



Digital Destiny

PEDAGOGICAL FRAMEWORK

Supporting teachers in integrating societal issues into their
classrooms with the use of blended learning



The Digital Destiny Pedagogical Framework provides a structure by which teachers can integrate societal issues (sustainable development goals) into their existing curriculum, employing highly engaging pedagogical methods and blended learning as appropriate.

This framework offers a set of principles which will support teachers in thinking about, developing and creating thoughtful and carefully designed learning experiences for their students in open and safe classroom environments where all voices are heard.

Digital Destiny introduces a set of learning tools and methods to use with students in a blended learning environment offering a seamless connection between school and home.

Finally, Digital Destiny created a digital learning platform that both supplements and extends on this framework by bridging theory and practice through professional development training materials and educational tools to be used for children 6-10 years old, with special attention to the opportunities of blended learning.

Digital Destiny is the product of an Erasmus + consortium composed by:

NORTH Consulting	Iceland
Djapo vzw	Belgium
Mediawijs vzw	Belgium
Panespistimio Dystikis Makedonias	Greece
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Education for Sustainable Development

Education for Sustainable Development (ESD) is commonly understood as education that encourages the development of the competence to act as resilient and conscious citizens. This is done by offering learners opportunities to practice with societal issues. In ESD, societal issues are seen as interesting drivers for creative and critical inquiry, for finding new ways to inhabit the world and thus for learning.

In other words, educators will sometimes organize concrete actions for the benefit of society but will mainly use societal issues as a relevant learning context, where learners can experience that they themselves can think about societal issues and make their own choices accordingly.

Sustainable Development

The term “sustainable development” (SD) designates a vision on how all human activities should be organized, structured, developed. The United Nations defines SD as follows:

“Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

To be of practical use, this vision on sustainability has been translated into a tool called ‘The Doughnut’. The doughnut can be seen as a compass for human activity. This compass describes two important boundaries to all human activities:

- **a social foundation**, that is to guarantee the right of all humans to have access to life’s essentials
- **an ecological ceiling**, to ensure that we do not overshoot the planetary boundaries of our ecological systems. Between those two boundaries lies a space where it is ecologically safe and socially just to develop human activities (<https://doughnuteconomics.org/about-doughnut-economics>).

Which direction to go with sustainable development?

- Figure 2 reveals the current state of humanity and our planetary home. You can think of it as humanity’s ‘selfie’ in the early days of the 21st century. Each dimension is measured, where possible, with 1 or 2 indicators, and the red wedges show the extent of shortfall and overshoot of the Doughnut’s social and planetary boundaries.
- It shows us that millions of people still fall short on all 12 of the social dimensions, and that humanity has already overshoot at least four planetary boundaries (air pollution and chemical pollution are currently unquantified).
- To achieve the 21st century goal of meeting the needs of all within the means of the living planet means eliminating all the red from the Doughnut diagram, and this must be done from both sides at the same time.

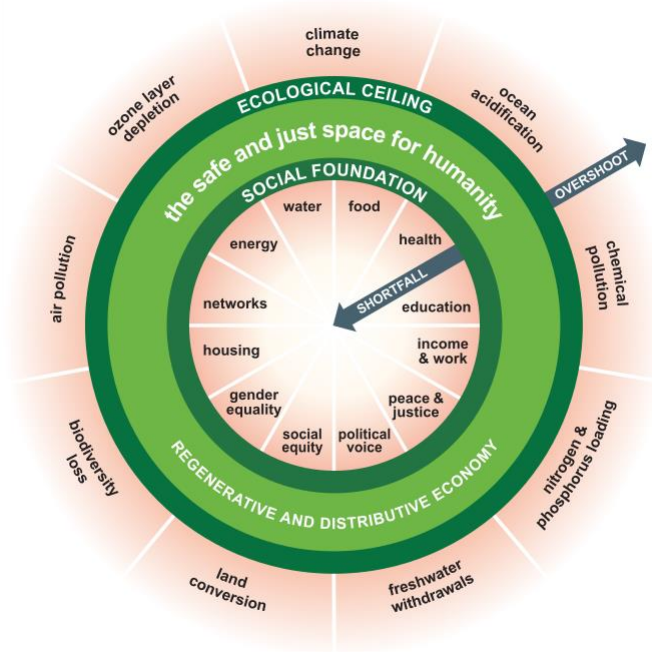


FIGURE 1: THE DOUGHNUT. SOURCE IMAGE: [HTTPS://DOUGHNUTECONOMICS.ORG/TOOLS/11](https://DOUGHNUTECONOMICS.ORG/TOOLS/11)

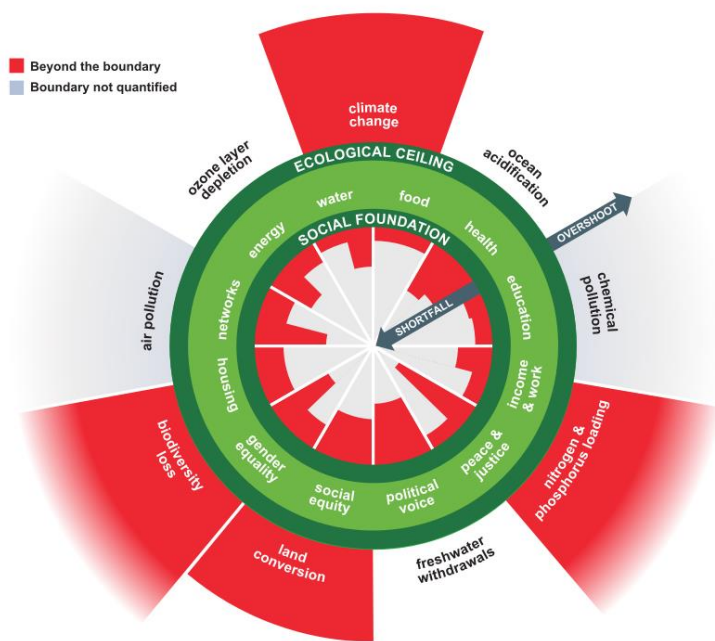


FIGURE 2



A Pedagogical Framework for Education for Sustainable Development: Digital Destiny

The Digital Destiny Pedagogical Framework aims to support educators in Education for Sustainable Development, with special attention to the possibilities and added benefits of blended learning. It offers a basis for educators to draw forth their sustainability teaching practices. It is meant as a compass for educators in designing and facilitating learning experiences from societal issues.

This pedagogical framework rests on the following beliefs about education and learning:

- ✓ education is a transformational process, both for the teacher and for the learners
- ✓ the teacher is a designer, researcher, and learner
- ✓ adding digital teaching methodologies can offer benefits for the learners' learning
- ✓ parents provide integral support for learners' learning at home

The framework explains...

- ✓ how Digital Destiny will stimulate and support teachers in the creation of a powerful ESD-learning environment, in a blended learning context where applicable or desirable.
- ✓ how effective communication with parents supports their children's learning in ESD in a blended learning context

This is done on a conceptual level, so that didactical and more practical work can be done by the educator, within the guidelines of framework.

Zooming into the Digital Destiny Pedagogical Framework: 5 pedagogical principles

An educator can create developmental opportunities for learners by designing learning activities according to the following five principles of the Digital Destiny Pedagogical Framework. The principles are conceived as a compass for educators, so that they can use them in their lesson design.

By no means are they designed as conditions for development, nor are they intended as learning goals in themselves: they are intentionally designed to create opportunities for the learners to engage in societal issues and by doing so, develop the competence to act as resilient and conscious citizens.

1. **Stimulating learning through societal issues** by helping learners connect to relevant issues in their close environment, community, country or globally.
2. **Stimulating learning through interaction** by encouraging student to engage in interactions and experience the richness of diversity.
3. **Stimulating learning through thinking** by offering learners experiences with the design of effective thinking strategies.



4. **Stimulating learning through reflection and evaluation** by developing a thoughtful process of reflection on both process and outcomes.
5. **Stimulating learning through** structured processes by engaging learners in meaning-making

The Creation of a Powerful ESD-Experimental Environment

Digital Destiny supports educators in creating a powerful ESD-learning environment where they offer learners opportunities to develop the competence to act as resilient and conscious citizens. This learning environment is called an 'ESD-experimental environment'.

The concept 'experimental' refers to the school as a place where:

- learners learn from experiences with societal issues;
- mistakes are understood as opportunities from which to learn;
- the development of learners (learning) happens through their engagement and experiments with societal issues.

In an ESD learning environment, attention is paid to these principles with the aim of creating a safe and high-quality learning environment for the development of ESD-competences. The quality of the learning environment can, on some occasions, be enhanced by introducing blended learning methods. Digital Destiny focuses on setting up such a learning environment at school.

Let's get to work: five pedagogical principles

Principle 1: Stimulate learning through societal issues

WHAT?

Societal issues are authentic, collective matters of concern in society. They concern society often in a negative way because they entail complex environmental, social, and economic consequences for society. Examples of societal issues are gender inequality, lack of mental well-being in young people, tax inequality, climate change, decline of our soils, droughts, water pollution ...

WHY?

Societal issues give us the feeling that we do not have the right knowledge or skills to provide an answer demands that we make a move, by thinking or acting, or both at the same time. This gap is the reason why they provide an interesting context for learning and developing ESD-competences, since it triggers interest and motivation for further inquiry and ... for learning.

In other words, societal issues trigger the learners' interest and make learners start to think about them. In doing so, learners learn. It's up to the teacher to design a learning environment that directs learning toward certain learning objectives he/she has put forward for the learners.

This principle is about setting up a stimulating learning environment that engages learners to learn through thinking about societal issue.



HOW?

Learning through societal issues requires activities that teachers...

- ✓ increase learners' awareness of issues in their close environment, communities and in the world that motivates them to explore, investigate, reflect ... and by doing so scaffold learning.

Principle 2: Stimulate learning through interaction

WHAT?

Understanding, knowledge and meaning-making all happen in the context of interaction which can include dialogue (both live and across time), engagement with diverse ideas as presented by live people and through other modes of communication and expression (online, texts, artifacts, media, etc). When we talk about 'interaction' we mean the expression, exploration, and investigation of:

- perspectives, of others* and our own
- thoughts, ideas, emotions, but also the physical, material world
- by interacting with others, whether in person, online or offline**, and the material and non-human world.

**Others could be peers, teachers, societal actors such as parents, professionals from the community of the school, politicians, neighbours, but even people from the other side of the world.*

*** 'offline' includes books, articles, documentaries, etc.*

WHY?

Interactions with other perspectives are important for individual learning because learners re-actualize and develop their perspective in relation to other (learners') perspectives.

HOW?

This principle is about setting up a stimulating learning environment that encourages learners to actively elaborate on other people's reasoning, such as stimulate them to paraphrase a shared position, complete the arguments of others, elaborate on others' views, show that the opinions of others have not been satisfactorily justified, critique other learners'/ideas' reasoning for missing an important distinction, ...

Learning by interacting with other perspectives requires that teachers ...

- ✓ stimulate interactions between the learner's perspective and other perspectives.
- ✓ create a learning environment which promotes and encourages respectful expression of information and opinions
- ✓ create a learning environment which promotes careful listening.
- ✓ create learning experiences in which learners can consider other's perspectives and their own allowing for everyone to grow and change in relation to their learning.



Principle 3: Stimulate learning through thinking

WHAT?

Thinking is essential for learning. When we say ‘thinking’ we mean all kinds of thinking processes such as, among others, critical and creative thinking, systems thinking, ... that all involve thinking processes like describe, predict, observe, compare, imagine, ...

WHY?

In many ways, education is about teaching learners to know what to do when they don’t know the answer. This is even more important when confronted with problems in society. Focusing on teaching thinking in an explicit way helps the development of thinking strategies that are needed in every day and professional decision-making. The development of metacognition, which encompasses both the intellectual and emotional states and processes, is an important factor for the learner.

Action-oriented thinking

In this pedagogical principle, special attention is paid to a kind of thinking that is key for ESD: **action-oriented thinking**.

WHAT?

Action-oriented thinking is all about gaining experience in considering a societal issue that touches you, defining a goal, setting up a strategy to get there and, finally, gaining confidence in you being able to make the change you had in mind. The word ‘action’ can refer to societal change but also change in one’s mind, either their own minds or the minds of others (raising awareness, or even simply gain understanding about a complex issue). Although action can be taken individually, there is a great need for collective action, where a group of people is acting toward a common goal.

Also, an important element of action-oriented thinking is goal-orientedness. The whole strategy toward reaching your carefully formulated goal is equally carefully designed. Contrary to projects at school where learners merely execute a societal task, such as gathering rubbish in the neighbourhood, or collecting funds for a humanitarian project, action-oriented thinking is about encouraging learners to think about what touches them in a societal issue and setting a goal (action) accordingly.

This principle is about setting up a stimulating learning environment that encourages learners to ...

- think about societal issues
- define what about the issue touches them
- define a challenge accordingly
- set up a strategy to achieve the goal (action)
- reflect on the process and be aware of the successes and learn from the failures.



WHY?

Goal-oriented thinking offers learners the opportunity to gain confidence about their own potential to be an active part of the world.

HOW?

In short, learning through thinking requires activities that...

- ✓ explicitly focus on stimulating thinking processes by making learners aware of the societal issue, and the importance of a good and clear definition of the challenge or the result, to design the thinking process that may lead to the desired result.
- ✓ make learners aware of the specific thinking processes they use when they are working toward a specific desired outcome.
- ✓ develop reflective practices for children to develop their meta-cognitive processes.



Principle 4: Stimulate Learning through reflection & evaluation

Evaluative and reflective thinking processes are an essential aspect of education, both for the learners and the educators. By incorporating these processes in daily classroom practice, educators and learners learn to both model and internalize them so that they become life-long learning practices.

Reflection

WHAT?

By reflection we mean mental activities during which an individual consciously observes and thinks about their own and shared/common experiences and/or behaviours.

WHY?

Reflection is essential for learning. When approached in a systematic, rigorous, and disciplined way, learners adopt a habit of reflection, at school, at home and elsewhere. By integrating reflection in daily teaching practice, educators create an environment where learners develop an attitude that values the personal and intellectual growth of oneself and of others. Reflection can be done on an individual basis and can be enriched by reflecting within a group.

Some of the benefits of collaborative reflection are:

1. Affirmation of the value of one's experience: in isolation what matters can be too easily dismissed as unimportant.
2. Seeing things in a new perspective: others offer alternative meanings, broadening the field of understanding regarding (past) experiences.
3. When one is accountable to a group, one feels a responsibility toward others that is more compelling than the responsibility one might feel too only oneself.

Evaluation

WHAT?

By evaluation we mean the systematic collection and analysis of a process and the result in order to determine the merit, worth or value of a result or process.

WHY?

Evaluation is important for:

- supporting the development of a teaching activity or a learning process (formative evaluation).
- assessing the final impact of the learning or teaching activity (summative evaluation)
- formulating a judgement based on internal and/or external criteria formulated by yourself as educator and/or by the learner.

Learning through evaluation is particularly important for ESD since it empowers both teacher and learners to critically reflect on society, evaluate the way things are going and engage in renewing,



transforming, redesigning ... smaller or bigger aspects of ourselves and/or our society. This principle is about setting up a stimulating learning environment that integrates reflective and evaluative thinking processes in daily teaching practices.

HOW?

Learning through reflection and evaluation requires activities that ...

- ✓ are explicit in their learning outcomes and the methods they will use to reflect upon and evaluate the learning and the process.
- ✓ create multiple and diverse opportunities for learners to reflect not only on their learning process, individually and in groups, but also on societal issues.
- ✓ update learning plans based on these evaluations.

Principle 5: Stimulate learning through structured processes

Considering one of the core objectives of education today to be getting to know what to do when you don't know the answer to a problem, transfer of what is learned at school to real-life situations is crucial. To get there, educators need to make sure that learners understand what the purpose of knowledge is or how to apply that to their daily life. In other words, learners need to feel the relevance of the knowledge and skills offered at school.

WHAT?

-The teacher plays an important role in setting the stage for the learners to make those connections between experiences at school and realities outside of school and by doing so, scaffolding transfer and meaning making. Various methodologies and approaches exist for the teacher with this purpose in mind, to which some of them we'll take a closer look: storytelling, design thinking, problem-based learning, and project-based learning.

Storytelling

WHAT?

Exchanging stories is a way to engage in relationships with the world; the world as it is, or the world as we would like it to be. Storytelling is a powerful way to imagine the world, re-imagine it, and to make conscious choices to be act with agency in society. To be a storyteller is an incredible position from which to bring to life our own and other's experiences in such a way that resonates with others. We communicate, relate, educate, and make our world meaningful through stories.

Societal issues and the variety of perspectives of them, are seen as powerful stories, integrated in the world. When we tell our story, we communicate our perspective on the world to others and enable them to enrich their own view on the world.



WHY?

Storytelling as an educational approach can be utilized by teachers to bring learners to construct and re-construct knowledge about the world, to demonstrate how to act on pending issues and re-create their own stories.

HOW?

One powerful way to do this is to bring in lived experience of the learners, and by doing so, making the experience explicit and easy to think of. This way, stories of the learners can be used to make sense of complex issues. An important point of attention to bring about to learners is that stories have the potential as rhetorical tools for manipulation.

Stories as tools for learning

Stories can be used as:

- starting points for learning
- to process information and acquire knowledge
- as an understanding performance

Stories can be told:

- by the students
- by the teachers
- by other actors in society
- Individually or collaboratively

Learning through storytelling requires that teachers ...

- ✓ design activities in which learners engage in the world and in meaning making by telling stories.
- ✓ use storytelling as a didactical device to connect issues of sustainable development with the learners.

Design Thinking

WHAT?

Design thinking is an approach to learning. Design thinking is a five-step structured approach to (1) identifying a challenge, (2) gathering information about that challenge, (3) brainstorming potential solutions, (4) refining those ideas, and (5) testing the solutions. From the get-go it is an empathetic process rooted in the needs of the end user – the person or people whose challenge or need one is trying to address. The five steps are also named:

1. Empathize
2. Define
3. Ideate
4. Prototype
5. Test



WHY?

It encourages learners to develop the mindset of and the competences for curiosity, inquiry, flexibility towards new information and finally the desire to work towards a solution to a given challenge.

HOW?

Learning through design-thinking requires activities where teachers ...

- ✓ plan effectively for the time needed to engage in a careful and thoughtful design-thinking process and decide the scope and purpose for using the approach
- ✓ emphasize the process of empathy through interaction and direct engagement with the challenge and the people impacted by that challenge
- ✓ design highly collaborative activities in and outside of the classroom

Problem-Based Learning

WHAT?

Problem-based learning is an approach in which students learn about a subject by working in groups to solve an open-ended problem. This problem is what drives the motivation and the learning. In Problem-Based Learning, the problem is presented to the learners first and then they generally examine, explore, evaluate ... until finally present a solution to the problem and report on the process. Problem-based learning can be used for long-term as well as short projects and learning modules.

WHY?

Problem-based learning can be used for long-term as well as short learning modules or activities. The goal isn't necessarily to solve the problem presented, but to create a clear structure in which the learners can take charge of their learning, research, and learn in depth about an issue. Problem-based learning leads to more flexible and generative application of the knowledge later.

HOW?

Learning through Problem-Based Learning requires activities where teachers ...

- ✓ explicitly articulate the outcomes of the learning
- ✓ decide on a societal issue (a ready-made rich and nuanced problem) to present to the learners
- ✓ Introduce clear and concise group project guidelines and consider assigning roles to the learners

Project-Based Learning

WHAT?

Project Based Learning is a teaching method in which students gain knowledge and skills, by working for a certain period to investigate and respond to an authentic, engaging, and complex question,



problem, or challenge. In designing the learning environment, the educator creates opportunities for learners to reach the desired learning outcomes.

WHY?

The process of working toward a final project is the vehicle for students to learn.

HOW?

Learning through project-based learning requires activities that ...

- ✓ Provide an intellectual challenge in which learners engage the topic deeply, think critically, and strive for excellence.
- ✓ Are authentic, and in which learners work on projects that are meaningful and relevant to their culture, their lives, and their future.
- ✓ Result in the learners' work being publicly displayed, discussed, and critiqued.
- ✓ Require learners to collaborate with other learners in person or online and/or receive guidance from adult mentors and experts.
- ✓ Help learners use a project management process that enables them to proceed effectively from project initiation to completion.



Blended learning to stimulate learning

Blended learning is the thoughtful integration of classroom face-to-face learning experiences with online learning experiences. Digital Destiny assumes a physical classroom setting in which either digital tools are used or in which a physical lesson is followed by online processing at home. Consequently, schools need to have minimal equipment before this blended method can be deployed, such as: Wi-Fi, laptops, tablets, desktops, smartphones, digital board... Schools don't only need the right equipment, but students and teachers also need a minimum of digital competences.

Blended learning is an effective tool for involving learners' families in the learning process. Technology and apps can be used to communicate with parents about content and they can also be used for collaboration through online surveys, dialogue, video recording, digital storytelling, etc. But the most important thing is that educators ask themselves: 'what added value is there for blended learning?'

Combining the digital competences, ESD-competences and digital inclusion that are needed in blended learning activities

Digital Destiny pays special attention to digital inclusion in the framework, where we understand 'digital inclusion' as actions and solutions needed to prevent digital exclusion so that everyone can fully participate in the digital society. Digital Destiny focuses on the needs and opportunities of learners, teachers, and parents to create strong blended tools. (Mediawijs, 2021).

Digital competences are often a precondition to creating ESD-competence learning opportunities. As society is becoming more and more digital, people need to be able to navigate the digital and technological world. Nevertheless, not everyone is 'on the digital boat' and some people are digitally excluded from society. This is the case, not only with adults, but also with children. With a focus on digital inclusion, the Digital Destiny materials have a focus on inclusive design. The tools are easy to use with simple language so everyone can handle them. By combining inclusive design, ESD and blended learning activities, Digital Destiny creates the opportunity to close the digital exclusion gap. Learners can learn from each other how to use specific devices through social constructed learning, in which the teacher fills the gap with other digital skills the learners need to acquire to live in a modern digital society.