lifelong pursuit and that our natural excitement and eagerness to discover and learn should be fostered throughout our lives, particularly in our earliest years.'*

The person-centered learning community which is established within the framework of the innovative IEE program puts the person at the centre of the learning. Exactly a person. This means that the IEE works with learner-oriented learning as opposed to the traditional teaching-oriented approach and offers learners the methods of teaching that shift the focus of instruction from the teacher to the learners – their interests, opportunities and individualities. With this type of learning, educators must totally change their own direction; they no longer work with a classroom, they work with every individual in the classroom.

This approach is known in pedagogy as learner-centered learning, which has a number of distinctions.

1. The first one is that this includes whole-person learning. To involve the whole person in learning means to use or combine the right and left brain, the logical and the intuitive, the intellect and the feelings, the concept and the experience, the idea and visual vision.
Another side of this kind of significant learning is self-initiated involvement. Even when the impetus comes from the outside, the sense of discovery, of reaching out and comprehending comes from within. Another feature is pervasiveness. It makes a difference in the behavior, the attitudes and even the personality of the learner. Yet another feature relates to learners' evaluation of the event ([p. 36, Freedom to Learn. Rogers Carl](#))
2. The next characteristic of learner-centered learning is the personal meaningful interest of the learners. This means that the teaching will take into account the learner's personal meaningful interest and conditions will be created for this to be answered in the learning situation and educational content. Often the realization of a personal meaningful interest takes place through a project, as well as communication with a teacher in the form of *walk the talk* and mentoring.
3. The following characteristic can be called the duality of possibilities. This takes place when:
 - a. on the one hand, the learners receive the right to choose the learning, the right to decide some issues and themes of learning;
 - b. and on the other hand, along with this, they receive responsibility for their training, its results and quality.

Educators encourage learners to share in the decision making processes, and believe in the learner's capacity to lead.

There are several other advantages of learner-centered learning that do not seem obvious, but which are also important, especially for entrepreneurship.

Learner-centered learning is a kind of active learning in the study group. This allows the learners to interact with their teams through discussions and encourages them to collaborate. Through working and thinking together they learn to deal with others, and many other daily tasks will eventually help them become team players. When leading a group of people from different countries and cultures, it is crucial for the international environment to strive towards a common goal.

Learner-centered learning requires the educator to act as a facilitator. The facilitator's goal is to facilitate the learning process to guide learners into making new interpretations of the education material and '*experiencing*' content, reaffirming Rogers' notion that '*significant learning is acquired through doing*'.

Learner-centered learning is correlated with the non-formal education context, in which the concept of the IEE has been developed. As is well known, non-formal education is oriented towards individual learning objectives and flexible learning environments based on learner's interests, and the mentor or facilitators work.

Learner-centered teaching focuses attention squarely on learners: how they study, whether they are applying the learning, and how they are feeling.

When teaching is learner-centered, the action focuses on other values, in that sense:

- Course content and curriculum is not the end; it is the means to an end.
- This is not only about how teachers need to become learner-centered teachers but also teaching the learners to become learner-centered.

For the purpose of an entrepreneurial education, it is very important that the learners are able to recognize their own interests, and that they become able to hear themselves and others in dialogue in order to understand each other better. In other words communication skills are essential to the entrepreneur.

'Conversational competence might be the single most overlooked skill we fail to teach. Kids spend hours each day engaging with ideas and each other through screens, but rarely do they have the opportunity to hone their interpersonal communication skills. Is there any 21st century skill more important than being able to sustain coherent, confident conversation?'
(The Atlantic, Paul Barnwell)

Due to the listed advantages learner-centered learning is considered a powerful pedagogical resource that has been actively developing over the past 100 years.

Learning community

Learning community

The beginning of the twenty-first century heralds a shift in emphasis from learning with the focus on the individual to learning as part of a community. The concept of '*learning community*' is currently one that is to the fore of much educational literature and discussion. It is now recognized that community learning has benefits and that admittedly learning communities can be a powerful means of *sharing* something and *creating* new knowledge (Kilpatrick, Barrett & Jones, 2003).

The *term* learning community is used variously within the literature, often with several definitions, but two major uses are highlighted:

1. The first focuses on the *human element* of communities, and the profits that accrue from building on the synergies of individuals in common locations or with common interests as they work towards sharing understandings, skills and knowledge for shared purposes.
2. The second is focused on *curricular* as the means to developing '*deeper*' learning of (implied) predetermined curricular content.

The broad use of learning communities is as enhancers for quality learning in educational settings. This is exactly because the learning community facilitates the *sharing of knowledge* and the potential to *create new knowledge* that can be used for the benefit of the community as a whole and/or its individual learner.

There are common characteristics of the learning community:

- common or shared purpose,
- interests or geography;
- collaboration, cooperation and partnership;
- respecting diversity;
- enhanced potential and outcomes.

These characteristics are not highlighted by chance - they provide the viability of the learning community.

Collaboration, cooperation and partnerships are in the centre of the concept learning community, because the learning community as a pedagogical phenomenon is operationalised in this way. The shared goals and learning together leads to creating new knowledge, as pointed out: '*learning helps people to create and manage knowledge that builds a system's intellectual capital*' (Watkins & Marsick, 1999, p. 81). While there are many tasks that can be undertaken by an individual, '*collaboration is called for when an*

individual's charm, charisma, authority, or expertise just isn't enough to get the job done' (Schrage, 1990, p. 6).

Collaboration is a powerful tool for use when working within teams or groups as an act of shared creation and/or shared discovery. To truly collaborate, however, requires a high level of cognitive involvement by participants, as well as a preparedness by them to contribute to the creation of a shared understanding (Schrage, 1990).

Sharing knowledge through collaboration is the core business of the learning community. The adage, *'two heads are better than one'* embodies the beneficial nature of knowledge when socially distributed, instead of being solely the property of an individual intellect (Brown, Collins & Duguid, 1989).

The understanding of the learning community as a concept is based on the view that learning cannot be taught, but must be constructed by the learner. The learner, in making sense of experiences, tests previously held values and attitudes against those of others. The opportunities for each one are enhanced in a learning community. This assists in *changing the learner's values and attitudes*. Change in values and attitudes are essential if learning is to result in new behavior (Candy, 1991; Kilpatrick, Bell & Falk, 1999).

Learning through collaboration with learners in the group and groups external to the community introduces new ideas, raises awareness of new practices and exposes community members to new norms and value sets. *External networks* improve the capacity of communities to learn and to manage change.

This is sometimes called *collaborative learning*, defined as the educational approach of using groups to enhance learning through working together. Groups of two or more learners work together to solve problems, complete tasks, or learn new concepts.

Respect for diversity enhances the learning capacity of a community. Acceptance of diversity is an indicator of willingness to entertain new ideas and accept change, both prerequisites for community development and learning. The experience shows that the learning community has much to recommend in an increasingly complex world where we cannot expect any one person to have sufficient knowledge and skills to confront the complexities of society and individuals, and the tasks they face.

Learning community practice clearly reveals the importance of social interactions in the *construction* of own values and *identity*. It's a real tool of achievement. Another thing is that it is not so simple and easy to create such a type of learning and development as learning in communities. This requires organizers and leaders to have certain abilities, competencies and internal stability. For those educators who accept the challenge of using the learning community as a kind of teaching and a tool for improving its quality, it is important to explore the following questions:

- How are learning communities fostered?
- What makes a learning community work?

- What is the role of formal and informal leaders in learning communities?
- How do learning communities interact with external groups?
- How do learning communities create new knowledge?

In the last 20 years, the phenomenon of community learning has been gaining momentum in education and has bright and successful examples. Each educational institution contributes to both the development of this pedagogical practice and the understanding of the phenomenon itself.

Harvard University defines the learning community as a space and a structure for people to align around a shared goal, learn and work across boundaries, common agendas, metrics and outcomes. There is focus on the participants to share results and learn from each other, thereby improving their ability to achieve rapid yet significant progress, highlighting 5 values:

1. It connects people. Learning community convenes change agents across sectors, disciplines, and geographies to connect, share ideas and results, and learn from each other.
2. It sets goals and measures collective progress. The community aligns participants around common goals, metrics (ways of measuring achievement), theories of change, and areas of practice.
3. It enables shared learning. The community shares learning from both successful and unsuccessful experiences to deepen collective knowledge.
4. It supports distributed leadership. The scope of a learning community allows it to offer a wide range of leadership roles and skill-building opportunities.
5. It accelerates progress toward impact at scale. The community facilitates fast-cycle learning, measures results to understand what works for whom, and brings together the key stakeholders who can achieve systems-level change.

The learning environment for the IEE ideally is through community, since the interpersonal skills of juggling personal preferences with the needs of a tight community calls for flexibility, reflection, communication and leadership.

There are many benefits of learning while in a community environment among which especially social- and relationship skills, networking and interaction skills strengthen and develop an entrepreneurial mindset.

Learning environment

The definition of learning environment as given in The Glossary of Education Reform refers to the diverse physical locations, contexts and cultures in which students learn. Since students may learn in a wide variety of settings, such as outside-of-school locations and outdoor environments, the term is often used as a more accurate or

preferred alternative to classroom, which has limited traditional connotations—a room with rows of desks.

The term also encompasses the culture of a school or class, that is its presiding ethos and characteristics, including how individuals interact with and treat one another, as well as the ways in which teachers may organize an educational setting to facilitate learning.

By conducting learners in relevant natural ecosystems, grouping desks in specific ways, decorating the walls with learning materials and setting up digital equipment aids, a safe and positive learning environment is created with good rapport between participants. It is a known fact that a learning environment has great influence on students, both directly and indirectly, including their study engagement in what is being taught, their motivation to learn, and their sense of well-being, belonging, and personal safety.

A learning environment where learners feel motivated to learn within the boundaries and expectations of a safe learning room is important. By modeling and encouraging a safe environment, participants get motivated to do the right thing and help one another. An intrinsic motivation in the learning keeps learners interested and invested in their own learning goals. At those times, extrinsic motivators help learners to follow the expectations of the learning team and support their intrinsic motivation.

The learning environment for the IEE is important. There is a focus on non-formal learning and education is woven into the daily well-being of students. The learning outcomes of IEE are aimed at cultivating competence and this is much more than just knowledge and skills. Therefore the learning format of IEE assumes a more flexible, creative and wide spatial learning environment than that of a conventional quadrangular classroom. The learning environment of the IEE can be considered a learning factor, part of the learning process and more than just a place of teaching.

Physical location

As a learning environment, the IEE uses 3 physical locations; the inside environment, outdoor environment and outside environment.

The inside environment is a flexibly organized space with movable furniture, in order to be able to change the structure of the space and/or create several spaces within one large room, depending on the learning objectives. Such mobility and flexibility of space is necessary due to the fact that dialogue-based learning plays a central role in the IEE. The educational process is built on interaction, listening skills and cooperation.

The kind of teaching that is built on an understanding of the meaning-making and communication occurs in dialogue. A dialogue is a forum that draws participants from as many parts of the learning community as possible to exchange information

face-to-face, share personal stories and experiences, honestly express perspectives, clarify viewpoints and develop solutions to community concerns.

The physical environment and objects therefore have a special focus. When participants sit opposite each other in a circle or horseshoe, typically without a table or with a table but without computers, and discuss the topic between them, they have a special feeling that they are more obligated to listen to each other and to engage in constructive learning-oriented relationships.

The outdoor environment is used to physically expand the learning space and move learning tasks or solutions outside the building. It encourages activity, acts as a break from being indoors and supports the learning to be in a variety of environments.

Several of the IEE modules uses the outdoor environment ie. the EDUjam, learning to learn and EDUcamp modules.

The outside environment refers to other locations outside the territory. It can be a place within walking distance or a trip to another area or city. The IEE has education modules such as EDUmining, with field trips, or the EDUhack, which is held as a big event in collaboration with other organizations i.e. a university.

Approach and methodology



Experiential learning

The main theoretical framework for the IEE curriculum is experiential learning, primarily because it reflects the reality of subject-based pedagogy, where the student and not just the teacher, appears in the subject of learning. This framework is fundamentally different from *'traditional education'*, meaning a disciplinary curriculum approach and subject-object approach learning, where the teacher is in the role of rewarding, demanding or decision-making, with the student in the role of accepting, receiving, but not participating and not creating participation in the educational process.

It is no coincidence that the concept *'experiential learning'* is sometimes used as a synonym for concepts such as *'active learning'*, *'practice-based learning'*, *'learning-in-community'*, *'reflective learning'* and *'learning by doing'*. All of them relate as parts to a whole.

The characteristics of experiential learning that are important for the understanding of the IEE model are highlighted below.

- Active involvement in the learning process
- Motivation
- Jointly created and experienced experience

The general concept of learning through experience is ancient. Around 350 BCE, Aristotle wrote in the *Nicomachean Ethics* '*for the things we have to learn before we can do them, we learn by doing them*'. But as an articulated educational approach, experiential learning is much more recent.

Ideas about this learning approach appeared in the USA in the 1920s. According to Hopkins (1937), a deadly struggle was waged between the two types of learning curriculums. On the one hand, there was a large group of teachers who stood on the side of the subject program. On the other hand, there was a group that advocated the experiential learning program.

In the experiential learning paradigm, the learning process becomes centered on the student, their individual capabilities, abilities and interests.

The focus of the experiential curriculum is on the person and the interaction with the environment. The basic concept in the experiential curriculum is '*integration*'. The question of integration is posed in this paradigm to educate the student to become a whole person, creatively functioning in a holistic society.

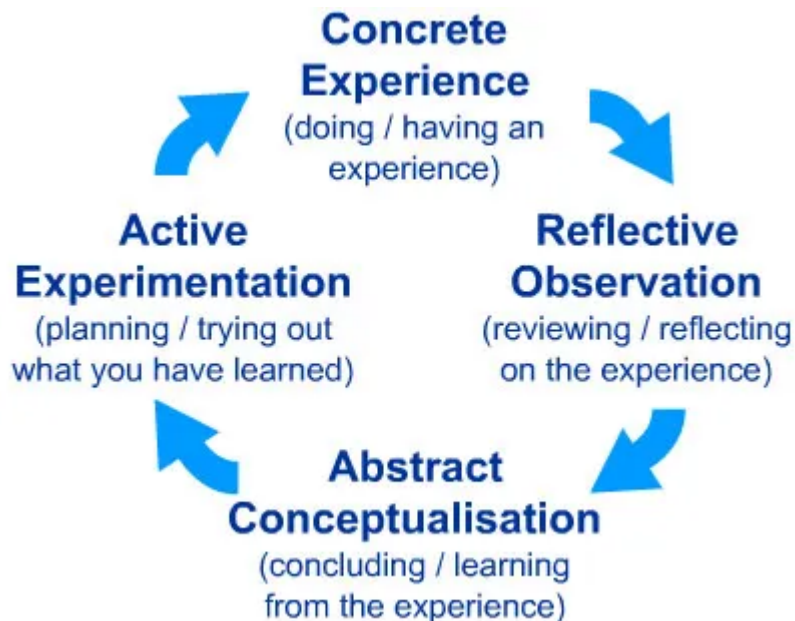
In this approach the focus is on the value of one's own experience and practice-oriented training as a source of knowledge. In order to transform experience into knowledge, reflection and reflective teaching methods are used here.

After the publication of Dewey's 1938 work '*Experience and Education*', it was reprinted many times in different countries and gathered many followers around the world, thus becoming a full-fledged concept of '*experience*'. Experience in the concept of experiential learning is seen as a process, including a process of comprehending experience.

Reflective learning as a fundamental component of experiential learning has been identified and expanded on since the publication of American scientist David Kolb's experiential learning cycle, where he wrote '*learning is the process whereby knowledge is created through the transformation of experience*' (Kolb, 1984) and where he presented his famous '*Experiential learning cycle*', which has 4 stages:

1. *Concrete experience* - a new experience or situation is encountered, or a reinterpretation of an existing experience occurs.
2. *Reflective observation* - of the new experience with particular emphasis on any inconsistencies between experience and understanding.

3. *Abstract conceptualisation* - reflection gives rise to a new idea, or a modification of an existing abstract concept (the person has learned from the experience).
4. *Active experimentation* - the learners apply their idea(s) to the world around them to see what happens.



McLeod, S. A. (2013). *Kolb - Learning Styles*. (Retrieved from www.simplypsychology.org/learning-kolb.html)

Alice and David Kolb propose that experiential learning has six main characteristics:

1. Learning is best conceived as a process, not in terms of outcomes.
2. All learning is relearning. Learning is best facilitated by a process that draws out the students' beliefs and ideas about a topic so that they can be examined, tested, and integrated with new, more refined ideas.
3. In the process of learning one is called upon to move back and forth between opposing modes of reflection and action - and feeling and thinking.
4. Learning is a holistic process of adaptation to the world. Not just the result of cognition, learning involves the integrated functioning of the total person - thinking, feeling, perceiving, and behaving.
5. Learning results from synergetic transactions between the person and the environment.
6. Learning is the process of creating knowledge. Experiential learning theory (ELT) proposes a constructivist theory of learning whereby social knowledge is created and recreated in the personal knowledge of the learner (Alice Y. Kolb and David A. Kolb. (Jun., 2005)).

Experiential learning is based on the understanding that the educational system should provide the student with conditions for the maximum realization of their activity, independence and initiative in the learning process.

The experiential learning concept involves a change in the mentality of teachers, as well as forms and methods of teaching.

The new training principles below are based upon the thinking developed by C. Rogers (Rogers C.R. *Freedom to learn*, 1969):

- based upon the personal interests and aspirations of the student;
- encourage academic success, and not just point out flaws;
- make learning an emotional, not just a mental process;
- help each learner in the course of learning to open up themselves and their abilities;
- make learning tasks creative;
- foster creative courage in students in the formulation and solution of cognitive tasks;
- organize joint creativity of an adult (teacher, parent) with a child.

The value of this teaching practice is openness to learning (the principle of cooperation), creating a climate of mutual trust, the concept of communicative education, and a pedagogy of dialogue.

That psychologized approach is being actively developed in the USA by the specialists of the National Society for Experiential Education. They deliver various programs and conferences, such as the NSEE 49th Annual Conference in September 2020.

Another organization involved in experiential learning is The International Consortium for Experiential Learning (ICEL), which was initiated by the Englishman Ed Rosen in 1987, they too display updates every 2 or 3 years through international conferences. Many worldwide researchers such as the English woman Susan Weil, Australian David Boud and Belgian Danny Wildemeersch are behind the development of this direction in the methodology. Following on from their first conference, the book '*Making sense and experiential teaching*' (Weil and McGill, 1989) was published, which serves as a basic guidebook. Publications of the above group of researchers designate dimensions: learner's control (over their own activity) and correspondence of learning environment to real environment. There are also 3 approaches: individual-centered approach, group-centered approach, project-centered approach (Boud, 1989).

In Denmark, the concept of experience was an appropriate focus for the various and often conflicting approaches of the 70s: It was firmly rooted in the pedagogical traditions of reform, which as early as the 1920 and 1930s were a progressive force in Danish pedagogy. The Danish analogy of '*erfaringspædagogik*' was not quite the same as '*experiential learning*', but was in many respects in tune with it, thereby becoming an

umbrella concept for a number of new trends; free pedagogy, critical pedagogy, anti-authoritarian pedagogy, dialogue-based pedagogy and others. Despite the differences in these trends, there was a need to highlight something common, unifying and tangible, in order to define a starting point.

Danish educational researchers made a significant contribution to the development of the theory and practice of experiential learning, which was perfected in special pedagogical technology used today in a specific model of university education at two Danish universities – Roskilde University and Aalborg University, which use experiential learning in Higher Education.

Experiential learning developed and articulated by Danish scientists are a solid part of Danish adult education in all professional fields. First of all, the works of Danish professor Knud Illeris (Illeris 1974; 1981; 1984; 1995; 1996; 1998; 1999; 2004; 2009) are of great importance and also educational researchers H. S. Olesen (Olesen 1981; 1985), Jensen JH, B. Simonsen, AS Andersen, S. Dupont, M. Blomhøj and others.

The Danish concept of '*erfaringspædagogik*' is close to the English experiential learning but the reference to John Dewey is combined with a closer connection to the German sociologist Oskar Negt and thereby to the tradition of Kant, Hegel and the Frankfurt School. Recent contributions to '*erfaringspædagogik*' and '*experiential learning*' are analysed in order to develop a common up-to-date understanding, and consequences for the design and framework of educational practice are discussed. Following on from here, Danish scientists attached fundamental importance to the concept of individual experience.

In developing this theoretical concept, they introduced key concepts such as: problem orientation, exemplary learning, participant-directed learning, project work and solidarity.

Experiential learning opportunities take students out of the classroom and into the field of life. Faculty and staff facilitate mentorship, substantive reflection and feedback.

This understanding of the values of learning provides valid reasons to build a learning model in the most effective way. Therefore the IEE design combines personal power and the entrepreneurial mindset with developing one's business product from start to finish.

Competence-based approach

The goals, objectives and teaching methods in the IEE emphasise the development of a holistic personality. It therefore uses special training strategies related to the implementation of a competence-based approach to training. In this regard, it is important to describe what competence is as a concept for the IEE model.

The concept of '*competence*' is used as one of the main drivers in entrepreneurial educational policy, in relation to individuals, organizations and nations. Since the

mid-90s the concept of '*competence*' has become central to management and education in many countries. Look up this word on the Google search engine and find more than 30 million links! International organizations, such as The Organization for Economic Co-operation and Development, The European Union, UNESCO and The World Bank, use the concept of '*competence*' as a key concept, with the Ministries of Education of different countries developing entire lists of competencies that a student should master.

According to Knud Illeris ([Illeris 2012](#)), questions which arise with regard to the competence-based approach include;

- What is competence?
- What is the specificity of this concept in comparison, for example, with the concepts of '*skill*' and '*qualification*'?
- What is the difference between the process of developing competencies, and the processes of learning, and learning?
- What needs to be done so that education and training contribute to the development of competencies?
- How does one measure competencies, is it possible to '*measure*' the competence of a particular person and how does one determine the competencies of the education offered to them?

The concept of '*competence*' was originally used in management in the USA in the 1950s. The appearance of these concepts was directly related to the involvement of the '*human resource*' in increasing labor productivity in enterprises and in business. In Denmark over the past 20 years, as well as in other European countries, there is a wide discussion around the concept of '*competence*', which includes scientists, practitioners and state institutions, educational institutions, centers of excellence, employment centers, and trade unions. So, in 1998, the non-governmental organization The National Competency Council ([Kompetenceråd 1998](#)) was established. The Danish Ministry of Education has published 2 special issues of the journal '*Education*', dedicated to these issues ([1999, 2003](#)). In 2008, The National Competency Development Center was established in Denmark.

The Competency Council gave a very broad, comprehensive and humanistically oriented proposal for 4 so-called core competencies, each of which includes 2-3 '*indices*':

1. Learning competence (professional competences, learning in organizations, cross-cultural learning)
2. Change competence (innovation, mobility)
3. Relationship competence (network, communication, responsibility)
4. Opinion competence (focusing abilities, identity) ([Schultz 2000](#))

One of the best competency definitions is from Danish psychologist, professor of The Danish Teacher Training College, Per Shultz Jørgensen:

'The concept of competence refers to the fact that a person is qualified in a broad sense. It is not only about the person mastering a professional area, but also that the person can apply this professional knowledge - and more than that: apply it in relation to the requirements of an uncertain and unpredictable situation. Thus, also included in a competence are a person's assessments and attitudes - and ability to draw on a significant part of his or her more personal preconditions' (Per Shultz Jørgensen, 1999)

Another Danish definition must also be mentioned, because it includes some special points in relation to the concept of qualification from Professor Bente Jensen:

'A competent person is a person who possesses qualifications and masters the exercise of those qualifications in a specific and perhaps unknown situation. Competences are what you practice in situations where the result is not given in advance. This in turn means that you can be well qualified, but incompetent...' (Jensen, 2000)

And the third Danish definition must be mentioned, which comes from Danish professor Stefan Hermann:

'Competence is the ability and readiness to meet a challenge through action, where it is often implied that the challenge is not given, but context-dependent, not routine, but new and not reflected in advance in certain success criteria, but rather in an open outcome' (Hermann 2005).

Most recently, The National Center for Competence Development published the book *'Adult learning processes - competence development in education and work'*, which summarised significant features of competence concepts (Wahlgren 2010) as follows;

- Competence is what we can (described by the words 'be able', 'ability')
- Integral character [.....(integrity as essential to completeness)]
- Application of knowledge, qualifications, competencies in a specific situation
- Effective actions (intellectual or practical) in a new situation
- Reflection as a component of competence

Danish professor Knud Illeris made an even deeper and more detailed analysis. Based on his analysis of scientific sources written in five European languages, collected by him over the course of 30 years, he came to the conclusion that all the important characteristics of the concept of competence can be unified and illustrated as a model called the *'flower of competence'*.

The *'flower of competence'* has a root part, a stem and a crown, consisting of a core and two rows of petals.

The concept '*action in a specific situation*' is located in the core of the flower, which expresses one of the specific features of competence - to manifest itself depending on a specific situation, possibly unexpected, with many unknowns.

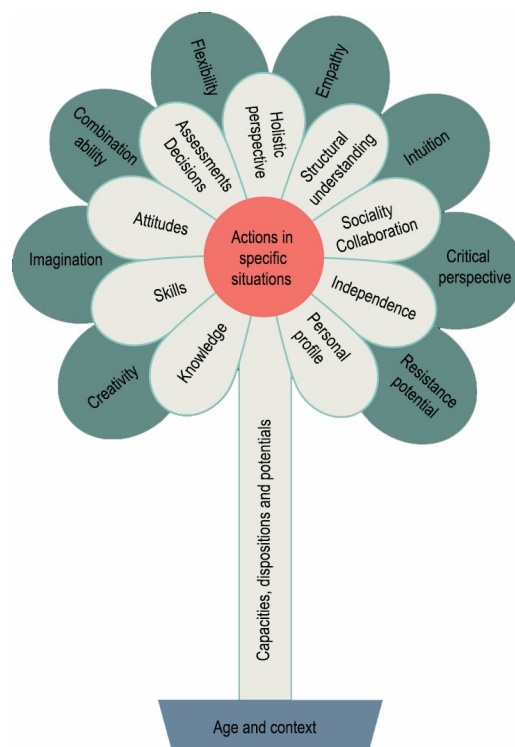
The stem or stalk is '*composed*' of three concepts:

1. capacity (which means available, actual volume, capacity, the level of anything available, including knowledge, skills, etc.),
2. dispositions (readiness for action at the next stage and in the development process) and
3. potentials ('*stock*', that which is not shown now, but can develop under certain circumstances).

The root part, the base of the flower, consists of two concepts: '*all life ages*' and '*contexts*'. This means that competencies are formed at all ages, in all life contexts and are inherent in all citizens, large and small, without exception.

The first row of petals closest to the core have the following elements:

- knowledge - skills - attitudes
- assessment - decision-making
- holistic orientation - structural understanding
- independence - personal profile



Illeris' competence flower (translated from Illeris 2011). <https://laererfagligebegreber.digi.hansreitzel.dk/index.php?id=171>

These competencies are found in most definitions, are indicated by most researchers and are recognized by them as integral parts of competency. The '*petals*' of the first row relate to the general competencies necessary for each and everyone.

The second row of petals include:

- creativity - imagination - combination ability - flexibility
- empathy - intuition
- critical approach - resistance potential

This series of competencies reflects an expanded understanding of competence, showing the prospect of its development, that is, through which its boundaries can be expanded.

Based on the analysis, K. Illeris gave the following definition to the term '*competence*':

'Competence consists of holistic rational and emotionally anchored capacities, dispositions and potentials that are related to possible areas of action and are realized through assessments, decisions and actions in relation to known and unknown situations' (Illeris 2012).

From the totality of definitions developed by European scientists over the past 20 years (DeSeCo 2001, Rychen, Salganik 2003, Illeris 2012), the specifics of the concept of '*competence*' are already quite clear, and it can be concluded that competence is a new quality of a holistic personality embedded in one's identity.

A specific personality means the characteristics and capabilities of the individual person, which in turn govern the internal conditions for the appropriation of new experience and new knowledge. These internal conditions include the experiences, motives, and abilities that make up the individuality of a particular person. The main factor in the formation of competence is education.

Transformative learning

The '*liquid modernity*', as Polish-English sociologist Zygmunt Bauman calls these times of constant change, makes some far-reaching demands on learning, not just in school and education, but everywhere and throughout life. This constant change requires modern identity to balance between stability and flexibility, thus actualising the concept of transformative learning. Professor Emeritus Knud Illeris from Aarhus University addresses this in his book '*Transformative learning and identity*'.

Identity, young people's '*self-world*' and transformative learning were diligently debated when Knud Illeris together with two other learning theorists - the German professor Thomas Ziehe and the Swiss author Etienne Wenger - spoke at a major conference on '*Transformative learning and identity*' at The Department of Education and Pedagogy (DPU), at Aarhus University in early 2013.

Illeris defines transformative learning as '*All learning that involves changes in major or smaller parts of the identity*'. He considers it a given that the world and human existence will change at increasing speed. The pressure on the individual will increase, including on the capacity to change and adapt to unforeseen developments, hence the urgency behind transformative learning.

The requirements for a more advanced and personal lifelong learning, development and self-understanding are phenomena which face the globalised society. The biological development of brain capacity cannot cope with what the individual must know, be able to do, understand and deal with, especially how much change can be generated. Therefore, transformative learning processes and identity development are absolutely crucial pivot points for future developments, according to Knud Illeris.

Here is a short summary of four important contributions to the development of the transformative learning concept taken directly from the article: '*A new bid for the doctrine of change*' by the Asterisk editorial staff, referring to the source of: ['*Transformative learning & identity*' by Knud Illeris \(2014\)](#).

In the 1950s:

Carl Rogers & '*significant learning*'

In the 1950s, the psychologist and psychotherapist Carl Rogers came up with the concept of '*significant learning*', which is close to transformative learning. According to Carl Rogers, significant learning is learning which involves a change in one's self organization. Significant learning can, however be both threatening and challenging for the learner and therefore requires a safe and trusting learning environment.

In the 1970s:

Paulo Freire & '*the pedagogy of the oppressed*'

Another contribution to the concept development came from the end of the 1960s, where a number of movements worked to do away with societal injustice and bias. Brazilian adult educator Paulo Freire plays an important role in the popular and liberating movements, and his book '*The Pedagogy of the Oppressed*' has sold over 700,000 copies worldwide, which possibly makes it the most read book about education and pedagogy ever.

Freire's work connects the reading instruction of poor, illiterate Brazilian farm workers with political awareness, later dealing with the oppressed population groups in other countries. Freire advocates active, problem-oriented and action-oriented learning to include enlargement and change of the learner's understanding and action options, in order to counteract the practical and societal conditions in their oppressed situation.

In 1978:

Jack Mezirow & women's liberation

The very concept of transformative learning was launched in 1978 by the American professor of adult education Jack Mezirow. The concept is basically about creating meaning in his life.

In the 1970s, when women's liberation got on the agenda, Jack Mezirow worked with a larger study of women who had embarked on various forms of adult education. For several of the women this brought about significant changes in their self-understanding and life journey. *'It was these profound personal breakthroughs that had appealed to Mezirow's great interest in learning processes that create qualitative changes in adults' understanding of the world around them and the self*, writes Knud Illeris. Mezirow is still at the core of the discussion on transformative learning.

In the 1980s & 1990s:

Biographical learning approach

During the 1980s and 1990s, especially in Germany, a so-called biographical learning approach developed, that perceives learning as a continuous development of experience, based on - and adapting to - the individual life journey.

A central figure in this is German sociologist Peter Alheit, who introduces the concept *'transitional learning'*, which he later changes to *'biographical learning'*. The concept stands for learning that includes or has the character of a change in one's biography, the individual life journey or identity.

According to Knud Illeris, biographical learning is more or less the same as a change in the organization of the self.

Transformative learning can be described as *'perspective transformation'*. The transformation occurs usually at one or all of these levels:

1. psychological (changes in understanding of the self)
2. convictional (revision of belief systems)
3. behavioral (changes in lifestyle)

Usually the trigger for these changes is a crisis or a transition, that in Jack Mezirow's theory are called *'disorienting dilemmas'*. As a result of these, individuals change their frames of reference by critically reflecting on their assumptions. Transformative learning involves experiencing a deep, structural shift in the basic premises of thought, feelings, and actions.

In the school context, educators can only provide an opportunity for transformative learning. The educator's role is to assist learners in becoming aware and critical of assumptions. The goal is to help learners to make meaning of their life experiences. In transformative learning, the educator is a learner as well.

All this is fundamental to the IEE. The program is designed to help learners find meaning and to reflect on their emotions, thinking and actions.

In school context and in the IEE, some methods for transformative learning are:

- learning contracts
- projects and case studies
- simulations or real-life situations

These opportunities are provided along the course of the program. In particular, the intensive team learning processes, EDUcamp, EDUmining, EDUjam and EDUhack, provide the learners with space and time to explore and develop concepts in the context of their lives. These somewhat long and very intensive processes can turn out to be '*emotional rollercoaster rides*' where feelings of happiness and joy can change into frustration and stress, and in the end to inspiration and fulfilment.

In these processes and in transformative learning, the educators support the learners to observe teamwork and team's dialogue and ensure all team members have equal opportunities to participate. Included is the reflection of the team members' emotions, thinking and actions, as well as the next steps or what to take with them from the experience.

Methodology and principles

A person's development is at the center of education. IEE's educational profile is based on a number of principles and strategies that characterize the organization of teaching;

- Learning through action
- Learner led learning (LED)
- Peer-to-peer learning
- Project based learning (PBL)
- Practice-based learning
- Reflective learning
- Team learning
- Events

Learning through action

The pedagogical practice '*learning through action*' or '*learning by doing*' focuses on acquiring skills through practice and to a lesser extent through formalized, theoretical teaching. This applies to the acquisition of social learning as well as professional learning and training, and is a fundamental principle in the whole of pedagogical thinking and ideas. The acquisition of knowledge is achieved primarily through reflected action in the form of the individual's understanding of their interaction with and

dependence on others, and through the ability to be able to choose the form of action and reflect on one's own actions as seen in the light of others' feedback on it.

The social manifests itself through action, and the personal formation then only becomes a consequence of the personal reflection on the consequence of the action for oneself and for others, a form of interpretation of others' opinion of ourselves.

Such social understanding and ability to act cannot be achieved through a theoretical teaching, or through therapeutic situations, as the main thing here is not factual knowledge, but attitudes and understandings. Through mechanical learning one cannot make the individual automatically behave in this or that way in a certain social situation. For in the end, the individual chooses how to use the learning and how to relate it to the practical reality as it is expressed through human interaction in the social community. It is a complicated learning process, which takes place through experience and experimentation and is supported by observation, imitation of, and guidance from other people.

An example of this learning process is language. The mother tongue is learned by the child living in a social context, in a community of action and a language culture where it acquires the language. It does not happen through a formal education, but only - as in the acquisition of social learning and understanding - through observation and imitation of others, and through the demands of the environment and indirect but natural expectations.

In the light of this, great importance is attached to the kind of knowledge that emerges in practice and through community with others, as opposed to the formal theoretical and planned teaching. Through being part of established knowledge-bearing practices a person acquires competences in the form of a tacit understanding of how things are connected, without having exact knowledge or technical knowledge.

'Repetition is the mother of learning, the father of action, which makes it the architect of accomplishment' (Zig Ziglar). In the IEE's EDUmining process, a repetition of certain actions take place, which helps to improve the speed of acquiring knowledge-bearing knowledge, increases confidence, and strengthens the connections in the brain that enhances the learning.

Learner led learning (LED)

There is a relatively new term in higher education: learner-led approaches in education (LED). This does not represent a single approach or dogma to replace existing dogmas, but a way of approaching learning and education that mirrors the complexity of society as it develops. LED is based on the assumption that all students have their own unique approach to learning and therefore have the potential to design learning processes that are meaningful for them. This removes focus from the teacher and the teaching to the learner and the learning. It builds on the student's motivation and experienced meaningfulness as a driving force, and hence the term *learner led*. The methods applied

in LED change over time, as different learners and teachers together co-create and design methods and approaches appropriate at that particular time, in that particular context and for that particular student or group of students (Iversen, Stavnskær Pedersen, Krogh & Aarup Jensen (2015)).

With student-guided learning students engage and participate actively in the organization and implementation of the learning processes in collaboration with mentors, facilities and experts. Student-guided learning strives for a high degree of student involvement and governance.

Student-directed learning starts with the teacher. Rather than giving students free reign over what they should learn, however, it is expected that teachers offer choice.

Cameron Pipkin at EdSurge explains a few ways this can be accomplished. First, teachers can provide students with choice by offering a number of project formats. From powerpoint presentations and essays to dioramas and songs, a wide variety allows students to choose the format most interesting to them. This increases the chance that they'll stay motivated and engaged in the work.

Another idea is to let students choose when and where they'll work on a student-led project. If they feel particularly inspired in the library or in a classroom where a different subject is taught, it's important to be open-minded to choices.

The EDUmining process of the IEE practices all of the above through providing a certain framework, within which the learner led learning takes place.

Peer-to-peer learning

Peer learning pedagogy is part of an active learning strategy, which is being increasingly used in schools around the world. In this mode of learning, students interact with their peers and learn from each other often without a supervising authority.

This creates an environment of open communication which is very important for learning. Research suggests that students who engage in an environment of open and free communication, study well and perform better academically.

Many experts say that peer-to-peer education, a form of learning that students and professors at prestigious universities such as Harvard, Stanford, Cornell, and Duke have incorporated into their main methods of studying, is the most effective way for students to learn.

By definition, peer-to-peer learning or education is a method of learning in which students learn from and with each other. This method allows for new opportunities and connections to develop between peers, and this leads to more learning.

David Boud, author of *Peer Learning in Higher Education: Learning from and with Each Other*, wrote, *'Students learn a great deal by explaining their ideas to others and by participating in activities in which they can learn from their peers. They develop skills in organizing and planning learning activities, working collaboratively with others, giving and*

receiving feedback and evaluating their own learning.' When you learn with a peer, you learn their ideas, their thoughts, their views on a certain subject.

'Various forms of peer, collaborative or cooperative learning, particularly small group activities, are increasingly used within university courses to assist students to meet a variety of learning outcomes. These include working collaboratively with others, taking responsibility for their own learning and deepening their understanding of specific course content. The potential benefits of peer learning have long been recognized and are especially relevant today' is another wise saying from David Boud. Basically, he is saying that when you teach a peer a subject, you learn more about it, because as the peer educator you first must understand the subject well.

This provides a two-way learning opportunity, where not only does one peer learn something from the other, but rather both learn something new from each other and themselves, which is called reciprocal peer learning.

According to the Higher Education Academy in the UK, studies from a survey titled *'Mapping student-led peer learning in the UK'* show that *'students progress in new and sometimes unanticipated ways through structured opportunities to facilitate and lead learning among their fellows. Peer learning creates greater confidence and independence in learning, deeper understanding and improved grades'*.

This was also seen when reciprocal peer learning, or teaching, was applied in an anatomy course at the Mayo Clinic College of Medicine. All of the students alternated between being the teacher and the learner. The students taught course content and explained procedures to their peers. After doing various reciprocal peer learning activities, they gave a debriefing questionnaire and the results were that 100% of the students increased their understanding of course content because they taught it and 97% agreed that it increased their retention of knowledge they taught to their peers. Also, 92% agreed that it improved their communication skills, which could then be used anywhere.

In conclusion, here are the main benefits of peer-to-peer education and reciprocal peer learning:

- Students receive more private time with their student peer, allowing for a more personalized learning experience
- Active learning is encouraged through the interactions between students
- Peer helpers gain a deeper understanding of what they teach to other peers, which benefits them as well as the peer they are helping
- Peers feel more comfortable and would open up and interact more with other peers rather than teachers or staff
- Both peers would have a greater connection because of their similar positions in school

Project based learning (PBL)

Project based learning (PBL) is a model and framework of teaching and learning *'in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem or challenge'* (Buck Institute for Education, n.d.). PBL is done collaboratively and within groups using a variety of employability skills such as critical thinking, communication, and creativity. PBL allows for student voice and choice as well as inquiry. Authentic PBL involves a community partner and a publicly presented product. PBL also involves an ongoing process of reflection.

PBL is a form of organization and a framework for learning, where the learners work together to study and to develop a concrete theme or idea, and on the basis of this knowledge, they are able to employ the idea and communicate the results obtained. The learners manage the process under supervisors and they achieve a deeper studying because they themselves must seek out, develop and evaluate the results and the methods they make use of.

PBL promotes motivation and commitment in the study activities. It brings the learners to actively build up their own knowledge instead of just taking it over, and a basis is therefore created for deeper cognitive learning. In addition, students learn to give and receive formative feedback along the way.

Project driven learning allows an individualized educational process. During the preparation and implementation of projects, as well as the provision of reports, students are likely to develop some of the following key competencies:

- Multilingual competence (expressing thoughts, feelings and facts in oral and written form)
- Personal, social and learning to learn competence (the ability to organize the learning process, be responsible for the learning process and overcome related obstacles, to be able to analyze and evaluate the results of the learning)
- Citizenship competence
- Entrepreneurship competence
- Cultural awareness and expression competence
- Digital competence (filling out applications electronically, organizing information, dissemination activities)
- Mathematical competence and competence in science, technology and engineering
- Literacy competence

The role of the modern education system, both formal and non-formal, is to awaken curiosity, critical thinking, the courage to use technology, the skill of combining, quick wit, a spirit of cooperation, leadership qualities and a desire to be a leader, the

importance of taking responsibility and being able to keep the word, ambition, caring and tolerance, dignity, determination, internationalism, statehood, courage to take risks, etc. Active work in projects successfully supports all of the above.

Project driven work gives the learner the opportunity to be a researcher, discoverer, explorer, team member, leader and decision-maker at the same time. The modern labor market shows that people who work on the basis of a project are growing significantly in the world. This means that in the future a person's career will be formed from many separate tasks, and to find and successfully complete a project, one needs to develop an entrepreneurial mindset, the ability to profitably sell oneself, the skill of self-management, independent search and project management, the ability to negotiate agreements and knowledge of platforms that are suitable for finding or creating such a job.

Characteristics of projects:

- Projects have a purpose; projects have clearly-defined aims and set out to produce clearly-defined results. Their purpose is to solve a 'problem', and this involves analysing needs beforehand. Suggesting one or more solutions.
- Projects are realistic; their aims must be achievable, and this means taking into account both the requirements and the financial and human resources available.
- Projects are limited in time and space; they have a beginning and an end, and are implemented in a specific place and context.
- Projects are complex; projects call on various planning and implementation skills, and involve various partners and players.
- Projects are collective; projects are the product of collective endeavour. They are run by teams, involve various partners and cater for the needs of others.
- Projects are unique; projects usually stem from new ideas. They provide a specific response to a need (problem) in a specific context. They are innovative.
- Projects are an adventure; every project is different and ground-breaking; they always involve some uncertainty and risk.
- Projects can be assessed; projects are planned and broken down into measurable aims, which must be open to evaluation.
- Projects are made up of stages; projects have distinct, identifiable stages.

Themes vs projects

Many educators define the difference between themes and projects by categorising themes as *'teacher led'* and projects as *'student led'*. In reality it is more complex than this. In the traditional approach to teaching themes, an educator would predetermine the topics and could thus plan months in advance. This made themes quite a structured approach to education and assumed students would be interested in learning the same things at the same time (Bonnay, 2017).

In more recent years, the trend seems to be to base a theme on the interests of the students and follow it as long as the majority of the student's interest is maintained. But this does not make it a project approach. While a project is based on the student's interests (those that are meaningful and worthy of attention) and encouraged through intentional scaffolding, there are other important distinctions to be made.

Whole group/small groups

In thematic education, the chosen theme of the week/month would set the foundation of all learning for students in any given classroom. This assumes that the whole group's interest in any particular topic can be maintained. And while this might be effective in a classroom of 10 students, it is somewhat presumptuous in a class of 20. As recognised by Bonnay (2017), this could lead to disengagement in the classroom.

A project approach, on the other hand, usually involves a small group of students who have displayed a common interest. Of course a whole group can be involved in a project (or an individual student for that matter), but it is more likely to be centred around a small group, which allows for more sustained and meaningful learning (Katz & Chard, 1992).

This difference becomes reflected in the environment. If you are setting up every area of your room according to the current interest of a majority group, you are still engaging in themes. The beauty of a project approach is that it allows for several topics to be explored in one classroom, at any given time.

Broad vs specific

When applying themes, fairly broad topics are chosen to allow more movement within the curriculum; for example, one might choose 'seasons' or 'space' as a theme. Alternatively, projects should be defined by the direction of research; for example, a project might be 'Why do people float on the moon?', where the theme would be 'space'. While this specificity might seem restricting at first, the idea of a project is to follow the student's line of enquiry, to observe the human narrative. This is something that themes do not allow for. In projects, students will determine the questions to be answered (Katz & Chard, 1992).

It becomes clear that there are distinct differences between the thematic and project approach to education. While both have their benefits, projects give autonomy back to the learner and allow for them to follow their stream of consciousness in a way themes do not.

The IEE and project work

The IEE uses project work in several different contexts, also on occasion with themes as an overall guide. The EDUmining module in example has a series of themes, which get chosen through brainstorming processes, afterwards learners can choose their own projects in connection with the overall themes.

During each project, the theme and project-focus is elaborated on to identify the interests of the learner. This process supports learners in discovering their personal significant interests and to develop them further. This is a period of '*self understanding*' for learners.

The EDUmining process as project based learning teaches learners how to conduct research on a subject of their own interest, engage in teamwork and compile questions; then how to involve experts to assist in finding answers, reflect on results and create presentations. Learners are trained to lead their own process in learning, to select and find information needed, to develop their self-confidence through training their communication skills to be able to contact relevant experts, to collaborate, to share and delegate. They learn a lot about themselves through taking on different roles in these teams, from project management, through technical ability such as programming, to creative expression through different types of presentation as well as many other competences.

The EDUjam and EDUhack in the IEE are in essence project-based team learning events. They serve as the beginning of the start-up process, the incubation of the idea which will be taken through the various steps of business creation. During these modules learners acquire the experience of generating an idea as a team, creating a proto-type of a product, and functioning as different roles in a team.

The start-up process is a project in itself. Once the idea is hatched, the team formed, the prototype created, then the big project is bringing this idea to life. Inside this big project there are other projects, starting with the IEE 'project writing' module.

Project writing as one of the modules of the IEE is dedicated to writing an application, to seek funding and to creating and managing international projects. International projects expand the network of partners and thereby support both the project-team itself and other students on the path of their development. This project type is a fundraising project, in which learners study how to work with foundations, to formulate a task, to prove its feasibility and usefulness, and to raise money for the realization of their business ideas.

In this type of project learners receive the experience of structuring their own idea into a business proposition, to bring it closer to implementation, to know about different funding programs and application options, and they develop project writing skills. They understand the cycles and features of international projects, become familiar with application opportunities, they develop their abilities to analyze project stages and anticipate possible risks, they can implement the project locally and internationally.

Practice-based learning

Through the determination of the individual principle and '*learning in practice*', the pedagogical interest has been shifted from the students' mental structures and their motivation to their actions, their form of communication and their interaction with

others. These forms of appearance have been made a pedagogical matter, similar to work skills and general knowledge.

It is a practically oriented education, which must be carried out in workplace-like forms, a holistic pedagogical effort that is practice-oriented and qualifying at both the work and technical level, as well as at the personal and social level.

This education is organized more as workplaces that perform the necessary work, where the students' efforts are essential for the solution of the tasks. The activity is aimed at teaching a professional production. The organization of the work environment plays a big role and the focus is on social practice and professional efforts similar to the conditions in an ordinary workplace. It is important that the students have an understanding of and an experience that *'they are working to learn'*. When this understanding is present, there will be a *'learning through practice'*. This form of education presupposes that the students must be qualified through what they are given the opportunity to perform.

This form of education has many advantages, primarily due to the fact that the students, through the practical and productive efforts, deal with tasks and issues that belong to the real world. They are part of a group with which they are bound together in the efforts to perform specific tasks, where everyone is more or less dependent on others, and where they are given the opportunity to experience the reaction of others to their individual actions and way of working.

At the same time, they gradually learn to perform more complicated parts of the overall work process, and experience and understand the necessity of the qualification. It is a consequence that they experience that some of the more demanding tasks must be solved by those who have experience or knowledge, as this is a practical production where the products or services produced are customer and sales based. The goal of learning is visible as a result of the product to be created through the effort, and thus the authority of the subject is superior to the individual interests that the students may have. It is therefore a question of *'what have I learned'* rather than *'I am skilled'*. The center of gravity is shifted from the individual to the *'learning'*.

The learning itself takes place mainly through observation of the other participants in the production and working community, and through an imitation of the students who are more knowledgeable than they are. This leads to students learning from each other, and this leads to the emergence of a social community that serves as a learning-promoting environment. Learning is not an isolated process that must be initiated and maintained by an external motivation or coercion, but a necessary precondition for belonging to the group. You see yourself both in relation to what you yourself are capable of, and through others. It opens up opportunities to evaluate own services and products. In the ideal learning situation, there will be a gradual transition from the individual's identification of themselves in relation to others, to the academic level, where the starting point will then be the way in which the task is solved.

It is through such a practice that there is a real shift from the students' mental structures to the subject being taught, its traditions and knowledge. It will therefore to a lesser extent be the students' psychology than the goals of the work that will govern the learning effort. The needs of the project will govern the learning and interaction and not the students' 'motivation' and interests.

In practice-based learning, normally the instructor or teacher will have a natural authoritative position by virtue of his professional knowledge, and the necessary presence to solve technical problems that arise during the implementation of the work processes. The learning situation is then guided by the teacher's knowledge and experience and the students' understanding of themselves as students, not by their experiences. This will give them an experience of being participants in an authoritative community of values.

It is then the teacher who maintains the social connection in the group and sets the boundaries of the individual actions and the goals of the work effort, makes the individual guidance and instruction, and organizes and implements the teaching that is the prerequisite for the implementation of the work.

In the IEE there are several modules that call for practice-based learning where business experts will teach parts of the processes.

Team Learning

Team learning is a collective learning process, where the team members make a collaborative effort to reach a common goal. The process is a combination of dialogue, reflection and practice. In team learning, the team is observing and adjusting their own process regularly. In order to achieve their goal, the team members need to stay committed.

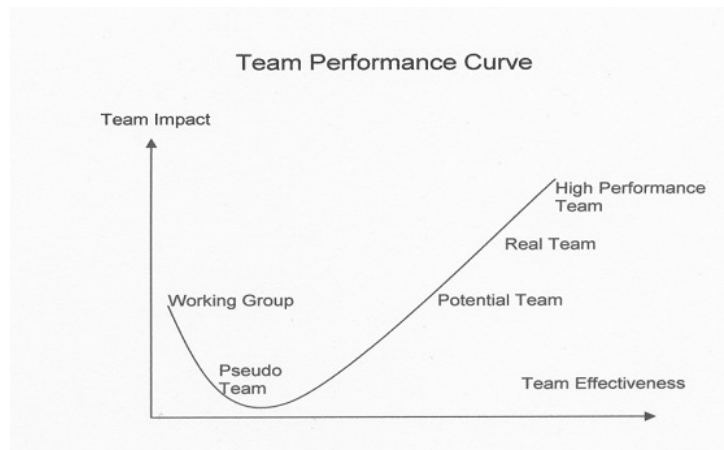
Diversity enhances team learning. Usually, the team members complement each other's competencies. However, having people from different backgrounds and with different personalities and perspectives will usually create conflicts within the team. Also teamwork cannot just be switched on. It takes time for a new team to begin to work well and work to its full potential. What's more, team members go through stages as they move from strangers to co-workers.

Psychologist Bruce Tuckman came up with the memorable phrase "forming, storming, norming, and performing" in his 1965 paper, *'Developmental Sequence in Small Groups'*. It describes the path that teams follow on their way to high performance. Later, he added a fifth stage, "adjourning" (also known as "mourning") to mark the end of a team's journey.

Team formation phases:

- Forming - positive and polite
- storming - push boundaries
- norming - start resolving differences
- performing - achieve goal without friction

Team performance phases: Working group, pseudo team, potential team, real team, high performance team (Jon Katzenbach and Douglas Smith)



Retrieved from <https://oer.royalroads.ca/moodle/mod/book/view.php?id=1332&chapterid=456>

The *'Team Performance Curve'* traces the development of a team from the beginning stage of the *'working group'* through the ultimate goal of becoming a *'high-performance team'*. Moving along the curve and becoming more effective and better-performing involves taking risks, dealing with problems and concerns, dialogue, patience, time, and commitment. When the team formation changes (someone leaves the team or someone new comes along) the process starts again.

Groups don't become teams because someone calls them that. Nor do teamwork values by themselves ensure team performance. So what is a team? In *'The Wisdom of Teams'* McKinsey partners Jon Katzenbach and Douglas Smith answer such questions and outline the discipline that makes a real team.

The essence of a team is shared commitment. Without it, groups perform as individuals; with it, they become a powerful unit of collective performance. The best teams invest a tremendous amount of time shaping a purpose that they can own. The best teams also translate their purpose into specific performance goals. And members of successful teams pitch in and become accountable with and to their teammates.

The fundamental distinction between teams and other forms of working groups turns on performance. A working group relies on the individual contributions of its members for group performance. But a team strives for something greater than its members could achieve individually. In short, an effective team is always worth more than the sum of its parts.

Katzenbach and Smith identify three basic types of teams:

1. teams that recommend things–task forces or project groups;
2. teams that make or do things–manufacturing, operations, or marketing groups;
3. teams that run things–groups that oversee some significant functional activity.

Considering the extra level that teams can achieve, the authors believe that teams will become the primary work unit in high-performance organizations of the future.

In team learning, the responsibility is with the team members. There can be a team leader, who has a similar role to others but who provides additional leadership and guidance for the team.

For the team's performance, it is beneficial for each team member to be aware of their abilities and competencies. The team roles defined by Meredith Belbin provide one framework for this. Belbin identified nine team roles and he categorized those roles into three groups: Action oriented, people oriented, and thought oriented. Each team role is associated with typical behavioral and interpersonal strengths.

1. Action oriented: Shapers, implementers, completers/finishers
2. People oriented: Coordinators, team workers, resource investigators
3. Thought oriented: Plants, monitor/evaluators, specialists

Dialogue, the ability to think together, is very important in team learning. In the IEE, dialogue is being practiced throughout the program, and there will be emphasis on

- Listen to try to understand and not just to wait for one's turn
- Speak from the heart (be honest and have trust)
- Wait for your turn and learn to appreciate silence and pauses
- Respect each other's opinions

Conflict is not being avoided but seen as a point of learning. Here, reflection is very important.

In team learning, it's important to make things visual and explicit. This enables the team to 'be on the same page': to get clear on their goal (why; vision), the way they work (how; values) and to have clear roles and action points (what; mission).

Events

Events are used as engaging and motivating activities throughout the IEE. These events are important for students both socially and academically, and must be well organised.

During the one-year IEE there will be five types of events.

1. EDUcamp is an intensive introductory event designed to create the foundation for the study-year. Common values, democratic principles, understandings and use of a common vocabulary is established and there will be group formation activities. EDUcamp aims to create a good network start and to introduce the institution in general. This event can be arranged to be useful for other interested parties as well - external participants can then be included.
2. During the EDUmining process there will be field-trips to companies, institutions and relevant sites for learning.
3. EDUjam is a one-day event introducing an ideating process, which can be useful for other interested parties as well - external participants can be included.
4. EDUhack is a 48 hour event of design-thinking and prototyping, this too can be useful for other interested parties, companies or other external participants who can be included.
5. Show & tell is the final event showing the results of the students' efforts. It is quite important that they get the opportunity to display and talk about their process and '*products*' - this can be to other students, parents, teachers or investors.

This learning can take place outside of daily education, beyond the borders of the education building. It can include the participation of students in conferences, large trainings held jointly with other organizations, forums, participation in innovation processes with high intensity in team learning.

Participation in conferences raises the status of training and the learner, strengthens the motivation of learning, contributes to the expansion of professional horizons, and helps to form an active position in relation to their learning. The IEE students gain experience in search work, get acquainted with methods of conducting discussions and with modern achievements in the field of their interest.

Strategy

Based on the IEE core values and ethics the focus is on the learner's viability. Each individual learner's acquisition of a broad knowledge of possible higher education avenues and business opportunities will be apparent, with a focus on realizing the value of life-long learning.

Throughout the education, the learners must be able to prepare for their higher education and business choice and understand the choice as a number of decisions that must be based on their own assumptions, needs, attitudes and social opportunities.

Personal counseling and guidance will help the learners to realize their own expectations and prerequisites and will make the learners able to prepare a personal education plan.

The aim is for the learners to understand the importance of continuing education and to gain knowledge and insight, such that they can make a relevant choice of education. Throughout the course of the education, learners must build confidence in their own possibilities and be aware of their own limiting beliefs.

Each individual must have real opportunities to achieve the best possible personal and educational prerequisites for a rich adult life. It is understood that career guidance with a personal value basis, interest and courage to become educated as well as insight into one's own real skills, are crucial for the learner's ability to have a good life.

The IEE model combines the development of personal, innovative and creative competencies with market understanding. By this is meant the type of education that can be characterized by:

- Motivated learners who have a firm desire to start their own business or explore their own ideas
- Teaching that has participants' experience at the center
- Teaching which is oriented towards changes in the way the participants view their life context

The entrepreneurial learning process involves the development of key qualities such as responsibility, independent thinking and connectivity. Entrepreneurial learning is a maturing process of specific dynamics.

Entrepreneurial competences

The one thing all successful entrepreneurs have in common is the desire to make their idea a reality. What entrepreneurs need most of all — above motivation, focus, hope, financing, marketing skills, a brilliant idea, etc. — is the will to bring their idea into existence.

Entrepreneurial behaviour is the result of a combination of:

- a strong motivation to achieve something; and
- the capabilities to achieve it.

Furthermore, there are three levels of competencies, which all entrepreneurs need:

1. Personal competencies: creativity, determination, integrity, tenacity, emotional balance and self-criticism.
2. Interpersonal competencies: communication, engagement/charisma, delegation, respect.

3. Business competencies: business vision, resource management, networking- and negotiating skills.

Previous research has also highlighted other competencies that make up the *'ingredients'* of a successful entrepreneur, including initiative, ambition and even luck. Though the key takeaway from this Idea is that entrepreneurship can be learnt by anyone, it's not something that can simply be learnt in a classroom. Even when key business knowledge has been acquired, the entrepreneur still has to learn how to use it in practice - something that can only be done through practice. In this respect, *'learning by doing'* is useful. Other tips include the following:

- Have a clear understanding of industry evolution, knowledge of the effects of globalization, techniques for developing markets, etc. Some training in an academic environment (e.g. business schools) may help with this, particularly where case methods/working groups are used to teach.
- Practice developing interpersonal competencies. Certain skills, such as communication, delegating and respecting others can only be acquired through practice and developing *'habits of character'*.
- Habits of character may not strictly be related to business but are to do with the kind of person the entrepreneur is and what he/she does. These are indispensable, alongside *'technical habits'* and *'skills'*.
- The only way to acquire the habits essential for entrepreneurs is by acting in a way consistent with them. Only then do these habits become the *'driving force'* of successful entrepreneurial ventures (ideasforleaders.com).

The EntreComp framework

The EntreComp framework proposes a shared definition of entrepreneurship as a competence, with the aim to raise consensus among all stakeholders and to establish a bridge between the worlds of education and work.

The EntreComp has been developed through a mixed-methods approach and consists of 3 interrelated and interconnected competence areas: *'ideas and opportunities'*, *'resources'* and *'into action'*. Each of the areas is made up of 5 competences, which, together, constitute the building blocks of entrepreneurship as a competence.

The framework develops the 15 competences along an 8-level progression model and proposes a comprehensive list of 442 learning outcomes. The intention is that the framework be used as a basis for the development of curricula and learning activities fostering entrepreneurship as a competence. Also, it is intended to be used for the definition of parameters to assess learners' and citizens' entrepreneurial competences (ec.europa.eu).

The IEE will use the EntreComp partly as a self-assessment tool and as a guide to what will be expected in the future.

The entrepreneurial mindset

There are many definitions of what an entrepreneurial mindset is, one says *'a way of thinking that enables you to overcome challenges, be decisive, and accept responsibility for your outcomes. It is a constant need to improve your skills, learn from your mistakes, and take continuous action on your ideas'* (hacktheentrepreneur.com).

Others - like the EntreComp - propose it takes 15 competences along an 8-level progression model with a comprehensive list of 442 learning outcomes to acquire the skills necessary to become an entrepreneur.

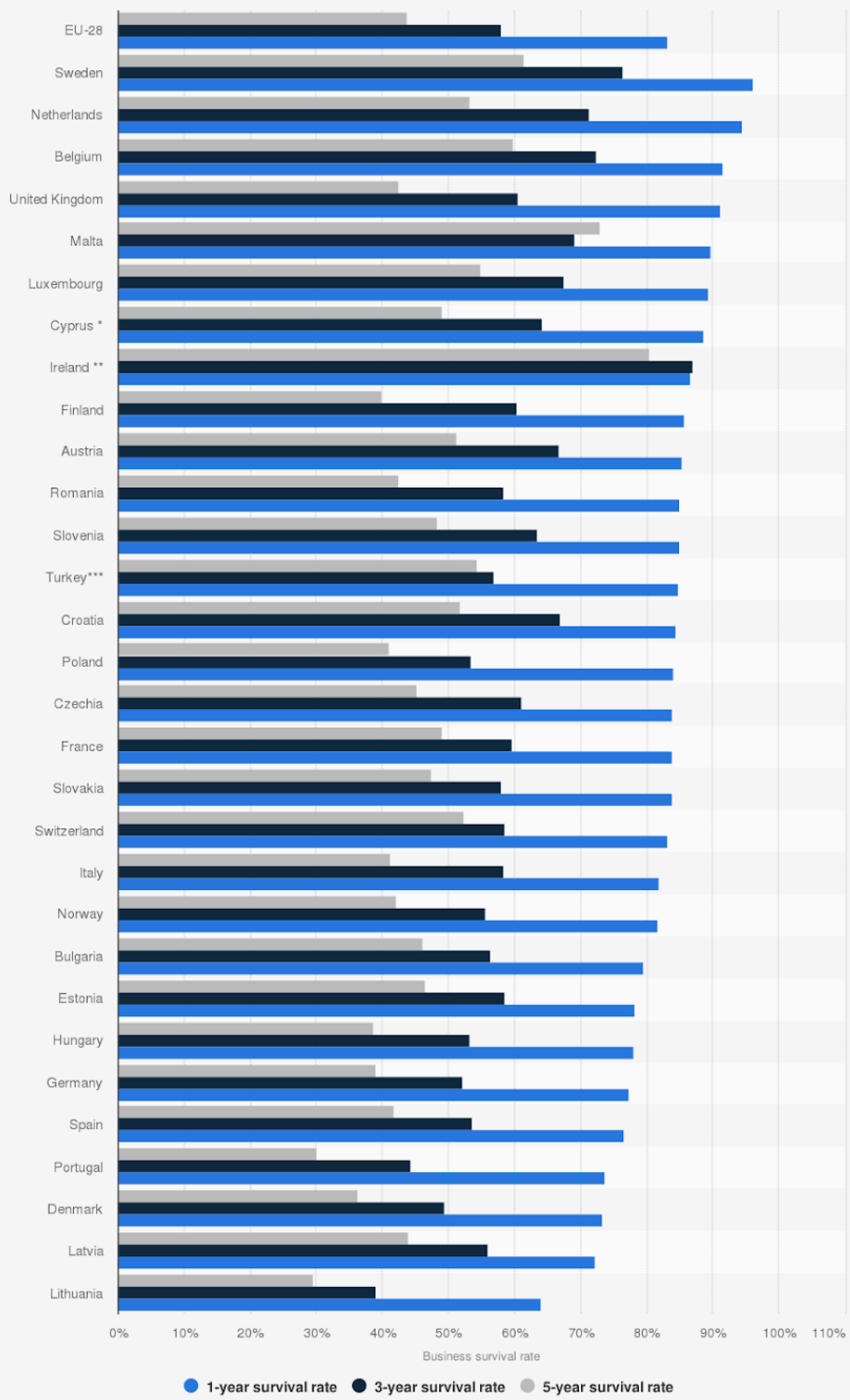
It's often said that more than half of new businesses fail during the first year. According to the U.S. Bureau of Labor Statistics (BLS), this isn't necessarily true. Data from the BLS shows that approximately 20% of new businesses fail during the first two years of being open, 45% during the first five years, and 65% during the first 10 years. Only 25% of new businesses make it to 15 years or more. These statistics haven't changed much over time, and have been fairly consistent since the 1990s (investopedia.com).

Comparing the numbers below from the EU with the US numbers above we can see that the numbers are very similar. On average across EU-28 ca 83% survive the first year (17% fail vs 20% for the US) ca 57% survive for 3 years (43% fail vs. 45% in the US) about 44% survive 5 years (46% fail). So similar in fact we can assume the average for 10 and 15 years as well.

Interestingly enough it is a very varied picture the graph below paints in regards to company survival rates. Some countries and the business environment in these countries seem to have a much better chance of survival. Study your home market and those international beach-head markets you look to expand into as a young business. Perhaps insights like this, and figuring out why can help your company survive especially through the infamous *'Valley of Death'*.

See picture below. *'Business survival rates in selected European countries in 2017, by length of survival'*.

Business survival rates in selected European countries in 2017, by length of survival



Source
Eurostat
© Statista 2020

Additional Information:
Europe, EU; 2017

Source: <https://www.statista.com/statistics/1114070/eu-business-survival-rates-by-country-2017/>

The IEE has a 50/50 focus on mindset and start-up process for a reason. Having the kind of *mindset* needed to become an entrepreneur is really, really, really important in order to become a successful entrepreneur.

The biggest killer of the entrepreneurial mindset is not failure, the economy, or bad ideas. It's doubt – in ourselves, our surroundings, and our abilities. Self-doubt kills many dreams, long before any external factors can come into play.

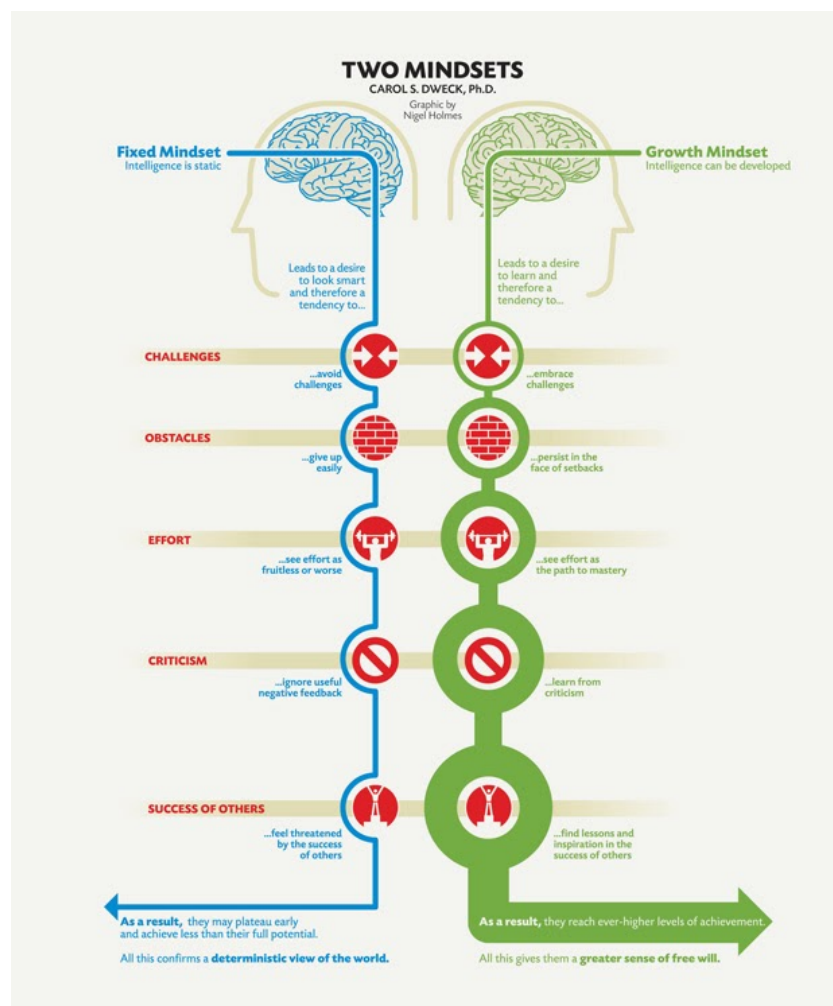
Fixed vs growth mindset

'Think you can, think you can't; either way you'll be right.'

— Henry Ford

It is not just our abilities and talent that bring us success – but whether we approach them with a *fixed* or *growth* mindset according to Stanford University psychologist Carol Dweck.

Dweck's work shows the power of our most basic beliefs. Whether conscious or subconscious, they strongly *'affect what we want and whether we succeed in getting it.'* Much of what we think we understand of our personality comes from our *'mindset.'* This both propels us and prevents us from fulfilling our potential. Our ideas about risk and effort come from our mindset. Changing our beliefs can have a powerful impact.



Retrieved from <https://fs.blog/2015/03/carol-dweck-mindset/>

The belief of the fixed mindset is that a person's intelligence, personality and qualities are unchangeable, fixed, deep-seated traits; this leads to a need to prove oneself correct over and over rather than learning from our mistakes. The growth mindset is based on the belief that our basic qualities are things to be developed and cultivated through our efforts, which creates a powerful passion for learning. *'Why waste time proving over and over how great you are,' Dweck writes, 'when you could be getting better?'*

Fixed mindset is limiting	Growth mindset is freedom
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Characteristics of the *'fixed mindset'* are:

- Talents, abilities and intelligence is fixed, it's who we are
- Run from error/do not engage with it - with a desire to look smart
- Avoid challenges
- Give up easily
- Feel threatened by the success of others
- Ignore negative feedback even though it may be highly relevant and useful
- Avoid new experiences with fear of failure
- Look for people who can reinforce their self esteem
- Focus on the outcome since they consider results as their identity
- Can lead to cheating and deception

Characteristics of the *'growth mindset'* are:

- Talents, abilities and intelligence can be developed through effort and practice
- Engage deeply and process the error with a desire to correct the error
- Embrace challenges
- Persevere in the face of failures and setbacks
- Find inspiration in others success
- Accept criticism as a way to learn
- Embrace novelty with a desire to master new skills
- Look for people who challenge them to grow
- Focus on the process and learning without worrying about the outcome
- Leads to collaboration and innovation

Two mindsets, two worlds

In one world—the world of fixed traits—success is about proving you're smart or talented. Validating yourself.

- Failure is about having a setback. Getting a bad grade. Losing a tournament. Getting fired. Getting rejected. It means you're not smart or talented.
- Effort is a bad thing. It, like failure, means you're not smart or talented. If you were, you wouldn't need effort.

In the other—the world of changing qualities—success is about stretching yourself to learn something new. Developing yourself.

- Failure is about not growing. Not reaching for the things you value. It means you're not fulfilling your potential.
- Effort is what makes you smart or talented. You have a choice.

This is why praising intelligence and ability doesn't foster self-esteem and lead to accomplishment, but may actually jeopardize success.

A common misconception about growth mindset is that being open minded and flexible qualifies as being growth minded. These are important qualities to have, but they themselves do not make someone growth minded.

It's also not possible to apply a growth mindset all the time. During challenging circumstances or when dealing with a feeling of insecurity, we may get defensive and adopt a fixed mindset to deal with the conflict.

We all have different triggers that can activate a fixed mindset. The critical thing is to recognize important situations which can set off a fixed mindset and learn to switch to a growth mindset.

Shift from self doubt to potential for growth, from worrying about the outcomes to taking interest in the process, from acting as a victim to adopting a role of a creator by taking responsibility and from fear of failures to learning through them.

Tell a different story

There's a lot of power in the story we tell ourselves. What do you tell yourself – do you have a choice, are you smart enough to learn new things, do you feel challenges lift you up or bring you down? When we come across hard problems or difficult situations, how we interpret and react to them is based on our own story. Our actions are nothing but a manifestation of our beliefs. So, the first step to enable a growth mindset is to learn to catch yourself in the moment, make a choice and shift the language you use.

Commit to learning everyday as opposed to seeking goals that prove your worth. For example, instead of setting a goal to lose 30 kgs, commit to eating healthy everyday. Instead of trying to score A on maths, commit to practicing maths everyday. Instead of the goal of being a professional runner, commit to running everyday.

Focusing on the process as opposed to the outcome helps us look for small continuous improvements that add up over a period of time. By shifting to learning, we can consciously choose a path in which hard work, effort, deliberate practice and persistence will be the key to success.

Success doesn't come in a day. It's a result of years of hard work in which learning never ends.

Failures teach us what success can't. Instead of running away from failures and giving up when faced with a setback, you can take advantage of your failures by reviewing them, identifying what did not work and then devising a plan to correct your mistakes. Apply multiple mental models like inversion principle and second order thinking to develop new strategies, seek help from others to review your decisions and commit to getting better with every defeat.

Once the mind is set to look at failures as a means to learn and grow instead of considering them as a limitation of your abilities, you will be able to capitalise on them.

There's a difference between seeking challenges and setting out to do what's impractical. If you try to climb a mountain without building physical strength, solve trigonometry without learning algebra and geometry, there's no way you can succeed. '*Goldilocks*' tasks are activities that are neither too easy nor too difficult, just a little over your current abilities. They provide a perfect opportunity to step outside your comfort zone without leading to anxiety. By investing in '*Goldilocks*' tasks, you can set up a path for continuous improvement by slowly building upon your current abilities.

While teaching a growth mindset can start at an early age, it's never too late to learn it. Our brain is highly adaptable to new ideas and new ways of doing things. When we push ourselves out of our comfort zone, we give permission to our brain to form new connections. With practice, these connections get stronger and what seemed like an effort at first, may soon be trivial.

To promote a growth mindset

- Do not praise intelligence. Intelligence and current abilities cannot be a sign of what learners can and can't do.
- Recognize and appreciate process, engagement, strategies, perseverance, effort and progress. These are strong indicators of a desire to learn and grow.
- Do not engage in false praise. Effort that leads to no progress should not be praised. Disappointment should lead to a burning desire to do better. It should be a signal to try a different strategy.
- Establish vulnerability not as a sign of weakness, but a powerful mechanism to realize their full potential.
- Encourage learners to make the right choice of words e.g. shift from '*I don't know*' to '*I don't know yet*'. Simply believing that they can do it will open up their mind to seek solutions that did not seem possible earlier.
- Provide them with *Goldilocks* tasks just above their current abilities to enable them to realize benefits of hard work and consistent effort.

Entrepreneurs and the growth mindset

No doubt, as entrepreneurs you must kindle the growth mindset. The passion for stretching yourself and sticking to it, even (or especially) when it's not going well, is the hallmark of the growth mindset. This is the mindset that allows people to thrive during

some of the most challenging times in their lives, and this is a trait that is necessary when persevering through bumps in the road as an entrepreneur. As entrepreneurs you are not likely to seek out the tried and true, instead you are likely to look for experiences that will stretch you. You will not look for friends or partners who will just shore up your self-esteem, instead you will seek the ones who will also challenge you and support you to grow.

Vulnerability as a defining trait

Vulnerability is the defining trait of great entrepreneurs according to Anthony K. Tjan, Harvard Business Review (2009). To be truly great, entrepreneurs need to be a little 'out there'. *'After all, fearless creativity, maverick thinking and risk taking seldom show up in the middle of the bell curve'* he says.

Perhaps one of the most important and delicate balances that great entrepreneurs must finesse is the one between risk-taking and vulnerability. A risk-taker is generally perceived as bold, driven and admirably extroverted, a 'vulnerable' person is apt to be seen as gentle, weak, introverted and easily assailable.

So it is a bit of a paradox to say that vulnerability is among the defining characteristics of the greatest entrepreneurs. The nuance lies in the type of vulnerability; There is a vital difference between passive and active vulnerability. Active vulnerability is in essence proactive and informed risk-taking while passive vulnerability is reactive and submissive exposure.

The willingness to be vulnerable isn't driven by the desire for exposure, but by the possibility of what that exposure might lead to — be it a meaningful role, the possibility to affect change, and, of course, greater financial gain.

What is failing?

Edison made 1,000 unsuccessful attempts at inventing the light bulb. When a reporter asked, *'How did it feel to fail 1,000 times?'* Edison replied, *'I didn't fail 1,000 times. The light bulb was an invention with 1,000 steps.'*

An entrepreneur knows that it's actually okay to fail. Here's why:

- Failure is inevitable.
- You learn substantially more from failure than success.
- Failure makes you stronger.
- You take more chances when you're unafraid to fail.
- Failure allows you to discover new paths.
- Failure makes success that much sweeter.

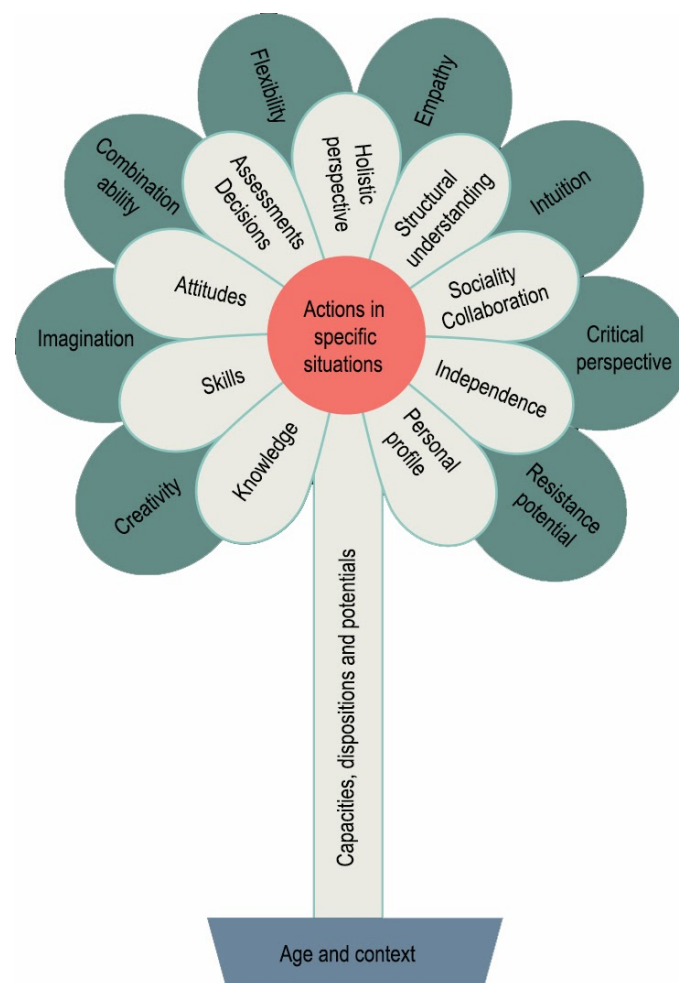
'Our greatest glory is not in never falling but in rising every time we fall.'

— **Confucius**

The Illeris competence flower and entrepreneurs

So to come back to the Illeris flower of competence, in the light of the required competencies for becoming an entrepreneur:

The root context of entrepreneurship, the stem of capacities, dispositions and potentials and the core of actions in specific situations are most relevant competencies. The whole flower very well expresses the range of competencies necessary to become a well-functioning entrepreneur.



Illeris' competence flower (translated from Illeris 2011). <https://laererfagligebegreber.digi.hansreitzel.dk/index.php?id=171>

The ordinary concept of competence:

knowledge - skills - attitudes

assessment - decision making

holistic orientation - structural understanding

independence - personal profile

The extended concept of competence:

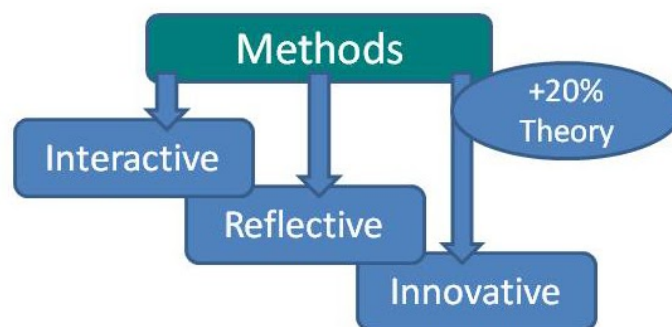
creativity - imagination - combination ability - flexibility

empathy - intuition

critical approach - resistance potential

It is clear that an entrepreneur has a wide range of all of these competencies.

Methods, techniques and practices



Courses, seminars and workshops = expert dialogues

Courses, seminars and lectures are classical theoretical methods of giving learners knowledge as a theoretical foundation to understand a specific field.

Courses as a method of education refer to verbal-logic methods of teaching, the purpose of which is to explain the basic concepts of the subject, to provide interpretations and examples of the use of these concepts in the field of study.

Verbal-logic methods of teaching include: short story, explanation, conversation, discussion, lecture, seminar, excursion and independent work of learners with primary sources.

Courses as part of the educational process are aimed at:

- broad and profound training in a specific field, a high level of understanding and professional progression;
- support for the systematic acquisition of key theories and methods through lectures, exercises, work in reading groups, etc.;
- a basis for being able to apply concepts, theories and methods from the courses in the project work.

The theoretical foundation takes up 20% of the IEE curriculum. The theory within the field of entrepreneurship is an essential part of the IEE, because it also ensures

sustainability in the development of growth thinking and entrepreneurial thinking. There are important discussions about the building blocks of the entrepreneurial character, about different paths for the entrepreneurial adventure and ways during the learners' entrepreneurship to see, re-evaluate and redefine themselves and their vision.

Key concepts of entrepreneurship must be explored. Not only what and who is an entrepreneur, but also relationships to customers, investors, employees and other stakeholders; in other words how to build relationships as well as partnerships with key players in business. Practical and concrete lessons are required on how to create a business plan, a budget, a set of financial statements and the like, as well as how to draw up contracts and what to look out for. Learning about new tools as well as keeping on top of sales and marketing strategies is an ongoing task.

Other important and different terms and concepts need to be explained to learners, such as competences and entrepreneurial competences; the concept of money, monetization and its role in business; how money is connected to entrepreneurship. Business creates value for someone else and the exchange resource is money. What is needed to go from an idea to a product; how to create funding for the business to survive; making a lot of experiments to investigate how to make the business a little bit better all the time.

The IEE curriculum provides time for learners to read, to study and subsequently discuss best-selling books in the business field at seminars. Here are examples of some of the best business books of all time that will be available:

1. *'Think and Grow Rich,'* by Napoleon Hill
- You can achieve anything you conceive and believe.
2. *'Rich Dad, Poor Dad,'* by Robert Kiyosaki
- Know the difference between an asset and a liability.
3. *'The E-Myth,'* by Michael Gerber
- Work on your business rather than in your business.
4. *'The 22 Immutable Laws of Marketing,'* by Al Ries and Jack Trout
- Marketing is a battle of perceptions, not products.
5. *'How to Win Friends & Influence People,'* by Dale Carnegie
- Remember that a person's name is to that person the sweetest and most important sound in any language.
6. *'The Hard Thing About Hard Things,'* by Ben Horowitz
- Embrace your weirdness, your background, your instinct. If the keys are not there, they do not exist. There is no one-size solution.
7. *'Blue Ocean Strategy,'* by W. Chan Kim and Renée Mauborgne
- Avoid trying to beat competitors. Instead, focus on making them irrelevant by creating a leap in value for buyers and your company.
8. *'Shoe Dog,'* by Phil Knight
- Don't tell people how to do things, tell them what to do and let them surprise you with their results.
9. *'The Secret of the Ages,'* by Robert Collier

- Manifest all the dreams of your heart: achieve success, attain happiness, create abundance and health.
10. *'As A Man Thinketh,'* by James Allen
 - The power and right application of thought that will help you to help yourself.
 11. *'Public Speaking for Success,'* by Dale Carnegie
 - Public speaking is a vital skill that can be attained through basic and repeated steps.
 12. *'The Science of Getting Rich,'* by Wallace D. Wattles
 - Discover how to get rich, starting from where you are, with what you have. The power of the human mind: thinking can attract or repel wealth.
 13. *'You2: A High Velocity Formula for Multiplying Your Personal Effectiveness in Quantum Leaps,'* by Price Pritchett
 - An unconventional strategy for achieving breakthrough performance. It puts forth 18 key components for building massive success with less effort.
 14. *'The Wisdom of Ralph Waldo Emerson as Inspiration for Daily Living,'* by Ralph Waldo Emerson
 - Emerson's principal essays
 15. *'Start with why - How great leaders inspire everyone to take action,'* by Simon Sinek
 - Leaders who've had the greatest influence in the world all think, act, and communicate the same way -- and it's the opposite of what everyone else does.
 16. *'Entrepreneurship – Successfully Launching New Ventures,'* by Bruce R. Barringer and R. Duane Ireland.
 - A straightforward guide to starting one's own business. Explores the allure of entrepreneurship, teaching students how to successfully start their own businesses.
 17. *'The Startup Owner's Manual – The Step by Step Guide for Building a Great Company,'* by Steve Blank and Bob Dorf
 - Put the customer development process to work. Steve Blank and Eric Ries created the *'Lean Startup'* movement which has been tested and refined for more than a decade.
 18. *'Business Model Generation,'* by Alexander Osterwalder and Yves Pigneur
 - A handbook for visionaries, game changers, and challengers striving to defy outmoded business models and design tomorrow's enterprises.
 19. *'Effectual Entrepreneurship,'* by Stuart Read, Saras Sarasvathy, Nick Dew and Robert Wiltbank
 - Whether you're dreaming about starting a business, learning about entrepreneurship or on the brink of creating a new opportunity right now, don't wait.
 20. *'The Design Thinking Playbook: Mindful Digital Transformation of Teams, Products, Services, Businesses and Ecosystems,'* by Michael Lewrick, Patrick Link and Larry Leifer
 - An actionable guide to the future of business. Questioning current mindsets and the faults of the status quo, this guide gives tools and frameworks to kick off a digital transformation.
 21. *'Sprint - How to Solve Big Problems and Test New Ideas in Just Five Days'* by Jake Knapp, John Zeratsky & Braden Kowitz.

- About surprising ideas: that the biggest challenges require less time, not more; that individuals produce better solutions than teams; and that you can test anything in one week by building a realistic façade.

22. '[Delivering Knock Your Socks Off Service](#),' by Kristin Anderson and Ron Zemke

- What is quality customer service -- and how do you consistently deliver it for your customers?

23. '[Managing Oneself](#),' by Peter F. Drucker

- Be your own chief executive officer. Carve out your place in the world and know when to change course. Keep yourself engaged and productive during all of your career.

24. '[Twelve Pillars](#),' by Jim Rohn & Chris Widener

- Take your life to the next level and beyond. Become the best that you can be!

..... etc.

It takes time to understand, present and grasp some of the complex concepts and realities of business, therefore in the IEE the students are encouraged to read as much as they can to support the topic and work that they are focusing on at any given time.

A typical module would include that the students read 2-4 books on the topic, or consume theory and knowledge from other types of media. For example reading as much as possible ½ book, selected parts, watching several hours of videos and listening to podcasts and audiobooks.

The IEE works with various essential elements for the material under study:

Term - Concept - Competence - Phenomenon

It is necessary for learners to be able to fit academic information into a real context and study it in an integrated manner.

In the IEE phenomenon-based learning is used as a method of study as it includes, apart from exploring phenomena in real contexts, the inner curiosity and interest of the students.

This new method stems from students' curiosity, self-motivation, autonomy and individual observations to search for and explain holistic real phenomena around them ([Silander, 2015](#)).

Phenomenon-based Learning

Phenomenon-based learning is a learner-centred, multidisciplinary instructional approach that is based on student inquiry and problem solving. Subjects are addressed through the lens of the phenomenon, with learning objectives organised under 7 core competencies.



Retrieved from <https://learningscoop.fi/why-do-we-need-phenomenon-based-learning/>

Competence is a key theme seen as *'a precondition for personal growth, studying, work and civic activity now and in the future'* (FNBE, 2016, section 3.3).

The focus is particularly on transversal competences that cross the boundaries of individual subjects and aim to link different fields of knowledge and skills. They are entities consisting of knowledge, skills, values, attitudes and will that can be applied in a given situation.

Seven transversal competence areas have been developed and considered key in defining the objectives and key content areas of the subjects. These are:

1. thinking and learning to learn;
2. cultural competence, interaction and self-expression;
3. taking care of oneself and managing daily life;
4. multiliteracy;
5. information and communications technology (ICT) competence;
6. working life competence and entrepreneurship; and
7. participation, involvement and building of a sustainable future (ibid, section 3.3).

Learning environments and a variety of working methods direct the learning of students toward demonstrating their competences in different ways.

Phenomenon-based learning is not just a new method of learning, but a whole new way of thinking about education which reorganizes teaching so that learning takes place in problem-solving contexts. In the process learners are incessantly supported to participate actively in the management of academic information, discussion of problems with peers, practicing negotiation, arriving at conclusions and reflecting on this process during and after.

Phenomenon-based learning is considered as an amalgamation of such theories and best practices, which allow for a change in the structure of learning and a more flexible response to the needs of a particular education. A few aspects that characterize this approach are:

- *Fusion of inquiry-based, problem-based and project-based learning* - this approach especially supports learning in accordance with some of the most advanced, nuanced and progressive pedagogical theories such as: study-based learning, problem-based learning and project and portfolio learning.
- *Centered on all learning* - this approach keeps learning at the center of both the education institution and learners lives, but also requires them to pursue their own learning. This ensures that the whole learning process becomes extremely meaningful for the educator and learner.
- *A shift to learning in relation to a quantum paradigm, with the 'learning to learn' competency as the gravitational centre.* Given the fact that today's world cannot be analyzed and understood just by breaking it down into its components, it requires a kind of education which allows the teacher to engage holistically, look at the big picture and appreciate the complexity.
- *Skills centered* - this approach is strongly focused on building skills such as problem solving in complexity, cooperation and active participation, setting and managing own goals and commitment. This needs a holistic understanding and breaking of artificial barriers to subjects or classroom time and schedules.
- *Authentic, meaningful learning* - In a learning situation, learning cognitive processes similar to the cognitive processes required in the actual situation where the information or skills are used. Authenticity and meaningfulness are key requirements for the transfer and practical application of information or skills.

Phenomenon based learning makes it possible to bring real work life practices and processes into learning situations in a pedagogically structured way where relevant, enabling the student to participate in the real expert culture in the field and its practice.

Modern society is now changing so fast that creativity, thinking ability and more far-reaching expertise is required. There is an objective need to teach this to new generations.

Entrepreneurs are people who have to keep up with the run of time. And of course, modern entrepreneurial education should take innovative trends of the modern study into account, which is what the IEE does in its program.

Interactive learning

'The digital revolution is all about facilitation — creating tools to make things easy', Bill Gates has been quoted to say.

The use of digital media in education has led to an increase in the use of and reliance on interactive learning, which in turn has led to a revolution in the fundamental process of education. Increasingly, students and teachers rely on each other to access sources of knowledge and share their information, expanding the general scope of the educational process to include not just instruction, but the expansion of knowledge. The role change from keeper of knowledge to facilitator of learning presents a challenge and an opportunity for educators to dramatically change the way their students learn. The boundaries between teacher and student have less meaning with interactive learning (en.wikipedia.org).

As a contrast to the more passive techniques of the traditional lecture, interactive learning is a hands-on/real life approach to education founded upon building student engagement through guided social interaction.

Carefully designed and structured activities facilitate learning in groups, fostering a challenging but encouraging space for students to wrestle with novel concepts and develop practical skills. Typical activities like applying course topics, solving problems and working through issues are done together, while the classic activities, such as hearing course topics explained, are done individually or in groups by watching videos, reading and using online resources.

Students have their curiosity piqued by engaging with topics and are given a problem, a project, a case to role-play or some other active learning exercise which engages them with their peers and teaching staff in an interactive and energetic learning environment.

Interactive learning is a holistic methodology that has both online and offline components, which together make a complete educational experience.

In the IEE, interactive learning has many different uses and many different types of tools. During the EDUmining process Zoom, Skype or other video communication tools are used to connect with experts, who may be far away or not able to travel to give a lecture live.

To keep an overview of projects and have input easily accessible for all team members a tool like the Miro board is used as an online visual collaboration board, and when running events or conferences a helpful tool is the Remo virtual networking tool. There are many more options, and new possibilities are constantly being made available and adopted by the learners. In the IEE, learners are free to use any of the electronic tools they can agree on using collaboratively.

2020–21 has brought new challenges making interactive online learning more important than ever. Whether classes are in-person, mixed or online with e-learning the utilization of creative tools and methods to keep students' interest are increasing.

Simply put, interactive learning is learning that requires student participation. This participation can come through class and small group discussions as well as through exploration of the interactive learning materials they're given in a digital classroom.

While the wide definition of *'interactive'* makes designing and teaching such a lesson relatively easy, not all kinds of interactivity are equally effective for all students. Shy students, for example, are likely to benefit less from class discussions where participation is voluntary. This is where technology can offer learning materials that must be actively explored or the skilled facilitator can use attentive dialoguing.

Dialoguing is general communication to establish what is going on. It goes two ways; both the facilitator and learner are working on finding out what the subject really is. They are both perceiving and working themselves closer to understanding the subject matter.

Dialoguing is interactive communication to understand a subject. At first glance, dialoguing looks like just a casual conversation. But dialoguing is a very focused activity. It is focused towards getting a clear picture of what is within certain parameters. Exactly what that is, will not be known at the start. Dialoguing goes from the general to the specific. This interactive method is used extensively throughout the IEE - dialoguing or dialogue based learning.

Dialogue based Learning

Dialogue-based learning has entered the science of pedagogy, once the question arose of how to raise the learning potential in teaching. In different parts of the world, this question has occupied the minds of both theorists and teachers. One of the well-known sources here, which comes from the 70s, is dialogical and communicative pedagogy by Brazilian philosopher and adult teacher Paulo Freire. He argues that the student should have the right to be an active participant in their learning, as opposed to passively receiving finished knowledge from the hands of the teacher. And it is the dialogic teaching method that can transfer the student from a passive position to an active one.

One of the most productive researchers in the field of dialogical learning is Norwegian professor Olga Dysthe, who believes that dialogue-based teaching increases the learning potential thanks to the monological learning space being transformed into a polyphonic one (Olga Dysthe, 1993). And that is perhaps the first important difference between traditional learning understanding and this new track in pedagogy.

From monological dialogue to dialogue-based teaching.

It is important to distinguish between monological dialogue by the teacher and dialogue-based teaching as a new teaching method. In monological learning the purpose of the teaching is to impart, reproduce and test knowledge, whereas in the dialogical learning space the knowledge does not exist prior to the lesson. It is created in the dialogue between the teacher and the participants and the participants among themselves. The participants' voices take up more space than the teacher's, and they acquire new insights by constantly relating to each other and the teachers' statements and views.

Teaching as a monological dialogue

The teacher asks many questions, the participants are active and engaged, which gives the illusion that the teaching is dialogical and learner-centered. However it is not, because the participants' answers and inputs simply fill the gaps in the teacher's monologue. The teachers know where they want to go with their presentation, and only use participants' responses to activate them and check if they are still involved. There is no dialogue, neither between the teacher and the participants nor between the participants and participants.

Dialogue-based teaching as a research-based method

Dialogue-based teaching is a method that has its own theoretical basis, historical source in pedagogy and its own didactic techniques.

As a theoretical platform for dialogue-based teaching, Olga Dysthe points out the two Russian theorists - psychologist Lev S. Vygotsky and philosopher Mikhail Bakhtin, who bring an idea that thinking develops in a dialogical form and that understanding is not transferred directly from one person to another. Learning is also a social process, and meaning is created in dialogue. The learning potential is therefore high when the interaction pattern in learning spaces is complex, i.e. when many different voices and views meet and challenge each other. These theories are supported by a large study, such as the American researcher Martin Nystrand with the clear result: the understanding is much higher in learning spaces where dialogic teaching was reported.

Dialogue-based teaching is realized through a large number of concrete pedagogical techniques, all of which have one common purpose: they must give the individual participant a voice and raise the participants' self-esteem.

The physical organization of the learning space

When describing dialogue-based teaching, it is necessary to also pay attention to purely practical considerations, for example the physical organization of the learning space. Dialogue-based teaching is created from the basic attitude that the ability to listen and engage in constructive learning-oriented relations in a group is not just something that everyone can do inherently, but that there is talk of techniques that - at least some of the way - can be learned. Therefore, it is important that a situation is framed in which the participants and the teacher sit in a circle or horseshoe, typically without a table or with a table but without computers, and discuss the topic between them. The participants thereby have a special feeling, as one participant states: '*one is just more obligated to listen to each other than in an ordinary situation*'. In truth, dialogue-based teaching is created based upon the basic attitude that the ability to listen and engage in constructive learning-oriented relations is crucial.

As the circle is a special form of teaching, the participants can experience:

- that it is legitimate to include one's own experiences in a teaching context;

- that it is exciting to listen to and try to understand other people's perspectives;
- that out of the intensity and focus that arises in circle form, there will often be a demand for more knowledge, more facts, deeper insights.

It is thus about helping the participants develop the confidence to reflect and participate in broader communities both professionally and in a general educational nature (Dysthe 2018: 16).

Practitioners realize that it can be challenging to create an engaging dialogue which arouses the participants' professional curiosity.

Individuals understand themselves and express understandings together with and in relation to others. The Russian philosopher Mikhail Bahtin puts it this way: *'I only gain consciousness about myself and only know myself to reveal myself to that spirit, through that spirit and with the help of that spirit'*. The most important actions, those that constitute self-awareness, are determined by their relationship to another consciousness. (Dysthe 2005: 66).

This understanding of dialogue is linked to Etienne Wenger's description of how the opening of identities is the absolutely crucial starting point from which in-depth learning can take place. In order to strengthen the possibility of realizing the dialogical potential associated with the teaching situation, the dialogue must be organized in such a way that teachers and learners can see each other to a greater extent as equal dialogue partners.

In the circle of dialogue, the focus is on a dialectical context: on the individualization of thoughts and on de-individualisation at the same time. In Bahtin's view an understanding of the subject is created by a 'we' via the individual, and that relationship depends on the response, where precisely the pluralism and the diversity of voices are thanks to the circle formation. The verbal and nonverbal interaction via circular placement can attain learning value for the formation of meaning, understanding and cognition.

Dialogue-based teaching as active learning

Didactics researchers emphasize that the participants' activity is a condition for learning, but not a sufficient condition. Participants can be very active, but still learn very little and develop nothing new. This takes place if:

- The participants did not know the teaching material (did not read the text they had to work with or did it poorly);
- The participants do not listen to each other when they are looking to find an answer to give to the teacher, and the group members' contributions seem to only disturb the process;
- The participants do not work with the text as their own project, they have no influence on its content and topic development.

In general, group work is not a dialogue but a series of monologues where opinions do not necessarily meet. Participant-activating teaching works when participants have information and tools they can work with, when they are in dialogue with each other and about the content, and they are substantially engaged.

It is an important thing that the teacher formulates questions for the material that engages the participants and touches their world of interest. However, for the topic to be suitable for participant-activating learning, it is best when the questions arise from the participants' own work with the material.

It is the teacher's task to arrange the material so that recognition becomes possible and to build teaching patterns that the participants can use. Organizing the teaching so that it promotes the participants' reflection is also the teacher's task. For dialogic teaching, there are concrete tools to consider for the teachers' questions:

- Ask authentic questions. Authentic questions require students to really think. The answer is not found in a textbook, and the teacher has no control over what the student will actually answer if the question is authentic. For example, an authentic question might be: *'Do you think this is a good idea?' or 'Why do you think that?'*
- The teacher records the participants' answers, uses their answers to formulate new questions. If a participant says that it is a good idea to X, the next question may be: *'Why do you think it is a good idea X'*
- When you utilize the participants' questions directly in the dialogue, you raise their self-perception and sharpen their attention.

Appreciating the participants in the teaching process is hugely important. The participants' answers and opinions are appreciated by passing them on to the other participants as something worth talking about. The signal to the participant is: *'I will be heard!'*

One can also appreciate the participants by praising them, but the praise must be specific. If you always say *'nice'*, it bounces off. If instead you say: *'What you say there is very central to the discussion'*, the participant feels appreciated. It is important to emphasize the participant's contribution to the topic and to invite others to develop it. One must remember that both the teacher and the participants must be engaged in the material. In short, following Olga Dysthe's recommendations, the tools look like this:

- Authentic questions
 - Open questions that invite reflection and more possible answers
- Record
 - Incorporate the students' answers in the subsequent questions
- High appreciation
 - Build on the students' answers in the subsequent teaching

So, in more concrete words, the role of the teacher in the dialogue is:

- Ask authentic questions, that is, questions that the participant will have to think about;
- Ask follow-up questions, i.e. questions that record the participant's answers and that value them;
- Make the participant's different voices clear and highlight inequalities, similarities and conflicts.
- Challenge the participant's views;
- Add new information;
- Summarize together '*What have we learned?*'

Start-up technique

By using a dialogue-based method, it is advised to follow a number of technical steps that make the method easy to use - this is described by Danish educational psychologist Bjarne Herskin (2001). As the author points out, one can use dialogue-based techniques already at the beginning of the course and early in the individual lesson, because once there has been dialogue, the ice is hopefully broken.

ANNOUNCEMENT

Before dialogue teaching, there are only some participants in the listening position, while many are intellectually absent because their general education experience shows habits of one-way communication.

Through tone of voice and body language, one can announce that a question is coming, and only then formulate the question. For example, one can say: '*I would now like you to think a little about a question.*'

QUESTION FORMULATION

The questions must be unambiguous and precise, but they must be as open as possible. A closed question that can be answered with yes or no does not stimulate argumentation and contemplation.

Of course a very open question is not the choice if you want a very specific answer. A good question should aim to get the participants to think, analyse and argue. The teacher must focus on the participant's thinking and not on just getting the specific answer.

THINKING BREAK

When waiting for an answer, it is natural to pick the first participant who answers. Typically, there will be some participants who answer very quickly, some of them in the same second that the teacher has asked the question.

The problem with the quick answers is, in the first place, that they actually interrupt the thinking break for the majority of the participants before it has begun. Once the fast participants get started, the rest do not have to think or participate at all.

The best way to solve this problem is a *'buzz meeting'*, which simply consists of formulating the question, and then asking the participants to discuss it in groups of 2-3 people, for a few minutes - 2 minutes is often sufficient, it can be a little more. The benefits of the *'buzz meeting'* as an entrance to the dialogue are manifold. The most important thing here is that everyone has the opportunity to work on the question actively, and that the teacher knows that most of the participants have an answer. Here is a clear connection between dialogue-based and team learning.

A general debate

Questions about active dialogue-based learning are closely linked to the general debate about what knowledge is; is knowledge something definitive? Is there a size that can delimit it? With the teacher for instance? In which case, the person who has the knowledge - the teacher - can convey or transfer (share) it to those who lack knowledge - the participants. The teacher becomes the active subject and the individual student the passive object in the learning process.

Within a traditional framework, teaching is known to be a transference of knowledge. Learning becomes the same as receiving knowledge. But in accordance with Dysthe's problematization, these questions arise: is knowledge rather something that each individual must construct anew? Something that does not exist independently of the one who learns? In that case, learning becomes something other than just accepting authoritative knowledge. The pedagogical focus of the IEE is creating, building, reconstructing, reforming, rediscovering and restoring knowledge.

Reflective learning

'The unexamined life is not worth living.'

— **Socrates**

Reflection is widely discussed in the literature as a tool for promoting learning and higher order thinking skills, developing professional practice and facilitating and structuring learning through experience. Reflection may be approached from different perspectives or lenses (Brookfield 1995) and may be engaged with at different levels of depth, complexity, and criticality (Mezirow 1991; Kreber and Castleden 2009) depending on the experience, intended learning outcomes and the learner's capacity for introspection and open-minded self-analysis (Paris and Winograd 2003).

Reflective learning is a necessary component of experiential learning. Reflective learning promotes *'deeper learning'* as it involves consciously thinking about and analysing a new experience. It enables learners to activate prior knowledge and to construct, deconstruct and reconstruct their own knowledge. Reflection involves linking a current

experience to previous learnings (a process called *scaffolding*). Reflection also involves drawing forth cognitive and emotional information from several sources: visual, auditory, kinesthetic, and tactile.

Nearly 100 years ago, John Dewey articulated his concept of how we think in a book by the same name (*'How We Think', 1910-1933*). He identified several modes of thought, including belief, imagination, and stream of consciousness, but the mode he was most interested in was reflection.

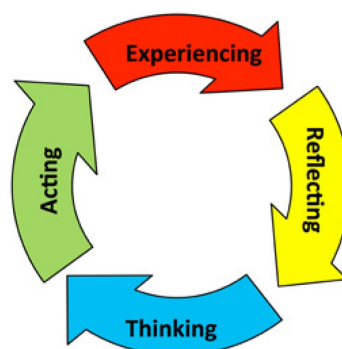
Distilled from Dewey's writing four criteria that characterize his concept of reflection have been listed by Carol Rodgers and the four criteria include the following:

1. Reflection is a meaning-making process that moves a learner from one experience into the next with deeper understanding of its relationships with and connections to other experiences and ideas. It is the thread that makes continuity of learning possible, and ensures the progress of the individual and, ultimately, society. It is a means to essentially moral ends.
2. Reflection is a systematic, rigorous, disciplined way of thinking, with its roots in scientific inquiry.
3. Reflection needs to happen in community, in interaction with others.
4. Reflection requires attitudes that value the personal and intellectual growth of oneself and of others.

Since Dewey many have explored and further developed ideas about reflective practice, in more recent years Alice and David Kolb (1975), Donald Schön (1983), Graham Gibbs (1988), Chris Jones (1995), Brookfield (1995, 1998), Rolfe (2001), Gänshirt (2007), Paterson and Chapman (2013) and others.

Reflective learning involves stepping back from an event or experience to analyse it from different perspectives (Gordijn, Ernstman, Helder and Brouwer. (Jan., 2018)).

The experiential learning cycle developed by David Kolb (1984) is a useful framework where reflection is part of the learning cycle, and thus critical to learning.



Retrieved from https://www.researchgate.net/publication/330993292_2018_kolb_and_Kolb_8_things_learning_cycle_AEL_reprint_40-3

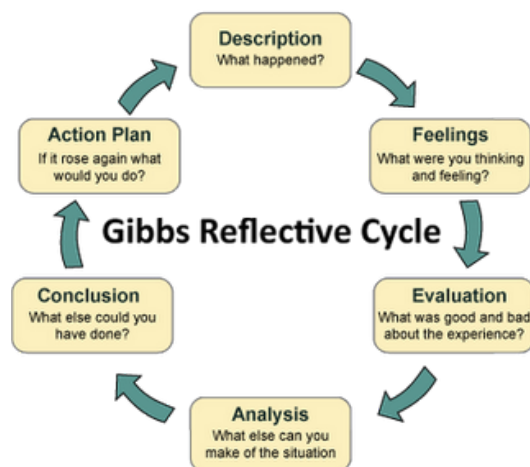
Models of reflection

The following two models can be used to prompt and structure reflection on experience: *'Gibbs' Reflective Cycle'* and *'The four F's of reviewing.'*

Gibbs' Reflective Cycle

Gibbs' Reflective Cycle was developed by Graham Gibbs in 1988 to give structure to learning from experiences. It offers a framework for examining experiences, and given its cyclic nature lends itself particularly well to repeated experiences, allowing you to learn and plan from things that either went well or didn't go well. It covers 6 stages:

1. Description of the experience
2. Feelings and thoughts about the experience
3. Evaluation of the experience, both good and bad
4. Analysis to make sense of the situation
5. Conclusion about what you learned and what you could have done differently
6. Action plan for how you would deal with similar situations in the future, or general changes you might find appropriate.



The four F's of active reviewing

The four F's of reviewing will help you to review an experience and plan for the future by moving through four levels: Facts, Feelings, Findings, and Future.

This framework is designed by Dr Roger Greenaway, an expert on training teachers and facilitators. By working through the four levels of this model, you will have critically examined the situation you want to review and reflect upon, while thinking about how to use what you have learned in the future.

The four F's are:

1. Facts - an objective account of what happened
2. Feelings - the emotional reactions to the situation
3. Findings - the concrete learning that you can take away from the situation
4. Future - structuring your learning such that you can use it in the future

This model can be used to think and reflect on a situation and can help to structure written reflections. The model is easy to remember and goes over the main aspects of what is helpful to consider when reviewing an experience.

Through reflection, the outcomes of learning become more clear, more explicit and more meaningful. Benefits of reflective learning are:

- Record your development
- Know your strengths and weaknesses
- Understand how you learn
- Develop self-awareness
- Plan your own development
- Learn about yourself
- Articulate your skills/learning to others
- Examine what you have learned and how you have learned it
- Demonstrate how your thinking grows and develops over time
- Assist with making connections between what you already know and what you are learning
- Help you learn from mistakes by identifying how you would do things differently next time
- Encourage you to become a reflective practitioner in your future career.

The subject of reflection can be a variety of areas of human existence: feelings, thinking, taking action, communication and values (also orientation, qualities and personality traits).

- Feelings - awareness of how I am feeling, and in connection with what, am I feeling this?
- Thinking - observing own thoughts and thinking strategies.
- Practical activity/action - awareness of goals, methods of action, their strategies, the results of activities, etc.
- Communication - awareness of the methods and strategies of communication, achieving mutual understanding with other people, developing an effective style of interaction, overcoming conflicts.
- Values - an awareness of the values that underlie my actions and choices.

Reflection methods

Reflective learning is based on the idea that learners are open to learning and willing to change. But of course there can also be resistance to change (often unconscious). Being in a reflective mode doesn't always happen by itself, so it can be very helpful to apply a variety of reflection methods to trigger that mode. Some examples of reflection methods include:

- Writing - self-analysis, essay, a letter to myself, personal and team diary, autoethnographic story, blog, logs and journals, sentence stems
- Visual - pictograms, images, mind-maps, metaphorical cards, drawing
- Creative - poetic reflection, comics, drama, board games, movie
- Dialogic - interview, speed dating, Socrates' walk, reflection in circles, storytelling
- Kinesthetic - molding, movement, improvisation, pantomime

There are several types of reflection, depending on what place it occupies in the course of the learning process: situational, retrospective and perspective ([Marina Bityanova](#)).

- Situational reflection (reflection - in - action) provides direct involvement in the situation, coordination and control over activities in accordance with the goal and changing conditions.
- Retrospective (reflection - after - actions) allows you to analyze the performed actions and past events to identify achievements and mistakes (in order to correct your behavior in the future).
- Perspective (reflection - before - actions) makes it possible to carry out mental planning, the choice of the most effective methods of implementation, forecasting the possible results and consequences of their actions.

To reflect, one must act upon and process the information, synthesizing and evaluating the data. In the end, reflecting also means applying what was learned to contexts beyond the original situations in which the learning took place. Reflection, when interwoven in the learning process, stimulates learners to 'own' their learning, which again stimulates the intrinsic motivation to apply lessons learned.

Facilitating reflective learning

Reflective learners are said to demonstrate self-awareness and motivation, awareness of the process of learning and independence. However, some learners can find the process of reflection problematic. It is possible, however, to help learners work autonomously, to qualitatively enhance learners' reflection, to enable reluctant reflectors to develop the tendency to habitually look for learning from a variety of knowledge sources, and to enable learners to predict future needs more successfully.

Effective reflection requires that facilitators demonstrate an open-minded attitude, communicate appropriately, manage group dynamics, incorporate diversity, and provide closure. Developing skill in each of these areas involves learning and becoming comfortable with numerous facilitation practices.

Facilitated learning

'The facilitation of significant learning rests upon certain attitudinal qualities which exist in the personal relationship between the facilitator and the learner. We cannot teach another person directly; we can only facilitate his learning' (Carl Rogers).

Dewey proposed that learners needed direction and that teachers have an important responsibility in facilitating learning by encouraging and channelling individuals' curiosity and motivation so they can develop intellectually.

From Dewey's viewpoint, teachers were to become facilitators, helping learners to develop skills and processes to solve problems at times of possible uncertainty – skills which could be transferable to other subjects – and for them to thrive and contribute to a democratic society.

Thinkers such as Froebel, Montessori and Piaget certainly related to Dewey, all maintaining that learners learn best when taking part in practical actions and by interacting with the environment. Piaget in particular is aligned with Dewey through his view of the teacher as a learning-centred facilitator.

The works of Carl Rogers and A.S. Neill, both humanists, were very much influenced by Dewey's progressive and liberal approach to education. Rogers replaced the term 'teacher' with 'facilitator'. (Aubrey and Riley 2016)

The whole conceptual framework of Carl Rogers rests on his profound experience that *'human beings become increasingly trustworthy once they feel at a deep level that their subjective experience is both respected and progressively understood'* (1992: 26).

Rogers' best known contribution is – the *'core conditions'* for facilitative counselling and educational practice – congruence (realness), acceptance and empathy. In his book, *'The interpersonal relationship in the facilitation of learning'* (1967), Carl Rogers suggested answers to the question: What are these qualities, these attitudes, that facilitate learning?

1. *Realness in the facilitator of learning.* Perhaps the most basic of these essential attitudes is realness or genuineness. When the facilitator is a real person, being what she is, entering into a relationship with the learner without presenting a front or a façade, she is much more likely to be effective. This means that the feelings that she is experiencing are available to her, available to her awareness, that she is able to live these feelings, be them, and able to communicate if appropriate. It means coming into a direct personal encounter with the learner, meeting her on a person-to-person basis. It means that she is being herself, not denying herself.
2. *Prizing, acceptance, trust.* There is another attitude that stands out in those who are successful in facilitating learning... Rogers thinks of it as prizing the learner, prizing her feelings, her opinions, her person. It is a caring for the learner, but a non-possessive caring. It is an acceptance of this other individual as a separate

person, having worth in her own right. It is a basic trust – a belief that this other person is somehow fundamentally trustworthy... What is being described is a prizing of the learner as an imperfect human being with many feelings, many potentialities. The facilitator’s prizing or acceptance of the learner is an operational expression of her essential confidence and trust in the capacity of the human organism.

3. *Empathic understanding.* A further element that establishes a climate for self-initiated experiential learning is empathic understanding. When the teacher has the ability to understand the student’s reactions from the inside, has a sensitive awareness of the way the process of education and learning seems to the student, then again the likelihood of significant learning is increased.... [Students feel deeply appreciative] when they are simply understood – not evaluated, not judged, simply understood from their own point of view, not the teacher’s. (Rogers 1967 304-311)

The Role of the Facilitator

The facilitated learning approach aims to encourage ‘*deep learning*’ and the ability to practically apply knowledge and skills, through active involvement of learners in their learning process. Learners are encouraged to take ownership and control of their learning while the role of the trainer/teacher is to facilitate this process. This is done by identifying possible resources, bringing out learners’ existing knowledge and potential, challenging learners through problem-based learning, peer-learning and reflection.



Photo by Galina Kushanova

The word “facilitator” originates from the French ‘*faciliter*’ and Italian ‘*facilitare*’ where ‘*facile*’ means ‘*easy*’. In other words: a facilitator makes things easier. The opposite of a facilitator of learning is somebody who directs the learning for the learner. A person

that decides what should be learned, how that should be done and when it's finished. A facilitator doesn't take that responsibility but leaves it to the learner. The role of the facilitator is first of all to support the learner in taking that responsibility and to plan and organise their learning.

In the '*Handbook for Facilitators - Learning to Learn in Practice*', Paul Kloosterman and Mark E. Taylor define twelve different and complementing roles of the facilitator:

1. *Creating a good learning environment.* Being open and clear about what makes a good learning climate, the facilitator is observed as a role model for behaviour in the group.
2. *To offer resources.* Offering possibilities and tips for further learning, the facilitator acts as a 'resource centre', being aware of the limitations that the educational activity has and the necessity of follow-up and further deepening.
3. *To ask supportive questions.* Asking questions that help get more clarity about learners needs, passions, goals and steps to take on the learning journey can be of great value to support the self-directed learner to reflect and make choices.
4. *To bring people together.* Learners need peers for support and cooperation, the facilitator has an important role to bring people together and to stimulate them to learn together.
5. *To put learning on the agenda.* Learners should be motivated to reflect on their learning so far, their strengths and challenges, alternative ways of learning and how they see their future learning.
6. *To listen and observe.* To discover and recognise the specific needs, blocks and passions of the learners it is vital to listen carefully and observe attentively what learners say and do.
7. *To motivate learners.* To bring back the fun of learning, motivate the learner to see it as something that belongs to them, something they can do, support them in changing negative images about themselves when it comes to learning.
8. *To give feedback.* As an observer of the learning process the facilitator is often in a good position to give feedback to learners in order to help them to broaden their self-perception and look at different options and possibilities.
9. *To see the potential of learners.* Many people focus on what they are not good at. The facilitator is able to see, or to help explore, the different potentials that all learners surely have. Giving learners the possibility to try out new tasks, roles and challenges that can reveal potentials they may not be aware of.

10. *To give ideas and tips.* Offering ideas and giving tips can be motivating to help learners get more insight or take new steps. The facilitator must be attentive, however, to the balance between giving tips and ideas and the learner keeping the responsibility.
11. *To recognise needs and passions.* Passions are often seen as strange, silly or put in the box of dreams. Passions are however probably the most important drive for learning! A facilitator that can recognise and awaken these passions and help the learner to reconnect to them does a great job.
12. *To be a learner.* Educators are not only 'offering learning' but are also learners themselves. A facilitator's awareness of own learning can help a lot in assisting learners in their self-directed learning journey.

According to the research, educators have an important role as models for learning in 'learning to learn' (Kloosterman and Taylor. 2012).

As facilitators, sometimes we stand in front of the group, but more often we're in the background, observing from the sidelines, acting as moderators or coaches. The challenge is to find the position that works best for the learning process as a whole (Gawinek-Dagargulia, Skowron and Zimmermann. 2016).

Several roles: stepping into different shoes



To be an effective facilitator we must know when to take a leadership role, and when to be neutral and take a back seat. The key to being proficient in the role is to plan and guide the proceedings effectively, and remain focused on the group process and outcomes, rather than specific content and opinions involved. The function of facilitation is to keep the training focused and moving, and to ensure even levels of participation (Sabine Klocker, p. 37).

According to The International Association of Facilitators (IAF) the core facilitation competencies are to:

- Create collaborative relationships
- Plan appropriate group processes

- Create and sustain a participatory environment
- Guide groups to appropriate and useful outcomes
- Build and maintain professional knowledge
- Model positive professional attitude

and the facilitation mindset includes:

- Authentic willingness to support the learners on their way;
- Genuine trust that learners know best their own needs and objectives;
- Belief in learners' existing abilities and potential;
- Readiness to connect, build and nurture relationships with learners;
- Empathy and transparency in relationship with learners;
- Openness in dealing with different opinions and conflicts resulting in a constructive way forward for the learners;
- Attention to the way the group works – the process;
- Willingness to reflect on own actions, skills and attitudes and learn further.

Facilitated learning is based on the premise that the more responsibility a student takes for his/her own learning, the more effective the training or education will be. Enabling rather than controlling, strengthening rather than emphasizing deficits, cooperating rather than delivering content. Such attitudes are a condition for success for competency-centered learning.

Delivery of facilitated learning

Facilitated learning may include:

- On-demand tutorials, presentations, and keynote addresses
- Online or face-to-face group discussions and exchanges
- Handouts, readings, videos, podcasts
- File and link sharing
- Surveys and polls
- Meta-planning (individual note pads on a flip-chart, placed into similar categories by the participants) to generate ideas
- Decision making techniques
- Action planning
- Peer-learning
- Small group activities
- Virtual real-time or physical classroom sessions, lectures, seminars

- Brainstorming sessions (virtual or face-to-face)
- Group activities such as role plays, games, simulations
- Field trips
- Projects and case studies
- Critical incidents
- Creative activities

The IEE uses visual facilitation for reflection, evaluation and workshops as much as possible, since visual and graphic facilitation in learning ensures that a wide range of learners are touched. Visual facilitation works well for conveying information and to find a common language with students more easily. Visual Facilitation is the intentional integration and application of visual elements and exercises into the educational activities for:

- Presenting content and information.
- Supporting (in the sense of actively guiding) an individual and/or group process.
- Documenting outcomes.

The main aim of teaching visual and graphic facilitation to students is that it helps them discover new ways of learning, making the learning process easier and developing their creative thinking. Using Visual facilitation during the learning process is a good example for them on how to make the process easier and more effective.

Learning outcome as learning how to learn

There is a general consensus in the educational community that *'learning to learn'* is an important educational goal. Despite this consensus, it is not clear how *'learning to learn'* is or should be implemented. A narrow interpretation of *'learning to learn'* concentrates exclusively on study skills, strategies and techniques. In contrast, the aim of *'learning to learn'* in a broad sense is to promote the use of higher order cognitive skills, such as problem solving and information-processing strategies. In the second case, learning becomes a goal on its own and it is not considered by the learners only as a means to achieve some particular objectives. It becomes a process for lifelong learning, of ongoing, voluntary, and self-motivated pursuit of knowledge for either personal or professional reasons. Therefore, it not only enhances social inclusion, active citizenship, and personal development, but also self-sustainability, as well as competitiveness and employability.

Learning how to learn is then seen as an essential transferable skill, almost a survival skill in the current socio-economic climate. In such a context it is seen as desirable that individuals are not only able to engage with questions about the *'what'*, but also the *'how'* and the *'why'* ([Mezirow 1991](#)), and to have a high degree of self awareness of their own learning needs and the initiative to take these forward.

It is claimed that one of the most effective ways of promoting such learning is to engage in reflection on a learning event, or learning experience, a process which would involve mentally revisiting the experience or event, interpreting the event and evaluating what was gained from it ([Boud et al. 1985](#)). Those learners able to reflect on the learning process are said to be more likely to develop the tendency to look for learning, and also to have an increased desire to learn. In fact, it is claimed that more learning can be derived from retrospective reflection on the process of learning from an experience than from the experience itself ([Posner 1996](#)).

In various educational contexts, specific 'tools' have been used to facilitate this process, such as learner diaries, critical incident logs, action research, identifying action plans or personal development plans, self-evaluation activities and peer assessment. All such tools aim to make the learner not only a more effective and self-aware learner, but also a more curious, confident and autonomous learner who understands the purpose of their learning, accepts responsibility for it, takes the initiative and is self-evaluative (see Little on [Learner Autonomy and Second/Foreign Language Learning in the Good Practice Guide](#)).

Little also notes that a reflective approach to learning enables the learner to best serve their own needs. It is, therefore, the educator's responsibility to help create a learning and teaching environment in which learners are encouraged to learn how to become more autonomous in their learning. In this way, reflectivity informs autonomy and autonomous learning has a qualitative effect on reflectivity.

The learning to learn competence becomes the ability to pursue and persist in learning, to organise one's own learning, including through effective management of time and information, both individually and in groups. This competence includes awareness of one's learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully. This competence means gaining, processing and assimilating new knowledge and skills as well as seeking and making use of guidance.

The learner gains a deeper understanding and awareness of the inner observer as the neutral, non-judgmental aspect of ourselves that allows us to witness our thoughts, feelings and sensations through the reflective process and guidance to questions such as:

- Why am I studying? What are my goals? Why do I choose such goals?
- What exactly am I learning? How does it change me?
- How do I learn? What helps me learn? Are there any other more convenient, efficient ways (for me to learn)?
- What results do I achieve? Do they meet my goals?
- How do I apply what I am learning?
- What's next?

This focus of attention and mindful awareness in turn brings the learner into alignment with the inner knowing of what is right for the individual.

Innovative learning

Innovative learning is similar to creative learning. In this model, learning is a process in which students actualise – or as in the IEE – *align* themselves and find their potential. In this process, the learners develop and create themselves as a person.

In this context, the purpose of teaching is not to provide ready-made particles of knowledge, rather it is the process where learners have freedom to ignite and use their creativity, and the teacher's role is to guide learners to find and create new solutions (igi-global.com).

The main characteristics of innovative learning are teamwork and collaboration, shared responsibility, synchronous and asynchronous communication, crossing silos and borders, and having fun while learning. In all of this, technology is providing new possibilities and can support learners in these processes.

The focus on a particular part of syllabus or subject content and the aim for each learner to excel in a subject are replaced by teaming-up to combine ideas and capacities in order to reach a common goal ([Blair et al., 2016](#)).

'For the future society, it is important to gain dynamic people, capable and willing to understand and reshape existing structures and models, and who are willing to work in interdisciplinary teams' (igi-global.com).

In all, innovative learning is learner-centered, a philosophy which aligns well with entrepreneurship education and the IEE program.

Being able to think creatively and innovatively are essential skills. It can sometimes be challenging to step back and reflect in an environment which is fast paced or when required to assimilate large amounts of information. Making sense of or communicating new ideas in an innovative and engaging way, approaching problems from fresh angles, and producing novel solutions are all traits which are highly sought after by employers. The IEE introduces a selection of behaviours and techniques that will augment the innate creativity of the learner. Some of the tools are suited to use on an individual basis and others work well for a group, leveraging the power of several minds. The greatest innovators aren't necessarily the people who have the most original idea. Often, they are people- or teams- that have harnessed their creativity to develop a new perspective or more effective way of communicating an idea. The focus will be on training the imagination to seize opportunities, break away from routine and habit, and tap into the natural creativity of the learner. If necessity is the mother of invention, then opportunity is the father.

Creative learning

Creative learning and creativity sound like synonyms, but they have very different meanings when applied to education and learning and development.

Creativity is the ability to create something out of thin air. A creative person can figure out solutions by successfully plugging in unique and useful solutions for each challenge. Creativity means knowing how to make sure each learner gets the experience they need. Creativity is required to see beyond what needs to be done, to decide the 'how'. Creativity is the ability to imagine or invent something new of value, whether personal, societal, financial or any combination thereof.

You need creativity to create creative learning, but not vice versa. Think about it: Someone needs to be able to think creatively - they develop ideas that are a combination of unique and useful - to come up with learning solutions, but a learner doesn't necessarily need to be a creative person in order to participate.

Creative learning is a delivery method. It takes individual learning styles into consideration to come up with fresh and innovative solutions that increase engagement and retention of content. So creative learning is:

- Providing a personal learning environment for each learner to think about training.
- Giving learners the opportunity to make decisions, and creating a space in which they feel comfortable about taking risks and seeing how their choices and actions affect outcomes.
- Creating a learning path where learners are actively involved and not just passive participants. Learning on their own time, prescribing their own learning, and creating their own paths mean learners are stepping outside the typical bounds of training for creative learning opportunities.
- Enjoying a number of different learning methods, from microlearning to gamification, as a way to increase overall learner engagement.

Creative learning is the process of acquiring knowledge and abilities using creative processes. In other words, creating theories, tests, stories, solutions, analysis and designs as opposed to simply trying to memorize information. The following are common types of creative learning:

- *Conjecture* - Asking learners to guess at information that is missing.
- *Abductive Reasoning* - Forming theories to explain observations.
- *Hypothetical Questions* - Questions that contain imaginary scenarios.
- *Open-end Questions* - Questions that allow for an unconstrained answer.
- *Abstraction* - Working with ideas that differ from reality but are nonetheless useful in explaining it.

- *Analysis* - Asking learners to break things down into their component parts.
- *Improvisation* - Games and exercises designed to stimulate improvisation.
- *Analogy* - Explaining things with analogy or asking learners to develop an analogy.
- *Counterfactual Thinking* - Considering how changes to historical fact would have changed the future.
- *Creativity of Constraints* - Imposing constraints on problem solving and decision making to stimulate creativity.
- *Tests & Experiments* - Developing a hypothesis and then conducting tests and experiments to support, refute or validate it.
- *Thought Experiment* - Communicating information as a thought experiment or asking learners to design thought experiments to support, refute or validate an idea.
- *Introspection* - Examining thoughts and emotions. For example, asking learners to explain how a musical composition makes them feel.
- *Prediction* - Developing future predictions with supporting arguments.
- *Debate* - Asking learners to present an argument of a position.
- *Storytelling* - The art of making information interesting. For example, asking learners to tell a fictional story that illustrates a problem.
- *Five Whys* - Digging into the root cause of problems by asking "why?" five times in succession.
- *Design* - Designing a solution to a problem.
- *Jugaad* - Designing practical workarounds as opposed to complete solutions to a problem.
- *Tradeoffs* - Modeling grey areas such as tradeoffs.

The term creative learning covers lifelong learning and applies to a range of settings – anywhere where learning takes place – in and out of formal education. All cultural activity has the capacity to inspire learning by its very nature. Artistic experiences can challenge and influence how we respond to the world in reflective and imaginative ways. Creative learning has huge benefits for individuals and society in terms of wellbeing, employability and skills development.

Team Coaching

Team coaching is the role and practice to support team learning. Because the team has responsibility for the process and to achieve the set goal, the team coach has mostly the role of a supporter and encourager. However, when it seems necessary for the cause of reaching that goal or for the team's learning, the team coach might provide a signal or interruption of the process. The aim can be to help the team get back on track or shake them out of their comfort zone.

The methods in team coaching are mostly to listen, reflect and act as '*a mirror*' for the learners. The team coach might also ask questions and provide feedback and alternatives. Any direct opinions, hints or orders from the team coach are usually avoided, since they don't have ownership of the process.

At the beginning of the team's process, the team coach is close to the team and they have many touchpoints or moments of collaboration. This can include taking part in non-formal situations where the team comes together, like '*reading club*' sessions. As the team forming and performance evolves, the team coach can leave more and more space for the team, so that they can take even more responsibility and explore their own way of working.

For the team coach, it is beneficial to have gone through team learning processes. This experience will help them empathize with team members. However, each team is unique and team coaching is not about '*learning tricks and best practices*' but to be present, and to challenge and care in a balanced way.

The team coach can support team learning by organizing the learning environment and equipment. Similarly, they can suggest reading and other types of material/media/tools for the team.

Design thinking elements relevant to the IEE

Design thinking is a non-linear iterative process which seeks to understand the user. It is used across multiple sectors, for example in service design and very much has a problem-solving methodology.

Design thinking typically has the following 5 stages; empathise, define, ideate, prototype and test. They often do not occur in a strictly sequential fashion and may occur simultaneously.

Empathising involves a lot of listening to the user without trying to guide or steer the conversation: it gives the designer a sense of the operational context and background in which a problem manifests. The key is to collect as much information as possible without diagnosing the problem.

Defining is where the user's needs and problems become clearer and diagnosis can happen. Typically a problem statement will clarify the design challenge and guide the ideation phase in the right direction. This definition exercise can be returned to if the testing of the solution reveals the solution does not solve or address the problem statement.

Ideating helps find new angles for solutions in a very open non-judgemental environment. The role of the facilitator is key here, as is the setting of time limits and variety of approaches, since creating the broadest range of possibilities is critical.

Prototyping is an active stage, geared towards speed and producing an early version of a solution without aiming for perfection or high quality. This is to ensure multiple iterations that can be tested and to keep an eye on the core issue to be solved.

Testing generates user feedback thus gaining new insights for all other stages of the design thinking process. Observing how the user interacts freely with the prototype is essential here.

In the context of the IEE, the design thinking process provides a method for participants to ensure that their business idea is solving a problem for paying customers.

Provision of IEE and structure of studies

The IEE is a one-year study program divided into two semesters, each consisting of several modules. It is intended to be given in a boarding school setting in order to benefit from the community structure as a means to developing an entrepreneurial mindset. Most modules can be taught also in a conventional setting and some modules would work well as online modules for self-education.

The one-year structure spends the first semester, or 20 weeks working on the '*personal power and entrepreneurial mindset*'. The second semester, or 22 weeks are spent diving into an '*incubator program, start-up process*' of creating an actual product, service or process and testing it in the marketplace.

1st semester – 20 weeks - the '*personal power and entrepreneurial mindset*'

The first semester is all about learning to ask the '*right*' or '*best*' questions and finding answers. The focus is on personal development and developing the entrepreneurial mindset. What does it mean to be an entrepreneur, what is required of the rational (scientific), emotional (aesthetic) and spiritual (greater than self) person, of the mindset to be an entrepreneur?

Each week a different topic of interest will be selected. The learner will engage in research, ask questions, contact relevant experts and also get really good at giving presentations.

1ST SEMESTER

W1 – EDUcamp – the learners are given a number of experiences that help them develop their personal strengths and social competences so that they can navigate their lives towards the best version of themselves. This week is aimed at personal development and self-insight.

W2 – Learning to learn – is particularly important when teachers are no longer a main source of information and knowledge. An individual's ability to locate and critically appraise information from such sources is vital for learning throughout life. The focus is on life-long-learning.

W2 – Reflection – reflecting and composing a piece of self reflective writing is becoming an increasingly important element to any form of study or learning. Reflecting helps to develop skills and review their effectiveness, rather than just carry on doing things as they have always been done.

W3 - Start with '*why*' - every organization knows what they are selling, most also know the '*how*', as in what makes them special or sets them apart from the competition, only few know the '*why*' of their organization. It is not about making money, it's the purpose, cause or belief - the reason the organization exists in the first place.

W3-20 – EDUmining – brainstorming, doing research, questioning, finding experts, pitching & presenting – for 18 weeks a wide variety of subjects guided by the learners' interests will be explored.

The subjects will have overall headings such as:

- Technical skills, programming and artificial intelligence
- Games, user experience and design
- Environment, climate and recycling
- Theater, music and performance
- Animation, drawing and sculpting
- Networking, personal leadership and social competencies
- Nutrition, health and the body
- Science, welfare technology and life quality
- Design processes, critical design and experience design
- Creativity, innovation tools and techniques
- ... topics seen as important by the participants.

During the EDUmining process the learners will team-up according to their interests, and they will be encouraged to take on different roles as they move along in order to examine when they get in or out of their comfort zones.

2nd semester – 22 weeks - an *'incubator program - start-up process'*

The second semester is all about taking action. Focus is on creating, building and bringing ideas into life. How and through what can I best express my creativity?

The second semester is an incubator process, where the learner learns how to develop own ideas into products or businesses. The second semester starts with an EDUjam and an EDUhack. EDUjam is a process to generate and develop ideas. EDUhack is about prototyping and teaming up.

2ND SEMESTER

W23 or W1 in the new year will be the start of an incubator process. It will contain an EDUjam (idea-generating-process) and an EDUhack (prototyping-process). With the help of these processes the learners will define what they will work on for the second semester and who they will work with based on their common interests. Therefore the concepts teamwork module takes the meaning of *'team'* to a new level.

W24(2) – Design sprint – design thinking encompasses processes such as context analysis, problem finding and framing, ideation and solution generating, creative thinking, sketching and drawing, modelling and prototyping, testing and evaluating. The students will define and refine the chosen *'product'* for the project.

W25(3) – Project management – learning the skill and practice of initiating, planning, executing, controlling, and closing the work of their team to achieve specific goals and meet specific success criteria at the specified time. The primary challenge of managing the incubator project will be to set and achieve all of the project goals within the given constraints.

W26–27(4–5) – Market research and business planning – market research aims to understand the reasons consumers will buy your product. It studies such things as consumer behavior, including how cultural, societal and personal factors influence that behavior.

The business plan will be a written document describing the nature of the business, the sales and marketing strategy, the financial background, and containing a projected profit and loss statement – a budget. Hence the budgets and strategy will be based on the findings, assumptions and conclusions brought about by this process.

W28–29(6–7) – Fundraising and project writing – the process of defining the needs of the project both financially and in kind is the process of seeking and gathering voluntary financial contributions by engaging individuals, businesses, charitable foundations, or governmental agencies.

It may also be seeking sponsors or existing companies who might benefit from the ideas generated and who might be interested in buying the idea.

W30–37(8–15) – Production planning, production (supply chain) and user testing – production planning is the planning of production and manufacturing of the product in a company or industry. It utilizes the resource allocation of activities of employees, materials and production capacity, in order to serve different customers.

The actual physical product production may or may not be accomplished depending on the idea, but this module will either simulate or produce a physical prototype at least to work with and have user tested.

A great customer experience begins with human insight. See, hear, and talk with the potential customers as they engage with the products. User testing could mean the difference between success and failure.

During this process the need for legal advice will most likely be evident and different contractual or legal issues will be analyzed.

W38–40(16–18) – Brand building, sales and marketing planning – a strategic sales and marketing plan outlines specific customer markets a business will target with a sales and marketing campaign. It also delineates tactics the business will use to reach target consumers. These tactics can include advertising, brand building activities and product specials. Different social media avenues will be explored.

Building a brand is a process. The brand is defined by the customer’s overall perception of the product and the business. A successful brand has to be consistent in communication and experience across many applications.

Brand building doesn’t happen overnight, however, the ongoing effort will result in establishing long-term relationships with the customers. This should lead to a steady

increase in sales, more projects, referrals and advocacy for the product or service offered. Standards for '*knock your socks off customer service*' levels will be set.

W41–42(19–20) – Product launch – launching a new product into the market can be the beginning of a wonderful friendship or a total fiasco. It is a key moment that needs all the care and attention it can get. For a product to take off quickly, a feeling of expectation and excitement for its release must be created, starting weeks or even months in advance. This module looks into the most popular techniques to do this.

W43–44(21–22) – Product maintenance, planning the future – it is not enough to launch a product, there must be a plan for the future of the product (process or service). How to maintain and further develop the product. These are questions to have already considered the answers to even before the launch of the product.

W44 – Financial, IT & management – this module will focus on practical things to know and choices to make from a financial, IT and management standpoint. The main goal is to be able to provide the business with an accurate and complete view of income and expenditures as well as look at possible management tools.

Second semester is wrapped up with a '*show and tell*' event, a presentation of the '*products*' and the processes. What was learned, what is the learners' take away, and what are their ideas for the future?

Throughout the IEE program there will be fun and interesting weekend workshops and excursions and also some field-trips, visiting different entrepreneurs and/or attending relevant conferences. There will also be lots of relaxing outdoor activities.

Alternative uses of the IEE

The IEE can also work as a 5 month program, where most modules are shortened, there is a higher pace and it is a more intensive experience. The '*personal power and entrepreneurial mindset*' part of the program is shortened to 7 weeks and the '*incubator*' part of the program is shortened to 15 weeks.

Certain modules can be made available online along with online coaching for guidance as a '*self-education*'. Several of the modules can also work well in traditional education settings, although the overall benefits will be different.

There is a need for differentiation with regard to how material and ideas are presented in order to allow for the spectrum of learners. As a society, we know that some learners are quicker than others, yet we keep designing our educational programs within a certain standard with regard to length and content. In contrast with other programs the IEE is designed to cater for diversity in all aspects and built to support the interests of the learners who embark on this journey.

This of course sets different requirements to faculty staff to be able to facilitate the flow of the changing learner needs. Trusting the program, the processes and own abilities become crucial.

Outcome

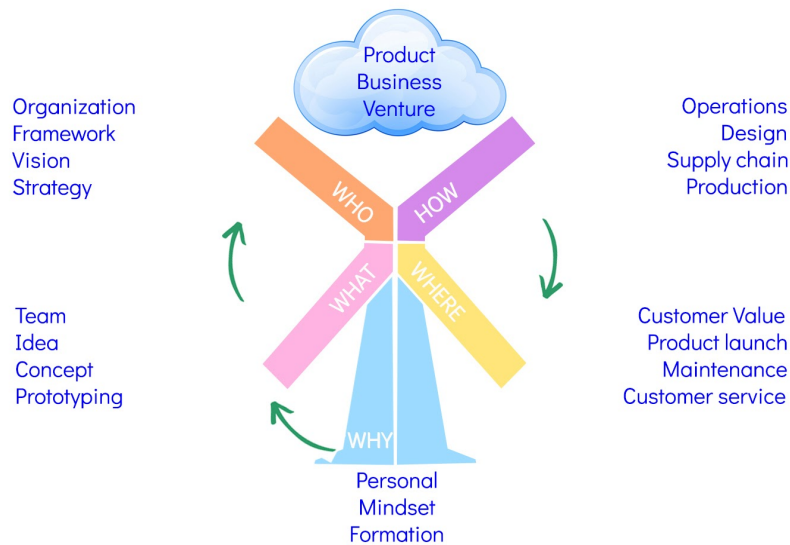
The IEE aims to provide an education that will enable young as well as mature adults to improve or supplement their knowledge and develop transversal skills that will help their professional and personal lives and enhance their ability to improve their future job and educational possibilities.

This cross-national program and process for youth entrepreneurship is a bridging youth education with a one year curriculum, using new teaching methods and tools. It is a modular program, suitable in most school settings. The teaching methods are built on ideas of game design and iterative processes, personal development tools, with focus on developing IT- and entrepreneurial skills through small business incubators and actual funding processes.

The impact potential of this entrepreneurship education program is far reaching. This is a bridge-builder to more informed higher education choices or a stronger foundation for self-employment directly. These innovative entrepreneurial processes will have a better chance of inspiring young people in this direction and thereby meeting the goals of increasing the percentage of self-employed and innovative entrepreneurs in the workforce.

The methodology and curriculum will develop those crucial skills required to confidently make career or education choices. The long term benefits might therefore potentially be fewer dropouts from higher education. The students will have acquired methods for learning giving them a competitive advantage for moving forward in life.

Content of IEE, the curriculum



The IEE starts with the *'why'*, the formation of the personal mindset; *'why'* become an entrepreneur - this is a personal awareness process, a very important foundation for the learner to acquire tools and processes for further personal development.

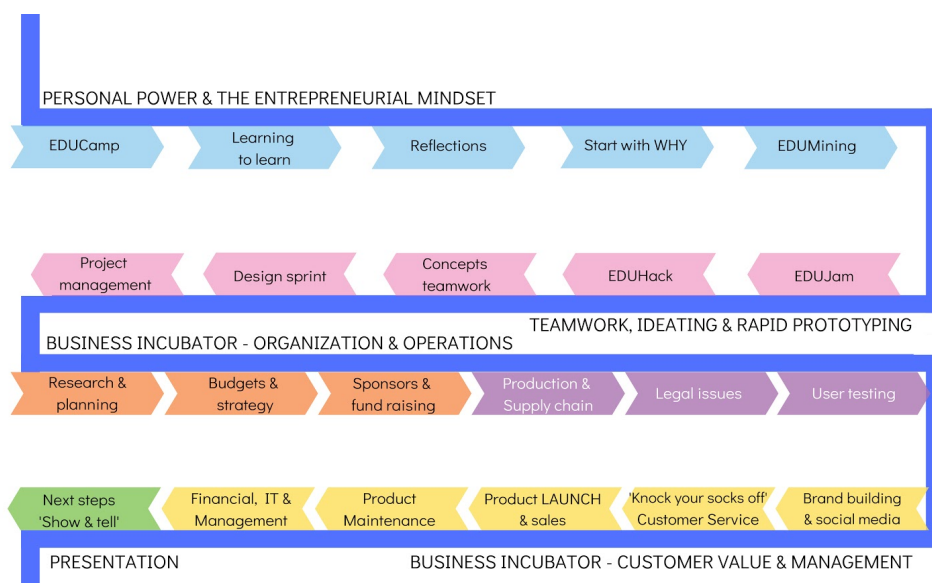
Next is the conception of the business idea and the whole 'start-up-process':

The *'what'* will bring ideas to life and put together a team-learning process.

The *'who'* creates the framework and strategy to take the idea further towards fruition.

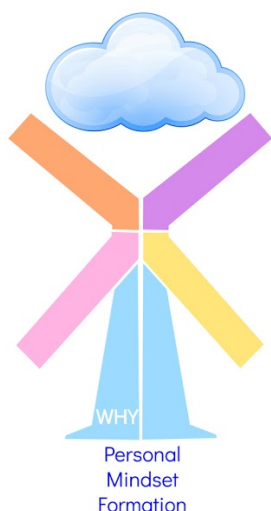
The *'how'* then gets practical - *'how'* to get the product/process/idea out there.

The *'where'* will be crucial to whether the idea will fly or not; will the idea create value and to whom? Was the idea sustainable? Is there a basis to remain in business?



First semester

'Why' - Personal power and the entrepreneurial mindset



Module 1: EDUCamp



The learner will engage in a variety of experiences that will assist them in the development of their personal strengths and competencies, so as to successfully navigate life.

This module focuses on personal development, leadership, social competencies and insight using positive psychology and strength-based management. The learners gain greater clarity about their own values, strengths and how to bring them into play.

Educational elements: 'Why' - Personal power and the entrepreneurial mindset

Key subject area: EDUCamp

Learning outcomes; by the end of the module, the learners

- discover more of who they are and know the people around them better;
- create a *common language* to develop the learning community;
- understand key concepts that are important for future learning;
- create *awareness*, strengthen focus of *attention*, develop a positive *attitude* towards themselves and others around them, and the ability and will to cooperate;
- are ready to cooperate within the learning community of young learners and

- adults;
- start to develop the entrepreneurial mindset.

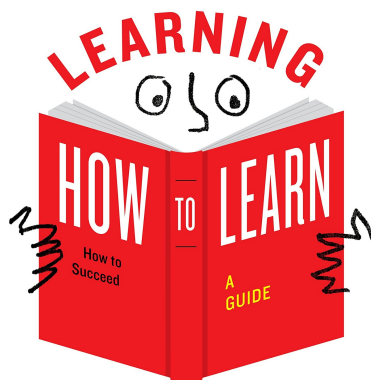
Learning processes:

- Interactive learning: dialoguing, brainstorming, pairing and teaming up, group assignments, indoor and outdoor activities.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Community learning: the learners will familiarize themselves with the group they will be spending the year with.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: the learners are introduced to the teacher as a facilitator, organizer, supporter and mentor.
- Psychological processes of *'who am I'*, *'how can I know people around me'*, *'how can I be better in my communication with others'* and *'how do I understand others better'*.

Content:

- Foundation: respect, understanding, communication, companionship.
Root/core leadership: purpose, growth mindset (vs. fixed mindset).
Relationships (who am I, how can I understand myself and others).
- Learning: feedback, reinforcement, diversity, engagement.
- Character: respect, optimism, ownership, integrity, perseverance.
- Dialogue and exercises to develop the understanding and recognition of the self and others, and the common language and values, which are the foundation for the learning journey.

Module 2: Learning to learn



The aim of the module is to make the process of learning much more explicit thus enabling learners to become more effective at learning and taking greater responsibility for their own learning and career.

'*Learning to learn*' is the ability to pursue and persist in learning, to organise one's own learning, including through effective management of time and information, both individually and in groups.

Learning to learn engages learners to build on prior learning and life experiences in order to use and apply knowledge and skills in a variety of contexts: at home, at work, in education and training. Motivation and confidence are crucial to an individual's competence (www.youthpass.eu).

Educational elements: 'Why' - Personal power and the entrepreneurial mindset

Key subject area: Learning to learn

Learning outcomes; by the end of the module, the learners

- are able to set and be responsible for personal learning goals in accordance with their own career priorities;
- are aware of personal learning styles and strategies;
- are able to notice the main obstacles in learning and use appropriate techniques to overcome them;
- apply effective learning techniques to support self-directed learning and development;
- have improved their communication and collaboration skills.

Learning processes:

- Interactive learning: dialoguing, discussions, pair and group work, indoor and outdoor activities.
- Project-based learning (PBL) - (or problem-based/inquiry-based learning): solving tasks, presentations, case studies.
- Experiential learning/active learning: best practices, simulations, investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.

Content:

- Key concepts: 21st century skills and labour market, hard and soft skills, trends in the labour market, foresights, emerging jobs.
- How do we learn? Human brain, neuroplasticity, memory, holistic learning (mind-heart-hand).
- Fixed mindset vs growth mindset, creativity, how do I learn? My learning styles and strategies.
- Efficient learning: techniques for improving efficiency of learning, time management, stress management and well-being.
- Critical thinking.
- Communication and collaboration skills: public speaking, techniques of successful communication, how to overcome stress and stage fright before important performances.
- Learning lifestyle: planning further personal learning path.

Module 3: Reflections



This module focuses on the importance of taking a step back to gain perspective, to process events and achieve clarity on what matters and what can be ignored.

Reflection is a process where learners describe their learning, how it changed, and how it might relate to future learning experiences. It is an important practice for learners to make sense of and grow from a learning experience.

Educational elements: *'Why'* - Personal power and the entrepreneurial mindset

Key subject area: Reflections

Learning outcomes; by the end of the module, the learners

- understand the place of reflection in learning;
- are willing to engage in regular reflective practice in learning;
- apply different reflection tools in their learning process.

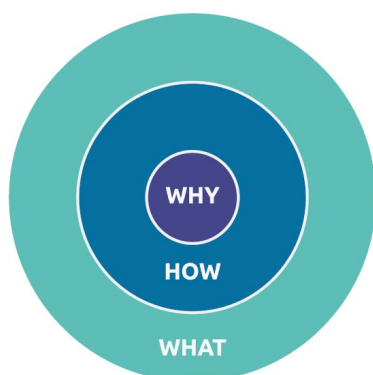
Learning processes:

- The module combines a variety of reflection tools and methods to ensure continuous interest and alertness of participants. Each participant has the opportunity and conditions to think along, express their opinions and analyze their knowledge and experience to achieve learning outcomes.

Content:

- Why do we need to reflect?
- Reflection tools.
- Reflection indoors and outdoors.

Module 4: Start with why



When you think about your ideal life and your desires, do you think about what you want? OR, do you think about what you DON'T want? One of these questions will lead to happiness, and the other down an endless road without fulfillment, success or love.

This module puts the *'why'* of the business and idea into focus and at the forefront of the adventure of becoming an entrepreneur. Why this *'hero's journey'*? Why this call for adventure? How to serve?

Educational elements: *'Why'* - Personal power and the entrepreneurial mindset

Key subject area: Start with *'why'*

Learning outcomes; by the end of the module the learners

- have a clear definition of why they want to become an entrepreneur;
- understand the value of communicating the *'why'* to the world as the purpose, the cause or belief which drives the business;
- understand how to balance the *'Golden circle'*;
- know more clearly how to build self-confidence;
- understand the difference between a visionary and a leader;
- explore their own leadership qualities.

Learning processes:

- Seminar and study-group: a guided interaction among the learners on the theme/book *'Start with why'* by Simon Sinek.
- Interactive learning: dialoguing, pairing and teaming up, group assignments, indoor and outdoor activities.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.

Content:

- Excerpts from *'Start with why'* by Simon Sinek.
- Group work on exploratory questions.
- Why become an entrepreneur: benefits, challenges.
- Exercises.
- Presentations.
- *'Golden circle'* and how to bring balance.
- How to build trust.
- Customer loyalty.
- Knowing why.

Module 5: EDUmining



This module will focus on how to conduct research on a subject of interest. The students will engage in teamwork and compile questions, then contact experts to assist them in finding answers. After reflecting on the information gathered, the students will create presentations and each team will present their results. At the end of each process, the students will engage in a *'post mortem'* analysis to determine and analyse elements of each EDUmining process that were successful and beneficial to them. They will each create a portfolio of useful takeaways.

Educational elements: *'Why'* - Personal power and the entrepreneurial mindset

Key subject area: EDUmining

Learning outcomes, by the end of the module the learners

- lead their own process in learning, selecting subjects of interest and finding information needed;
- develop their self-confidence to be able to contact whoever they want to;
- develop the mechanics of asking valuable questions;
- collaborate to share and delegate;
- communicate their messages clearly and efficiently;
- develop awareness of their most comfortable roles;
- become confident and good at presenting.

Learning processes:

- Interactive learning: dialoguing, brainstorming, pairing and teaming up, group assignments, indoor and outdoor activities, research through technology.
- Experiential learning: posing questions, investigating, experimenting, being curious, taking initiative, making decisions, being creative, assuming responsibility, constructing meaning, being accountable for results and making presentations.
- Action learning: advancing individual skills, building teams and developing leadership skills.
- Reflective learning: becoming aware of their own thinking processes.
- Transformational learning: deep, constructive and meaningful learning.

- Phenomenon-based learning: multidisciplinary inquiry and real-world topics or issues investigated from different perspectives.
- Learning from experts: interviewing experts to gain knowledge.

Content:

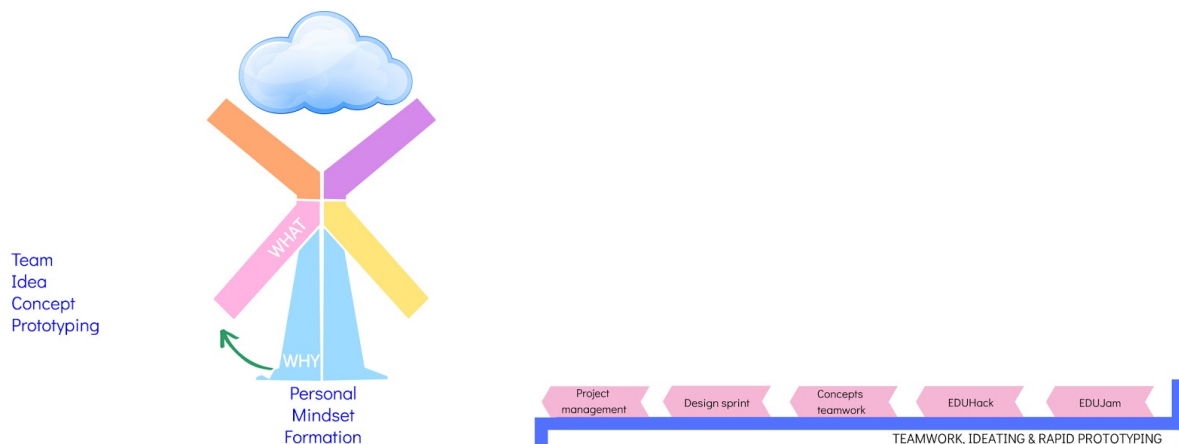
- 18 weeks of diving into a wide variety of subjects guided by the students' interests.
- The subjects will have overall headings such as:
 - Technical skills, Programming and Artificial Intelligence
 - Games, User Experience and Design
 - Environment, Climate and Recycling
 - Theater, Music and Performance
 - Animation, Drawing and Sculpting
 - Networking, Personal Leadership and Social Competencies
 - Nutrition, Health and the Body
 - Science, Welfare Technology and Life Quality
 - Design processes, Critical design and Experience design
 - Creativity, Innovation tools and techniques
 - ... or topics seen as important by the participants.

- Topics subdivided, interest groups, teaming up.
- Finding the '*right*' questions to ask.
- Examine topics on the Internet and seek out professionals.
- Ask experts and learn from the best.
- Query session through business visits or interactive media.
- Delegation and work on presentations.
- Presenting to the other teams.
- Presentation types are optional (PowerPoint, comic-strips, simple animations, storytelling or theatre-play etc.)
- Recordings of presentations for further study.
- Individual documentation of every topic in portfolio or 'look-book'.

- In addition: weekly tool-workshops to learn new skills of using necessary tools, ie. different types of software.

Second semester

'What' - Teamwork, ideating & rapid prototyping



The second semester will be the start of an incubator process. The first modules will contain an 'Edujam' (idea-generating-process) and an 'Eduhack' (prototyping-process). With the help of these processes the students will define what they will work on for the second semester and who they will work with based on their common interests. The concepts teamwork module will support the teaming up process and take the meaning of 'team' to a new level.

Module 6: EDUjam



The EDUjam module is a team building and an innovation process that will ignite new thinking. The learners will be challenged to generate and share new ideas that could solve a real-life problem. The process is team learning combined with design thinking methods and tools. At the end of the EDUjam, each team will present their team's concept, an idea which the team would like to start developing further.

EDUjam can take place in any location, but It is important that participants learn in an environment that supports the process. This may include rearranging furniture, displaying visual motivation and generally creating an inspiring atmosphere that is different from the norm.

Educational elements: 'What' - Teamwork, ideating & rapid prototyping

Key subject area: EDUjam

Learning outcomes, by the end of the module the learners

- form a capable and resilient team to start working with;
- develop the 21st century skills: creativity, critical thinking , communication and collaboration;
- apply divergent and convergent thinking in an explicit way;
- familiarise themselves with the use of design thinking methods and tools;
- develop understanding of team learning process, where dialogue and reflection are the most important tools;
- attain the feeling of challenge, learning, accomplishment and inspiration;
- develop the capabilities to create and present a solution to an identified real-life problem;
- have ignited new thinking around the identified real-life problem.

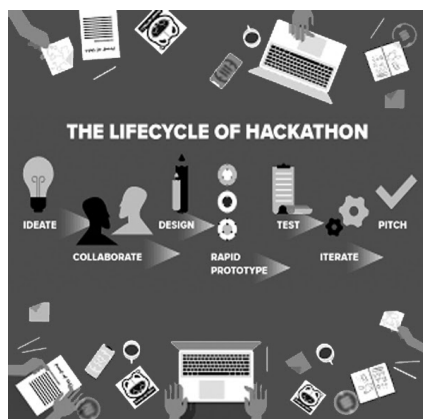
Learning processes:

- Interactive learning: dialoguing, discussions, indoor and outdoor activities.
- Project-based learning (PBL) - (or problem-based/inquiry-based learning): solving tasks, presentations, case studies.
- Experiential learning/active learning: best practices, simulations, investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.
- Design thinking: iterative process to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and test.
- Event learning: EDUjam can be set up as an event inviting people to join from the outside.

Content:

- Check-in - meet everyone and listen to one another.
- Team up - form diverse teams of 4 to 8 people.
- Define problems - clearly articulate problems that need to be solved.
- Investigate ideas - explore a variety of potential solutions.
- Build solutions - focus and develop a solution.
- Share solutions - present solutions and receive feedback.
- Check-out - reflect, close the process and set the tone for future work.

Module 7: EDUhack



EDUhack is an event, designed for people from all over to come together to create together. This is an innovation process with high intensity in a team learning format. Ideas from people of different ages and backgrounds will be utilized to create new solutions for real-life challenges.

EDUhack welcomes learners, teachers, educational leaders and administrators, designers, developers and companies, to engage in innovating.

EDUhack provides a venue, place and state of mind for self-expression and creativity through technology. People come together, form teams around a problem or idea, and collaboratively create a unique solution from scratch in 48 hours. It enables grassroots level ideas to 'level up' and to create a real impact.

Each team will collaboratively create a unique solution using their own ideas. The IEE learners now have the opportunity to take the concept developed in the EDUjam, and in EDUhack create their first prototype.

Educational elements: 'What' - Teamwork, ideating & rapid prototyping

Key subject area: EDUhack

Learning outcomes, by the end of the module the learners

- continue developing individual and team's abilities to encounter and handle uncertainty;
- take ownership and responsibility;
- value and use the different strengths and competencies of each team member;
- develop skills in problem solving and communication;
- build more of the 'we' feeling and understanding of the team;
- experience meeting and working alongside with people outside the IEE program;
- experience using short mentoring and workshop sessions to support individual skill development and reaching the team's goal;
- put into use design thinking methods and tools.

Learning processes:

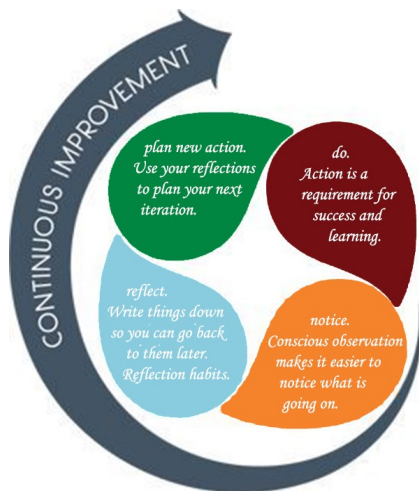
- Interactive learning: dialoguing, discussions, indoor and outdoor activities, research through technology.
- Project-based learning (PBL) - (or problem-based/inquiry-based learning): solving tasks, presentations, case studies.

- Experiential learning/active learning: best practices, simulations, investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.
- Design thinking: iterative process to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and test.
- Event learning: EDUhack must be set up as an event inviting people to join from the outside. Experts and sponsors will be engaged.

Content:

- Inspiring the participants through a designed '*hackerspace*' and kick-off event.
- Present the challenges set by partners and sponsors to hackers.
- A coached teaming-up process where participants form teams of 4–8 hackers (unless they come in as a ready team).
- Hacking process is supported through mentoring and workshops.
- In-between activities and reflection points to balance out the intensive working.
- Teams finalize their own unique solutions and pitch those to judges and other participants.
- Everyone wins through the process of learning, and selected teams receive awards in the form of cash prizes, tickets to events, potential partnerships etc.

Module 8: Concepts teamwork



The focus is on learning how to become a great team member and how to boost the learning process. The learners will receive coaching and get a chance to reflect on their experiences from the EDUjam and EDUhack modules. Each will discover their team roles and competencies and start learning as a team.

Through an iterative process of do - notice - reflect - plan new action, the learners will learn to combine team learning and design thinking.

This becomes the foundation for developing innovative solutions.

Educational elements: '*What*' - Teamwork, ideating & rapid prototyping

Key subject area: Concepts teamwork

Learning outcomes, by the end of the module the learners

- understand the different team strengths, roles and phases;
- internalise the importance of physical and virtual working environment, as well as the resources and tools used by the team;
- get to know some of the key concepts and methods in team learning;
- identify and start the team's shared learning process;
- define and design the team's working environments;
- make the team's work explicit through visual thinking.

Learning processes:

- Interactive learning: dialoguing, discussions, indoor and outdoor activities.
- Project-based learning (PBL) - (or problem-based/inquiry-based learning): solving tasks, presentations, case studies.
- Experiential learning/active learning: best practices, simulations, investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.
- Dialogue and reflection supported by team coaching and visual thinking, which could include graphic recording, data & information visualization, diagrams, sketchnotes, mind maps, infographics, concept maps, process & flowcharts, information/presentation design or such.

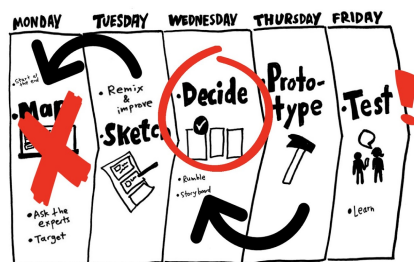
Content:

- Learning contract.
- Belbin's team roles.
- Dialogue.
- Reading lists.
- The concept of '*4 wheel drive of learning*'.
- Ways to map the team's status, resources and performance, including the tools for these.

Business Incubator

From here onwards, the IEE program serves as a business incubator, designed to accelerate the growth and success of the entrepreneurial endeavours by the teams through an array of business support resources and services that include physical space, capital search, coaching, common services, and networking connections. In the IEE this process is structured as a 20-week process, taking all the teams through common steps, in order to introduce knowledge and tools for the teams to experiment with in each area.

Module 9: Design sprint



Design thinking includes processes such as context analysis, problem finding and framing, understanding the customer, ideation and solution generating, creative thinking, sketching and drawing, modelling and prototyping, testing and evaluating.

The students will define and refine the chosen 'product' for the project.

Educational elements: 'What' - Teamwork, ideating & rapid prototyping

Key subject area: Design sprint

Learning outcomes, by the end of the module the learners

- know how to define what design thinking is and know its phases;
- learn the model of a design sprint;
- run a design sprint and create and/or refine a prototype.

Learning processes:

- Seminar and study-group: a guided interaction among the learners on the theme/book '*Sprint*' by Jake Knapp.
- Interactive learning: dialoguing, pairing and teaming up, group assignments, indoor and outdoor activities, research through technology.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.
- Design thinking: iterative process to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and test.
- Fieldwork and engaging experts.

Content:

- Design sprint books and websites.
- '*Sprint - How to Solve Big Problems and Test New Ideas in Just Five Days*' by Jake Knapp, John Zeratsky & Braden Kowitz.
- '*This is Service Design Doing - Applying Service Design Thinking in the Real World*' by Jakob Schneider, Markus Edgar Hormess, Adam Lawrence, Marc Stinkdorn.
- '*The Design Thinking Playbook: Mindful Digital Transformation of Teams, Products, Services, Businesses and Ecosystems,*' by Michael Lewrick, Patrick Link and Larry Leifer.

- Understand. Map out the problem and pick an important area to focus.
- Ideate. Sketch out competing solutions on paper.
- Decide. Make decisions and turn ideas into a testable hypothesis.
- Prototype. Hack together a realistic prototype.
- Test. Get feedback from real live users.

Module 10: Project management



Project Management – learning the skill and practice of initiating, planning, executing, controlling, and closing the work of their team to achieve specific goals and meet specific success criteria at the specified time. The primary challenge of managing the incubator project will be to set and achieve all of the project goals within the given constraints.

Educational elements: 'What' - Teamwork, ideating & rapid prototyping

Key subject area: Project management

Learning outcomes, by the end of the module the learners

- understand the cycles and features of project management;
- understand the most important principles on how to manage projects;
- know the basics of project management and are able to apply them in real life;
- know about different tools to support project management;
- are able to analyze project stages and anticipate possible risks;
- are ready to implement the project.

Learning processes:

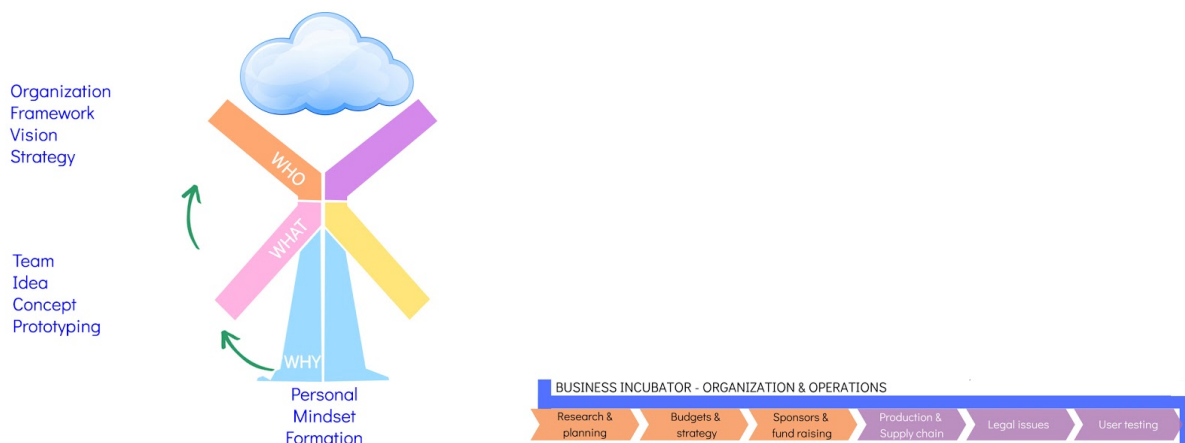
- Interactive learning: dialoguing, discussions, pair and group work, research through technology.
- Fieldwork and engaging experts.
- Project-based learning (PBL) - (or problem-based/inquiry-based learning): solving tasks, presentations, case studies.
- Experiential learning/active learning: best practices, simulations, investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.

Content:

- Key concepts: project, project management.

- Experiential learning in project management.
- The project team: team building, roles, group dynamics, teamwork principles.
- Management and the ideal project manager and his roles.
- Development of a project idea: Stages and project life cycle, ideation, methods of ideation, funding opportunities.
- Necessity of the project: need for the project - the relevance of the project, sources of information and search for information on the topic.
- Project aim and participants: statement and statement of purpose, vision, goal, objectives and results of the project, direct and indirect target groups of the project, market research in the target group, active participation and involvement.
- Program of project activities: project schedule and activities, project preparation, implementation, assessment and follow-up, planning a core business, testing, implementation and evaluation.
- Project management tools.

'Who' - Organization, framework, vision and strategy



Module 11: Market research & business planning



The aim of this module is to understand the reasons customers will buy the product. Studying customer behaviour, including how cultural, societal and personal factors influence that behaviour.

Adapt the marketing strategy to complement the way the potential customers research, shop, and buy! Have a deep understanding of who the buyers are, the specific market, and what influences the purchase decisions and behavior of the target customer.

Each team will write a business plan which describes the nature of their business and its elements.

Educational elements: 'Who' - Business incubator, organization & operations

Key subject area: Market research & business planning

Learning outcomes, by the end of the module the learners

- understand the purpose and structure of a business plan;
- experience and understand the value of an iterative process of learning and confirming, moving from assumptions to researched data;
- understand the basic assumptions to make about the market and customer needs to ascertain the viability of the product or service;
- understand what customer research is and how it is carried out;
- understand research data collection, verification and presentation;
- identify the value of the product or service to the customers;
- get an overview of which the key partners could or should be;
- get a clear idea of the resources needed to execute the project;
- know which activities to undertake in order to move forward;
- select preferred channels for visibility;
- create the first business model and start the first business plan.

Learning processes:

- Interactive learning: dialoguing, group assignments, research through technology.
- Fieldwork and engaging experts
- Project-based learning (PBL) - (or problem-based/inquiry-based learning): solving tasks, presentations, case studies.
- Experiential learning/active learning: best practices, simulations, investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.
- Design thinking: iterative process to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and test.

Content:

- Creating the team's first assumptions, going out and testing those, learning and confirming, then coming back to the assumptions, and starting again.
- Tools that can be introduced, to be used in this module as well as later:
 - Business model canvas
 - Value proposition canvas
 - Persona canvas
 - Customer empathy map
 - Customer journey
- Some of the tools will also be used in module 9 about design thinking.
- Researching the structure of a business plan and starting to write the team's own.

Module 12: The business plan - budgets & strategy



The business plan will be a written document describing the nature of the business; the business idea, the sales and marketing strategy, the financial background and a budget in the form of a projected profit and loss statement.

The strategic plan lays out the direction and goals of the business and guidelines for actions to achieve those goals, while the budget looks at the money needed to support achieving those goals.

Educational elements: 'Who' - Business incubator, organization & operations
Key subject area: The business plan - budgets & strategy
<p><i>Learning outcomes, by the end of the module the learners</i></p> <ul style="list-style-type: none"> - lay out the direction, KPI's and the goals for the business; - set up guidelines for actions and milestones to achieve those goals; - make a zero-sum (breakeven) budget for their business; - know how to monitor their budgets to break even; - understand how to lead via numbers; - understand what timelines to take into account in budgeting; - monitor and manage cash flow taxes and runway.
<p><i>Learning processes:</i></p> <ul style="list-style-type: none"> - Seminar and study-group: a guided interaction among the learners on the theme. Focused individual work and individual reflection. - Interactive learning: dialoguing, group assignments, research through technology. Engaging experts. - Experiential learning: investigating, being creative, constructing meaning and making presentations. - Reflective learning: becoming aware of their own thinking processes. - Facilitated learning: researching knowledge, setting objectives, assessment. - Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.
<p><i>Content:</i></p> <ul style="list-style-type: none"> - Research strategic planning tools for KPI's - Features of a zero-based budget and how to create a cash-flow budget - Creating the first budgets based on templates - The 4 main elements of a profit and loss statement - Accounting

Module 13: Sponsors & Fundraising



Become familiar with engaging individuals, businesses, charitable foundations, or governmental agencies in order to seek sponsors or existing companies who may benefit from the business idea.

The process of defining the needs of the project both financially and in kind is the process of seeking and gathering voluntary financial contributions by engaging individuals, businesses, charitable foundations, or governmental agencies. It may also be seeking sponsors

or existing companies who might benefit from the ideas generated and who might be interested in buying the idea.

Educational elements: 'Who' - Business incubator, organization & operations

Key subject area: Sponsors & fundraising

Learning outcomes, by the end of the module the learners

- put together a focused pitch deck;
- map suitable stakeholders:
 - investments, sponsors, grants and other funding
 - suppliers, banks and possible partners;
- understand the share and equity in relation to investment;
- know how to negotiate terms;
- report on use of money and delivery of project.

Learning processes:

- Interactive learning: dialoguing, group assignments, research through technology. Fieldwork and research. Engaging experts.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.

Content:

- Different kinds of pitch decks and their purposes.
- The types of funding available.
- Report templates.

Module 14: Project writing



Structure the idea into a business proposition and bring it closer to implementation. Gain knowledge about the project cycle as well as critical principles on project writing. Learn about different funding programs and application options and finetune your writing skills.

This module will look at the idea from an international perspective to explore funding options through the large international channels (Erasmus, Nordplus etc.)

Educational elements: 'Who' - Business incubator, organization & operations

Key subject area: Project writing - international project management

Learning outcomes, by the end of the module the learners

- understand the cycles and features of international projects;
- understand the most important principles on how to write projects;
- are familiar with application opportunities and application forms;
- know the basics of project management and are able to apply them in real life;
- know the forms and possibilities of financing, know how to use these opportunities for project implementation;
- are able to analyze project stages and anticipate possible risks;
- are ready to implement the project locally and internationally.

Learning processes:

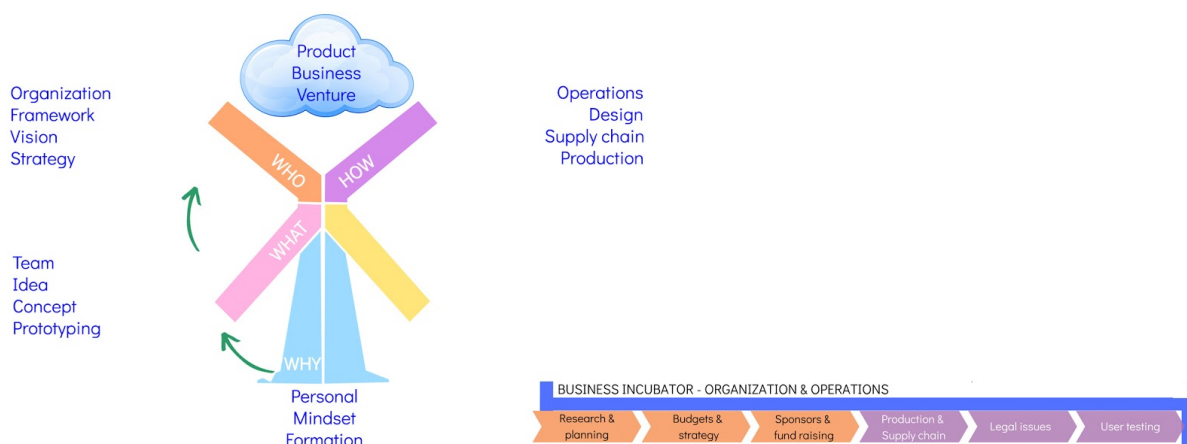
- Interactive learning: dialoguing, discussions, pair and group work, research through technology.
- Project-based learning (PBL) - (or problem-based/inquiry-based learning): solving tasks, presentations, case studies.
- Experiential learning/active learning: best practices, simulations, investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.

Content:

- Key concepts: project, project management,
- The project team: roles in project writing team, group dynamics, teamwork principles, management, the ideal project manager and his roles.

- Development of the project idea: stages and project life cycle, ideation, methods of ideation, funding opportunities.
- Necessity of the project: what are the needs for or relevance of the project? Sources of information and search for information on a topic, application form for participation in the Erasmus+ programme (or equivalent), filling out an application.
- Project aim and participants, statement and statement of purpose, vision, goal, objectives and results of the project, direct and indirect target groups of the project, market research in the target group, active participation of the youth, involvement.
- Partnership: partnership and networking, responsibilities of partners, search and selection of partners, mutual communication of partners, first contact with a partner, partnership agreement.
- Program of project activities: project schedule and activities, project preparation, implementation, assessment and follow-up, project fair, business planning, testing non-formal learning methods (planning, implementation and evaluation).
- Learning in the project: learning and support of the learning, intercultural learning, creating a learning environment, key competencies and learning outcomes, recognition, as well of study and achievement, youth passport, methods of reflection.
- Intercultural learning: features of the international project, culture and intercultural differences, intercultural learning and dialogue, simulation.
- Practical arrangements and the budget: practical organisation of the project, cost planning and budgeting, requests, terms of self-financing and fundraising, sponsorship opportunities, analysis of possible sponsors, risk analysis and safety.
- Impact and visibility: the impact of the project and its evaluation, assessment criteria and indicators, project marketing, i.e. its visibility, preparation of a marketing plan, dissemination and application of results, the sequence of activities planned after project completion.
- Evaluation of the project and summing up: evaluation of application and evaluation criteria, project reporting, submission of the project.

'How' - Operations, design, supply chain and production



Module 15: Production & Supply chain



Production planning is the planning of the production and manufacturing of the product parts in a company or industry. It utilizes the resource allocation of activities of employees, materials and production capacity, in order to serve different customers.

In this module the teams will create a wireframe and either simulate or produce a physical prototype to work with and have it user tested.

Educational elements: 'How' - Business incubator, organization & operations

Key subject area: Production & supply chain

Learning outcomes, by the end of the module the learners

- are familiar with mass-customisation;
- are familiar with wireframing;
- have knowledge of possibilities of local production;
- can model mini factories;
- know dropshipping & al;
- understand supply chain management.

Learning processes:

- Seminar and study-group: a guided interaction among the learners on the theme. Focused individual work and individual reflection.
- Fieldwork and engaging experts.
- Interactive learning: dialoguing, group assignments, research through technology, analysis.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.

Content:

- Principles of mass customisation.
- Wireframing as a way to design the product or service at the structural level.
- Content and functionality of user needs and user journeys.
- Supply chain management.

Module 16: Legal issues



It is important to consider legal issues to ensure that the worst-case scenarios are taken into account, purely legally and financially. It can be a considerable expense for an early-stage startup, but the risk and expense of not doing so can be disastrous.

This module discusses a variety of possible legal issues to take into account when starting a business - starting with up-front partner agreements.

Educational elements: 'How' - Business incubator, organization & operations

Key subject area: Legal issues

Learning outcomes, by the end of the module the learners

- have familiarized themselves with the basic legislative areas;
 - company law, IP law, tax law;
- know about trademark, patenting and copyright;
- have drawn up partner agreements for the team collaboration.

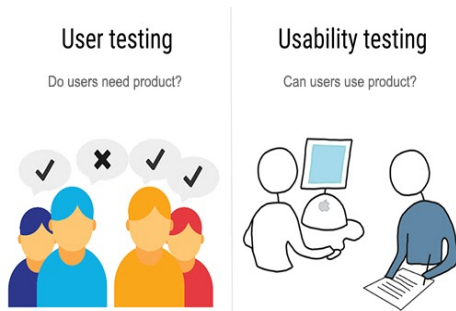
Learning processes:

- Seminar and study-group: a guided interaction among the learners on the theme. Focused individual work and individual reflection.
- Fieldwork and engaging experts.
- Interactive learning: dialoguing, group assignments, research through technology.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.

Content:

- Relevant acts and statutes for entrepreneurs.
- Different company forms and contents, standardized agreements.
- Partnership agreements.
- Shareholder agreement, also possible agreements with investors, suppliers, employees etc.

Module 17: User testing



A great customer experience begins with human insight. See, hear, and talk with the customers as they engage with the products. User testing could mean the difference between success and failure.

This module will either work with a simulated test product or test the actual prototype of the team products.

Educational elements: 'How' - Business incubator, organization & operations

Key subject area: User testing

Learning outcomes, by the end of the module the learners

- understand what is A-B testing;
- understand UX, LX, CX;
- understand the influence of neuroscience in the user experience process.

Learning processes:

- Seminar and study-group: a guided interaction among the learners on the theme. Focused individual work and individual reflection.
- Fieldwork and engaging experts.
- Interactive learning: dialoguing, group assignments, research through technology.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.

Content:

- Product interfaces for testing.
- Examples of current knowledge on UX and neuroscience (i.e. pt. 'The Gamer's Brain: How Neuroscience and UX Can Impact Video Game Design' by Célia Hodent).
- User test cycles.

Learning processes:

- Seminar and study-group: a guided interaction among the learners on the theme. Focused individual work and individual reflection.
- Fieldwork and engaging experts.
- Interactive learning: dialoguing, group assignments, research through technology.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.

Content:

- Benchmarking existing companies.
- Strategy formats.
- Advertising and different platforms + chatbots.
- Clear content strategy across channels.
- Focus on content that grows the business - content toolbox.
- Build & tweak & build & tweak.
- Growth hacking canvas - to get structure.
- Test Q's with entrepreneurs.
- UVP - Unique Value Proposition.
- Find out if users are actually using the product!
- Growth hacking starts when you reach product-market fit!
- Neuromarketing & digital psychology.

Module 19: *'Knock your socks off* customer service & networking



Why customer service is important and how to go about it. As far as customers are concerned *'you'* are the company, this is the core of your job. You hold in your hands the power to keep customers coming back - perhaps even to make or break the company.

Building a strong network is not only really important for creating a customer base, it is also important for sharing information and learning.

Educational elements: *'Where'* - Business incubator - customer value & management

Key subject area: *'Knock your socks off* customer service & networking

Learning outcomes, by the end of the module the learners

- Can define the actions that constitute high quality customer service;
- Know the most important customer service skills;
- Know the 'deadly sins' in customer service;
- Have defined a clear strategy for their customer service;
- Know how to maintain professional or social contacts;
- Know how to create new contacts and promote something of value.

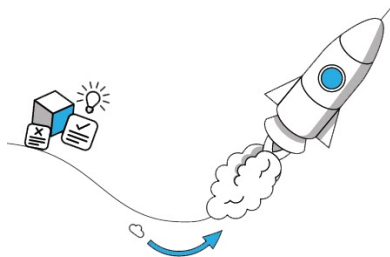
Learning processes:

- Seminar and study-group: a guided interaction among the learners on the theme/book '*Delivering Knock Your Socks Off Service*,' by Kristin Anderson and Ron Zemke.
- Interactive learning: dialoguing, group assignments, research through technology.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Fieldwork and engaging experts.

Content:

- Excerpts from '*Delivering Knock Your Socks Off Service*,' by Kristin Anderson and Ron Zemke.
- Features of high quality customer service.
- Pitfalls in customer service.
- Group work on exploratory questions.
- Exercises & presentations.
- Golden rules of customer service.
- How to build trust & customer loyalty.

Module 20: Product launch & sales



Launching a new product into the market is a key moment that needs all the care and attention it can get. For a product to take off quickly, you need to create a feeling of expectation and excitement for its release. We look into the most popular techniques to accomplish this.

Know if the sales and marketing solution is right for taking the new product to market by establishing the right internal feedback loops to improve the product and align sales and marketing for shared success.

Educational elements: 'Where' - Business incubator - customer value & management

Key subject area: Product launch & sales

Learning outcomes, by the end of the module the learners

- understand their buyers and their expectations;
- know how to pitch the product or service;
- are familiar with the process of a product launch;
- know what to take into account and know how to find and use a suitable product launch formula/list;
- are familiar with the online platforms to launch;
- understand what is involved in sales;
- understand the importance of rapid communication and direct feedback loops;
- comprehend what a sales pipeline is and how to use one;
- know how to measure the 'right' success metrics.

Learning processes:

- Seminar and study-group: a guided interaction among the learners on the theme. Focused individual work and individual reflection.
- Fieldwork and engaging experts.
- Interactive learning: dialoguing, group assignments, research through technology.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.

Content:

- Pitching workshop.
- Seminar on sales strategies for new products launch.
- Elements of a product launch and tools.
- List of online platforms for product launch and their uses and benefits.
- Books on sales (e.g. 'Measure what matters' by John Durr).
- Differences between B2C, B2B, C2C and C2B business models.
- Sales enablement.
- Selling benefits, not features - the story.

Module 21: Product maintenance



It is not enough to launch a product, a plan for the future of the product, process or service is necessary. How will the product be maintained and developed further? There are questions to already consider the answers to even before the launch of the product.

Iterate, feedback, edit and adjust... do over and expand... How to bring the idea further? Where should it go from here? Is the idea *'taking off'*? Are you excited and eager to expand? What else will you need to learn? New ideas and possible avenues?

Educational elements: *'Where'* - Business incubator - customer value & management

Key subject area: Product maintenance, planning the future & re-iterate

Learning outcomes, by the end of the module the learners

- plan the future development and maintenance of the product;
- familiarise themselves with customer support and bug tracking;
- carry out foresight work;
- deliver a company strategy (active strategy);
- articulate a vision and mission;
- have created a draft budget and pitch-deck;
- make decisions about the future.

Learning processes:

- Seminar and study-group: a guided interaction among the learners on the theme. Focused individual work and individual reflection.
- Fieldwork and engaging experts.
- Interactive learning: dialoguing, group assignments, research through technology.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.

Content:

- What's the service and maintenance process and promise?
- Benchmarking existing companies.
- Strategy formats and product lifecycle management.

Module 22: Financial & IT management



This module will focus on practical things to know and choices to make from a financial and IT standpoint.

The main goal of financial- and IT management is to provide the business with an accurate and complete view of profitability, expenses, cash and credit, so that the organization can have the means to carry out its goals as satisfactorily as possible.

Educational elements: 'Where' - Business incubator - customer value & management

Key subject area: Financial & IT management

Learning outcomes, by the end of the module the learners

- have a system for archiving documentation;
- know how to optimize the cost of IT Services while taking into account quality and risk factors;
- know how to analyze and balance costs against quality and risk to create intelligent, metric-based cost optimization strategies;
- create the best strategy to deliver optimum consumer outputs;
- know the standard financial and accounting principles and have a system for accounting and enterprise resource planning (ERP) in place including fixed asset management and capital management.

Learning processes:

- Seminar and study-group: a guided interaction among the learners on the theme. Focused individual work and individual reflection.
- Fieldwork, benchmarking and engaging experts.
- Interactive learning: dialoguing, group assignments, research through technology.
- Experiential learning: investigating, being creative, constructing meaning and making presentations.
- Reflective learning: becoming aware of their own thinking processes.
- Facilitated learning: researching knowledge, setting objectives, assessment.
- Team learning: tracking the experiential learning cycle, building a shared purpose, reflective integration, critical conversations, and taking action.

Content:

- How to keep all important documents and information shared within the team and have it safe from outsiders. Structure of documentation.
- How to organise bookkeeping, financial operations and reporting.

Next steps

Module 23: Show & Tell



How far did you take the idea? Still excited? What were the thoughts and processes along the way? How was each step of the way for each of you and for the team? Prepare to share the experiences in a 'Show and Tell' presentation.

We wrap up the second semester with a 'Show and Tell' event, a presentation of the products and processes. What did you learn, what can you take with you, and what are your ideas for the future?

Educational elements: Business incubator outcome

Key subject area: Show & tell - presentation and pitch

Learning outcomes, by the end of the module the learners

- practice and adapt their presentation using feedback;
- perform in front of a crowd;
- make sure the MVP (minimum viable product) works!

Learning processes:

- 100% independent TEAMWORK IN THE FIELD!
- The learning community decides what kind of show and tell they will be having.
- Event learning: presenting this must be set up as an event inviting people to join from the outside. Experts and sponsors will be engaged.

Content:

- Team defined content (see learning process).
- Everything that is needed to GSD (get stuff done). MAKE A LIST!
- Pitch templates.
- Best practices for presentations.
- Everyone wins!

Assessment

Any development of entrepreneurship skills through education should seek to prepare learners to be responsible, enterprising individuals who have the skills, knowledge and attitudes necessary to achieve the goals they set for themselves. In addition to equipping learners with the skills to start a business, entrepreneurship education is also about encouraging creative thinking and promoting a strong sense of self-worth, initiative and a tolerance of failure.

The assessment of the success of the learner to become an entrepreneur through the IEE will then either be self-evident or not necessarily show itself for some time. Life will tell. Self-evident - because the learners will have created a business or a ready-to-go business plan at the end of the program, or not necessarily - because the efficiency of the learned entrepreneurship skills will show themselves only when put in a live situation.

Objectives of assessment

Throughout the IEE the intention is to use parts of the entrecomp framework as a guideline for self-assessment and peer-assessment. The most important '*skill*' the learners can acquire to become a successful entrepreneur is self-awareness. Self-assessment with peer- and mentor feedback will be most helpful in this process, and there will be ample opportunity to receive feedback from facilitators and mentors throughout the program.

The criteria for IEE could be based upon the entrecomp framework pages 23-35
<https://publications.jrc.ec.europa.eu/repository/bitstream/JRC101581/lfn27939enn.pdf>

The assessment would take place at 4 points along the 22 modules.

The certification would be in the form of ratings along the entrecomp framework rubric.

Assessment of subjects/subject groups

The entrecomp competency recognition model can be relevant for self-assessment and peer assessment purposes.

There is the scale of 1-8 and 15 different competencies in 3 key areas. This could be done 4 times per year, after 90 days / after each quarter (like in businesses the quarters are the check-out points).

The 3 areas and 15 competencies are:

1. Ideas and opportunities

1.1. spotting opportunities

- 1.2. creativity
- 1.3. vision
- 1.4. valuing ideas
- 1.5. ethical and sustainable thinking

2. Resources

- 2.1. self-awareness and self-efficacy
- 2.2. motivation and perseverance
- 2.3. mobilising resources
- 2.4. financial and economic literacy
- 2.5. mobilising others

3. Into action

- 3.1. taking the initiative
- 3.2. planning and management
- 3.3. coping with uncertainty, ambiguity and risk
- 3.4. working with others
- 3.5. learning through experience

Table 2: EntreComp Progression model

Foundation		Intermediate		Advanced		Expert	
Relying on support ⁶ from others		Building independence		Taking responsibility		Driving transformation, innovation and growth	
Under direct supervision.	With reduced support from others, some autonomy and together with my peers.	On my own and together with my peers.	Taking and sharing some responsibilities.	With some guidance and together with others.	Taking responsibility for making decisions and working with others.	Taking responsibility for contributing to complex developments in a specific field.	Contributing substantially to the development of a specific field.
Discover	Explore	Experiment	Dare	Improve	Reinforce	Expand	Transform
Level 1 focuses mainly on discovering your qualities, potential, interests and wishes. It also focuses on recognising different types of problems and needs that can be solved creatively, and on developing individual skills and attitudes.	Level 2 focuses on exploring different approaches to problems, concentrating on diversity and developing social skills and attitudes.	Level 3 focuses on critical thinking and on experimenting with creating value, for instance through practical entrepreneurial experiences.	Level 4 focuses on turning ideas into action in 'real life' and on taking responsibility for this.	Level 5 focuses on improving your skills for turning ideas into action, taking increasing responsibility for creating value, and developing knowledge about entrepreneurship.	Level 6 focuses on working with others, using the knowledge you have to generate value, dealing with increasingly complex challenges.	Level 7 focuses on the competences needed to deal with complex challenges, handling a constantly changing environment where the degree of uncertainty is high.	Level 8 focuses on emerging challenges by developing new knowledge, through research and development and innovation capabilities to achieve excellence and transform the ways things are done.

⁶ Support from others includes for example support by teachers, mentors, peers, advisors, or consultancy services.

General objectives of the IEE

With the IEE in the boarding school setting the learners will be given opportunities:

1. To experience work and leisure as a whole and coherent existence, for example a school day with sliding transitions where the subject areas outside the school involve, for instance, visits and contact with the surrounding community. A good leisure life contributes to a good school life.
2. To participate openly and actively in a living community where freedom and responsibility are the order of the day, and to practice choice and draw the consequences of these, for example by involving learners in daily obligations.
3. To meet the different cultures of the participants, both through narratives/stories, songs and general research.
4. To empower and develop the abilities and facilities that each individual is gifted with, for example by establishing professional connections that will allow learners to choose suitable career paths after the education.
5. To meet people, life, the whole human being and the world around us from different perspectives through working with topics that promote understanding and respect for others.
6. To strengthen self-esteem and courage, by working with varied forms of production such as lectures, presentations, projects, self-chosen assignments, design, music, drama and theater.
7. To learn about the right to diversity, human rights, freedom of speech, democracy etc. for instance by working deliberately with social norms.
8. To experience the interrelationship between learning and social interaction by emphasizing the understanding that learning is a life-long, full-time activity with different weightings throughout the course of a day.
9. To discover the importance of interpersonal understanding for instance by involving international relationships inside and outside of school life through specific relationships in a global world.
10. To nurture the use of imagination and the ability to become amazed both in a daily setting and in creative projects.
11. To dare to stand up and stand out, both within the smaller team as well as in various forms of performances.
12. To be aware of the 3 essential elements of the conversation: speech - listen - answer. First of all, to be taken seriously and listened to. (Active listening)...
13. To understand that formation is about ethics, aesthetics and morals - through a clear experience and understanding that we are each other's role models.
14. To find that through all of our lives we need each other, we need to be something to and for each other, through experiences in everyday life, where there is a need for each individual and his/her contributions.

Implementation of IEE

The intention of the IEE as a full one-year program was developed on the basis of the successful *'afterschool'* concept in Denmark, where a boarding school stay is designed for 1 year of study. The kind of boarding school the Danish *'afterschool'* has become is quite different to the more widely known idea of what a boarding school is. The perceived success of a year's stay at almost any *'afterschool'* in Denmark is high if the participating students are asked. They come away with a tremendous amount of confidence and knowing in many areas of personal, relational and life-skills. They have become *'wiser'* - often the first year away from their parents, the young people get to test themselves in new environments and with new groups of peers. The *'afterschools'* are for young adolescents, usually 9th or 10th graders, occasionally 8th graders are accepted and as the 11th grade is also a possibility in places.

It has become popular to take a *'gap year'*, and as such the IEE in the boarding school setting can serve many purposes. There will be lots of fieldwork and occasional travel, but instead of travelling to see and meet people from other cultures, young people from all over the world will be invited to come to study entrepreneurship here. It will be an opportunity to live away from home - maybe for the first time - to learn life-skills and nurture relationships in a community setting, to get to know yourself.

Shorter versions of the IEE are a possibility. The possibility of introducing a 3 or a 5 month version at the Danish *'folk highschools'* could be an option. This would then be for a more mature audience, since the *'folk highschools'* only accept students above the age of 18 years old.

Naturally it follows that the IEE in a 5 month version would have most of the modules shortened. There will be a higher pace and it will be a more intensive experience. The *'personal power and entrepreneurial mindset'* part of the program could then be shortened to 7 weeks and the *'incubator'* part of the program could be shortened to 15 weeks.

The most important features of these versions of the IEE are community and immersion.

Other adaptive versions of the IEE, where some modules are taken out and used as separate fragments are also possible as each educational module is designed as independent entities that have internal logic, structure and tasks. This is not, however, the IEE as such - it is a module from the IEE.

Adaptive or express versions of the IEE could be used during youth camps or as an addition to any other entrepreneurship education to complement or supplement what is already in place.

The adaptive use of IEE modules provides the possibility of its flexible implementation to work in conditions different from the boarding school setting. An adaptive version can be used for additional education of youth at NGO's, centers of education and

development, and specialized educational institutions perhaps with the concept of lifelong learning.

The adaptive option is important for the spread of the IEE in the project partner countries of Estonia and Finland, or any country that does not have a tradition with boarding schools as part of their educational culture.

Future of IEE

The project partners behind the IEE are looking into the possibility of creating an online version of the IEE, or rather it would be a hybrid, since the *'in person'* teaming up and creating the learner partnerships are seen to be a very important part of securing the success of the program outcome for each participant.

The project partners will continue to develop the IEE further and seek to secure certification of academic quality for the international entrepreneurship education (IEE) and ECTS accreditation.

The IEE sets different requirements to faculty staff to be able to facilitate the flow of the changing learner needs. Trusting the program, the processes and own abilities become crucial. The project partners are looking into possibilities of creating a *'teach the teachers'* program to support those who accept the challenge of changing the way we think about the teacher's role and teaching in general to that of facilitating and mentoring a learning process. Certainly with the subject of entrepreneurship this is a requirement.

In the meantime, if you as a school leader or teacher are willing to experiment with the content of this education, and if you wish to have the input of the project partners, you can find more information on the website: craftorship.com or you can reach out to any of these program developers:

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