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## The Digital Bridge Project: Strengthening Cognitive Resilience in Ukrainian and EU Students

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### Abstract

The events in Ukraine in 2022 had a devastating effect on its population. The authors of this paper considered whether it would be possible to strengthen both Ukrainian and other young people's cognitive resilience in the face of different forms of conflict if they were put into contact with students in other countries. One potential means for building this resilience that could be explored in a classroom setting was the provision of a platform through which to compare perspectives with fellow students of other nationalities while gaining exposure to and practical experience with a set of cognitive tools for understanding and addressing challenging situations. The Digital Bridge Project (DPB) was designed to improve these students' English and critical analysis skills through direct exchange with their counterparts in other parts of the world via five online interviews in which they explored decision-making tools proposed by a variety of authors. The following case study describes how the Project was conducted. Three Ukrainian universities and the University of Europe for Applied Sciences in Iserlohn, Germany participated in this study. The results of the Project indicate that it is a model that can be applied effectively in a variety of subject areas. The authors recommend that schools and universities wishing to emulate the model discussed here should adapt the format to their specific needs. The results of the student surveys from both countries involved indicate that the method can empower students to address a wide range of disruptive forces in business and society with tools that are part of a 21<sup>st</sup> century skill set for both enhancing managerial decision-making and encouraging participatory democracy.

*Keywords/phrases:* cognitive resilience, critical analysis skills, decision-making

## 1. Introduction

After an initial outpouring of support and interest in the Ukrainian situation in 2022, new conflicts began to compete for the public's attention. Convinced that young people across Europe could benefit from enhanced cognitive resilience under these circumstances, the author designed a program for an online exchange between German and Ukrainian university students. In this project, cognitive resilience was defined as the ability to thrive despite adversity, including but not limited to that caused by military conflict. This is a variation on the expression's usage in the behavioural sciences (Flood & Keegan, 2022), in which resilience has been described as the demonstration of 'positive adaptation despite experiences of significant adversity or trauma' (Luthar & Cicchetti, 2000, p. 858) as well as a combination of personal characteristics enhancing an individual's ability to adapt to demands successfully (Fletcher & Sarkar, 2012).

The author theorized that cognitive resilience could be strengthened in a classroom setting in two ways: through the study of critical thinking frameworks designed to guide decision-making even in times of stress, and via direct communication, which could provide a powerful antidote to the potentially negative impact on decision-making that confusing or misleading media narratives can have. The author contacted institutions of higher education across Ukraine inviting them to participate with the University of Europe for Applied Sciences in Iserlohn, Germany (UE) in a program called The Digital Bridge Project (DBP). Students and teachers from three prominent Ukrainian universities, the Kyiv School of Economics (KSE), Odesa I. I. Mechnikov National University (ONU) and Vasyl Stefanyk Precarpathian National University (VSPNU) responded, volunteering to join the DBP.

The aim of this effort was to expose students to educational methodology that fosters cognitive resilience through academic and personal development, bolstering their perception of themselves as empowered, active participants in the shaping of their own lives, particularly in times of conflict. It was felt that this could be achieved through the study of analytical frameworks designed to promote more informed decision-making. Additional objectives included improving the participants' ability to conduct joint interviews in English, and to collaborate effectively with others in an online environment using digital tools. A final goal was to encourage students to see themselves as global citizens, and to build international networks for possible future benefit.

## 2. The Digital Bridge Project: Methods and Findings

### 2.1. Selection Criteria

The analytical frameworks selected as the foundation for the DBP templates were chosen based on their attention to building critical analysis skills in ways that can be applied across a wide array of conflict situations. Each provided a "tool in the critical thinking toolkit" students were given and encouraged to practise using throughout the DBP.

Doughnut Economics (Raworth, 2017) invites readers to consider seven proposed paradigm shifts when making business and policy decisions. To do so, both Raworth and the author of Theory U (Scharmer, 2018) refer to and expand upon the concept of systems thinking and the related Iceberg Model (Menge, 2006). Each of these authors encourages a big-picture perspective on the consequences of actions taken in different ways. Images and supplementary material are provided by the DEAL (Doughnut Economics Action Lab, 2020).

Similarly, the Transformation Maps developed by the World Economic Forum (World Economic Forum, 2019) foster a heightened awareness of how microeconomic issues on which

leaders in a given field may wish to focus their attention can have both powerful knock-on effects on other sectors of society and simultaneously be affected by larger external forces. Because these leaders may have less knowledge of these fields outside their immediate area of expertise, they may have significant blind spots with regard to how their “piece” fits into the larger puzzle of greater societal well-being. Transformation mapping helps address this issue by providing maps that show these interconnections more clearly based on the research organised by the World Economic Forum.

The “How Might We” (Rosala, 2021) and “Flare” aspects of the Design Thinking method (MIT Open Learning Library, 2018), as well as the analytical strategies proposed by Theory U provide frameworks designed to maximise the ability of disparate groups to work together in order to help users better understand and find solutions for the conflicts they face.

The Media Literacy Framework (Thoman, 2003), like all other concepts featured in the program, encourages users to ask questions and seek the answers themselves. It provides tools for reflecting more deeply on what they are dealing with, in this case a range of publicised messages, and so can empower students to both avoid being manipulated by them while helping them construct their own more effectively.

Each of these concepts were featured in the templates, or “architecture” of the DBP, which were accessible online in Mural, a visual collaboration tool, to all students. A different template was created for each joint interview session to be filled in with the ideas of the participants during their discussions.

## **2.2. Research Questions**

The authors wished to establish whether the project design could assist students in strengthening their knowledge of and interest in the critical thinking skills-related topics covered, as well as their sense of personal empowerment in terms of ability to make a positive difference in their own lives.

This was attempted by asking participants to use the frameworks to, among other tasks, think about and articulate what they wish the societies they live in to be like in the future and what policies might foster those outcomes. For example, they were asked which content, including values, they would want included to promote desired results if a segment dedicated to what they considered important conversations were to be added to curricula in their countries. The authors also desired to explore students’ evolution in terms of their existing beliefs and perspectives as well as their preferences regarding the five templates employed.

## **2.3. Methodology**

In this study, both quantitative and qualitative methods were used to collect data. The quantitative method entailed two authors’ surveys. Some questions asked students to rate different aspects of the project on a 1-5 scale. Qualitative data were also collected using templates (in joint interviews) and written and recorded reflections by the students. Open-ended questions in the surveys were used to collect data about opinions, values and interests (Gall et al., 2003). The entrance survey assessed the students’ background knowledge of and interest in topics discussed and their sense of personal empowerment to affect the world outside their immediate circle. The exit survey traced the evolution of the students’ competencies, gathering feedback on preferences and recommendations.

## 2.4. Participants

Twenty-two undergraduate students from VSPNU, eight students from KSE and eight students from ONU participated in the DBP. The latter two groups consisted of a mix of undergraduate and graduate student volunteers from a range of study programs. The VSPNU students were paired with thirty-four undergraduate students from UE, while the KSE and ONU students were paired with seven undergraduate UE students.

## 2.5. Structure

In each meeting, the participants interviewed each other in subgroups of four to eight students per university during five one-hour online sessions from October to December 2023. During the joint interviews, discussions based on a given template were conducted by groups of students with diverse backgrounds and expertise. The application of this approach reveals multiple perspectives and produces collaborative insights.

## 2.6. Joint Interview Frameworks

Each of the five joint interviews was guided by a different analysis framework template. The author designed templates using the online visual collaboration tool Mural and shared them with all members of the DBP. Their conversations took place in Microsoft Teams. The framework concepts were introduced to the UE students before each interview and reviewed afterwards. Part of the UE students' task was to explain the basic ideas in their own words to their partners before applying them together.

Before the first joint interview, UE students were given a briefing on how to conduct themselves based on recommendations proposed by Shtaltovna and Muzzu. According to them, these classroom methodologies prepare students for a digital future (Shtaltovna & Muzzu, 2021) (see Figure 1).

FIGURE 1. RULES OF ENGAGEMENT FOR THE STUDENTS



**Rules of Engagement for Joint Interviews**

1. Connection before cognition
2. More visuals, less verbiage
3. Takers to makers mindset
4. Less lecture, more architecture

Image by rawpixel.com, © rawpixel ltd.

Above all: Reach consensus about what to discuss before starting.  
If anyone in your group is uncomfortable with a student's topic suggestion, pick another.  
We are humans first and treat each other with respect and consideration, always.  
Be aware of each other as beings with agency in head, heart and hands.  
NO ONE is a slave to their past.

Source: Author slides. Image by rawpixel.com, © rawpixel ltd., 2023.

Participation was not graded for the Ukrainian students. Grading for the UE students was not dependent on the nature of what, if any, opinions were articulated. Each reflection, recorded or written, was usually due within two weeks of the meeting according to the following format guidelines:

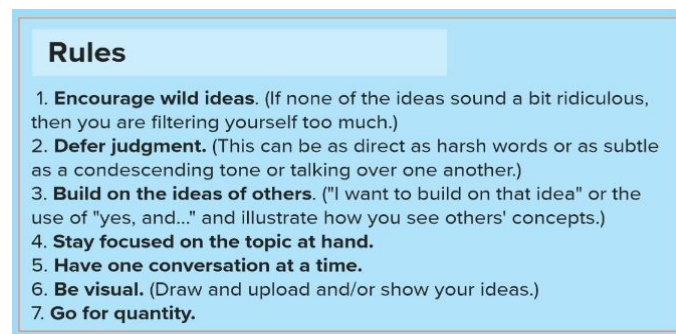
- **Joint Interview 1 - Doughnut Economics (Raworth, 2017) and Design Thinking (Rosala, 2021) on Tomorrow's Values:** Three-minute reflection sent to the instructor as a video link using the online software platform Loom through free student accounts.
- **Joint Interview 2 - Systems Thinking Iceberg Model (Menge, 2006):** Written reflection of 350 words sent via Microsoft Teams to the instructor.
- **Joint Interview 3 - Transformation Mapping (World Economic Forum, 2019):** Three-minute reflection sent to the instructor as a video link using the online software platform Loom through a free student account.
- **Joint Interview 4 - Media Literacy Framework (Thoman, 2003):** Written reflection of 350 words sent via Microsoft Teams to the instructor.
- **Joint Interview 5 - Theory U (Scharmer, 2018):** Three-minute reflection sent to the instructor as a video link using the online software platform Loom through free student accounts about the last joint interview and class topics since that meeting up until the week before the due date for this reflection.

### 2.6.1. Doughnut Economics and Design Thinking

In the first joint interview session students introduced themselves and were asked to work with two aspects of design thinking after studying the How Might We (HMW) question style (Rosala, 2021) and the first part of the Flare and Focus method (MIT Open Learning Library, 2018), to develop and articulate their own personal, societal, and professional objectives and possible paths to them.

First, they were asked to read the rules seen in Figure 2, to be applied not just to the initial but all five sessions.

FIGURE 2. RULES OF ENGAGEMENT FOR JOINT INTERVIEWS



Source: Author design, 2023.

These rules were based on general Design Thinking principles as discussed by the Interaction Design Foundation (Interaction Design Foundation, 2016). They were included to foster a sense of connection between the participants and to encourage independent thought and active, creative exchange in a welcoming environment.

Students also received an overview promoting the “Takers to Makers mindset” (Shtaltovna & Muzzu, 2021) as seen in Figure 3.

FIGURE 3. INTRODUCTORY OVERVIEW FOR JOINT INTERVIEW 1

**Overview**

**What should we do? How does a great economy look?**  
 The power to develop and articulate your ideas in English is a key to your employability in many areas. It can also help you influence what "tomorrow" looks like.  
 One skill related to that power has skyrocketed in importance across firms: the ability to communicate and work with others in a variety of online situations.  
 In this session you can exchange views on core concepts relevant to your future on a number of levels.  
 As you gain knowledge of key issues affecting employment today, challenge yourself to go from being a passive "taker" of information to an active "maker" of your own reflections and innovations.  
 In the driver's seat, develop your ability to thrive in an increasingly digital and visually collaborative professional environment.

Source: Author design, 2023.

They were asked to discuss seven “How Might We” questions based on core principles of Doughnut Economics (Raworth, 2017). The aim of this format was to introduce students to Raworth’s proposition that there is much more to a functional economy in the service of its population than growth via an exploration of their own priorities. Students were asked to place their thoughts on digital notes on the template provided as seen in Figure 4.

FIGURE 4. JOINT INTERVIEW TEMPLATE 1

Doughnut Economics & Design Thinking: Mapping Tomorrow's Values

YOUR FUTURE IN 7 QUESTIONS: **HOW MIGHT WE...**

best measure if a society is doing well?	describe what &/or who makes up an economy?	name & nurture the aspects of human nature in a society we want to live in?	describe how world events can affect future employment?	distribute key features of a good society, & what are they?	increase our energy sovereignty & reduce energy waste?	describe the goal(s) of a good society?
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IDEATION: **FLARE**

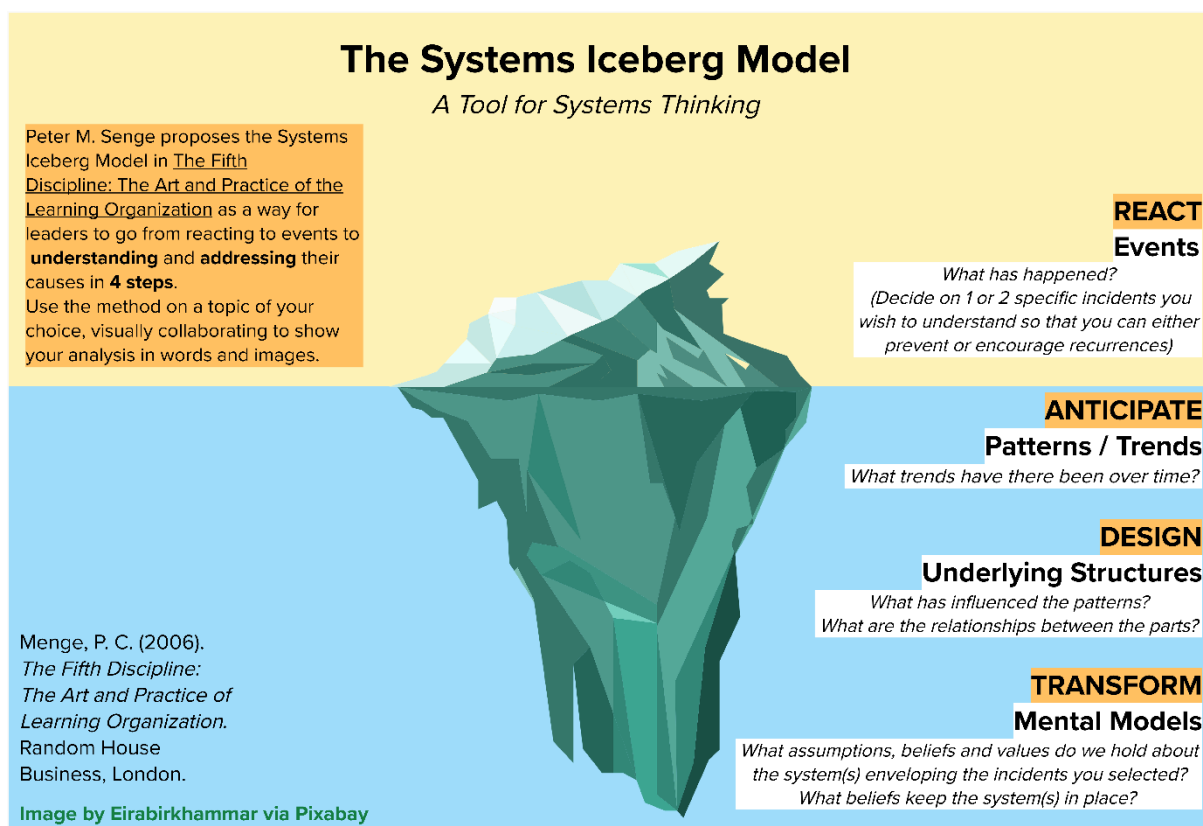
Raworth, K. (2017). *Doughnut Economics: 7 Ways to Think Like a 21st Century Economist*. Random House Business, London. Photo by Brian McGowan on Unsplash

Source: Author design with image by Brian McGowan on Unsplash, 2023.

### 2.6.2. The Systems Iceberg Model

In the second joint interview, participants were introduced to the Systems Thinking Iceberg Model as a framework for understanding the patterns, structures and mental models that lead to geopolitical, economic and even personal upheaval and gaining insight on how to change them for the better. After watching videos and reading about the concept described by both Menge (Menge, 2006) and Scharmer (Scharmer, 2018), students were asked to think of and work on a topic of their choice together on which to apply the framework shown in Figure 5.

FIGURE 5. JOINT INTERVIEW TEMPLATE 2



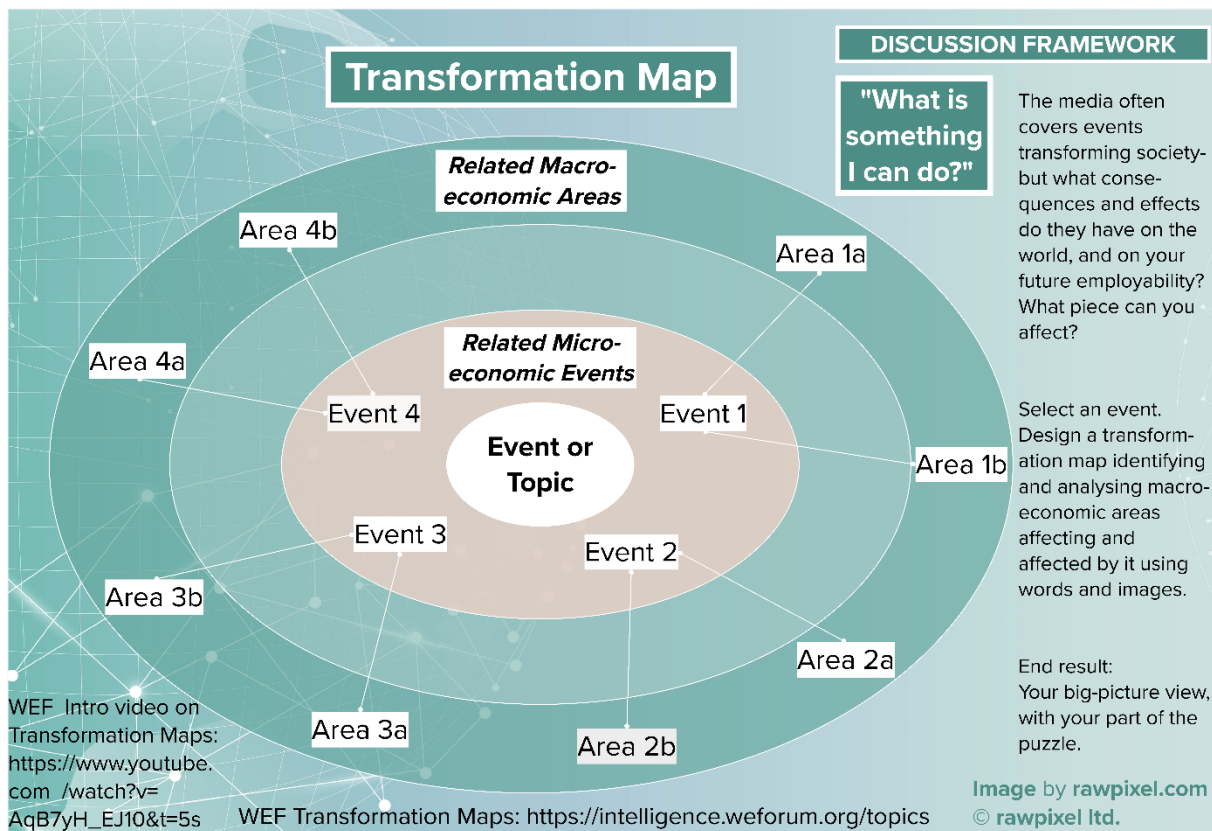
Source: Author design with image by Eirabirkhammar via Pixabay, 2023.

### 2.6.3. Transformation Mapping

This segment began by asking students to obtain a free account in the World Economic Forum to gain access to their evolving library of transformation maps, which they describe as a “way of seeing the hidden connections between global issues” (Landale, 2017). Once registered, they were asked to explore the options available and select a transformation map of their choice (World Economic Forum, 2019) and present highlights from it, so gaining experience in this way to better research and understand the interrelated macroeconomic effects of a host of issues transforming society.

During the joint interview session, they practised using the method to analyse an event of their own choosing in a way that acknowledges and embraces the complexity and interdisciplinary nature of a given issue. After reflecting together on the many and varied macroeconomic consequences of microeconomic events, they were asked to use the map to identify areas where they have the leverage to make a difference, however small, in what may appear to be an intractable problem. This framework, as seen in Figure 6, thus provided both exposure to the transformation maps already made available by the World Economic Forum for future reference as well as an introduction to applying the format to issues of students’ own choosing later, for example, at their places of employment. Transformation mapping can thus reveal previously unconsidered points of contact where they can say, “This is something I can do” when faced with an issue or crisis which may feel initially overwhelming. While gaining a deeper understanding of how a given event is interconnected with an array of areas touching their lives, students were invited to see themselves as stakeholders with the agency.

FIGURE 6. JOINT INTERVIEW TEMPLATE 3



Source: Author design with background image by rawpixel.com, © rawpixel ltd., 2023.

#### 2.6.4. The Media Literacy Framework

The purpose of this segment was to counter the toxicity of social media with the directness of actual social interaction while at the same time gaining familiarity with an established framework for developing media literacy, learning how key questions can help students avoid being manipulated by disinformation, advertising, and other media campaigns.

Using the free teaching materials available from the Center for Media Literacy as a basis for instruction (Thoman, Jolls, 2003), students were introduced to five parts of all media construction and deconstruction: authorship, format, audience, content, and purpose. Different examples of media communication in the form of videos and case studies were examined in class and included as links in the template along with key concepts related to each of the five parts as indicated in Figure 7. During the joint interviews, students could either discuss any of the examples they had covered or analyse a new piece or pieces of media selected with their Ukrainian counterparts according to the five-part framework.



FIGURE 7. TEMPLATE 4, JOINT INTERVIEW TEMPLATE 4

Nr.	Key Words	Deconstruction: 5 Key Questions for Media Consumers	5 Core MLF Concepts
1	Authorship	Who created this message?	All media messages are constructed by a party with a purpose.
2	Format	What creative techniques are used to get my attention?	Messages are communicated with more than just words.
3	Audience	Who is the desired receiver of this message?	Different people are the targets of different messages.
4	Content	What values and points of view are represented in or omitted from this message?	Media have embedded values and points of view.
5	Purpose	Why is this message being sent?	Most media messages are created to gain in profit or power.

**1**

- Who made it?
- Who is profiting from it?
- Is this benefit financial and/of another kind?

**2**

- What images, sounds, symbols or other visual metaphors are used?
- How is an emotional or rational appeal made?

**3**

- Who do you think this text was meant for?
- What makes you think so?
- Why were they picked?

**4**

- What details are the creators emphasizing?
- What are they leaving out that could be important to a full understanding of the topic?
- Which ideas, actions or values are being promoted?

**5**

- What do the constructors of this want me to think and/or feel?
- Why?

Concepts from:  
Center for Media Literacy Empowerment through Education MediaLit Kit,  
[www.medialit.com](http://www.medialit.com)

Photo by Sara Kurfeß on Unsplash

Source: Author design with a background image by Sara Kurfeß on Unsplash, 2023.

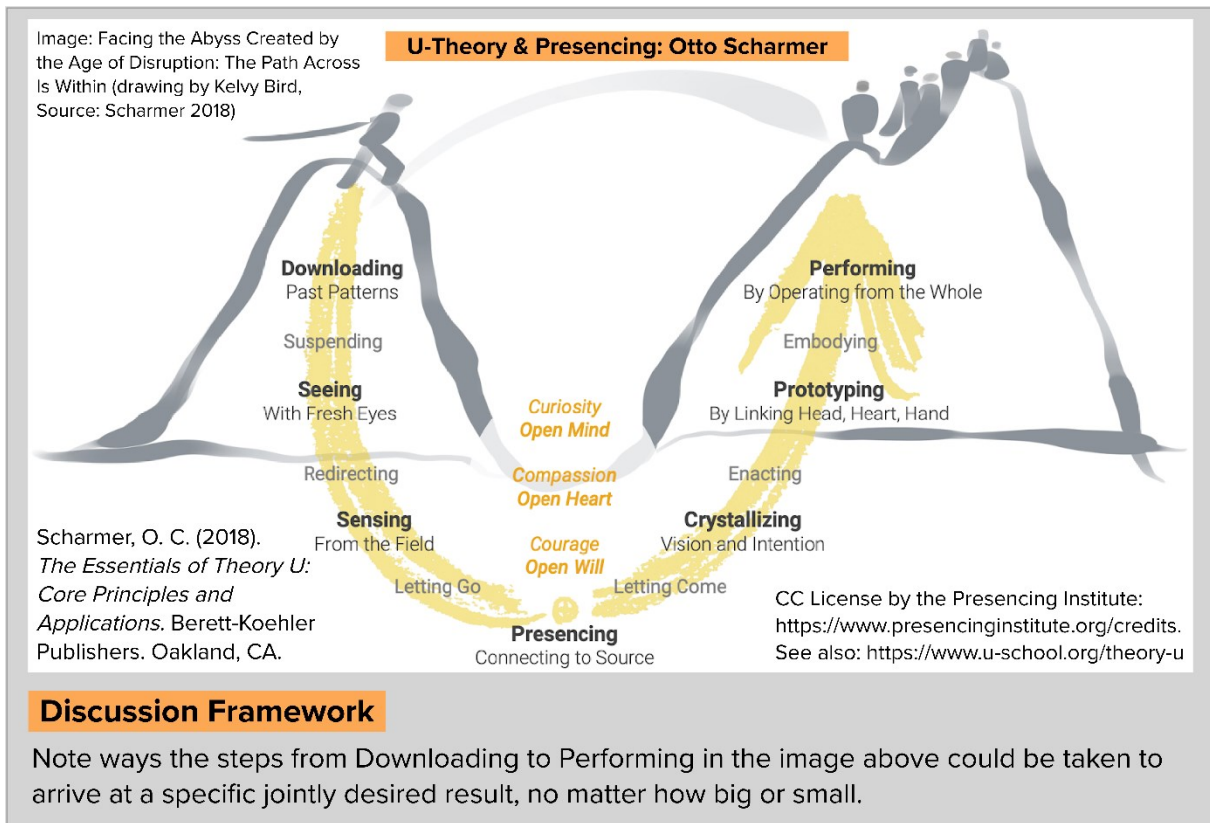
### 2.6.5. Theory U

Theory U was chosen as a method for working effectively with others to identify and achieve shared goals. In an interview with philosopher Yermolenko, its author discussed it as a powerful leadership method in times of disruption (Yermolenko, 2023). Its emphasis on giving voice to and attending to the “head” (knowledge), “heart” (interests) and “hands” (ability to act under current conditions) of every stakeholder made Theory U a kind of *roter Faden* (“red thread” in German) or sub-theme running throughout the DBP.

Students were introduced to some of the key steps in the process it proposes from getting from a present “no one wants” to a destination that develops out of the articulation of the needs and objectives of the stakeholders. Given how many global voices have been claiming the right to speak for Ukraine over the course of the present conflict, the authors felt it to be an especially appropriate tool to place into the heads, hearts and hands of Ukrainians themselves, especially as future leaders of their country.

As part of the step on “Seeing with fresh eyes” seen in Figure 8, each side was asked to prepare a virtual tour of their respective lives using PowerPoint or similar format to help their counterparts form a view of their world based on the perspectives of its own inhabitants. As this was the last interview, it also offered a way for students to give a guided tour to the international exchange partners they had gotten to know over the semester and conclude the exchange with powerful visual impressions.

FIGURE 8: TEMPLATE 5 JOINT INTERVIEW TEMPLATE SECTION



Source: Design [www.presencinginstitute.org](http://www.presencinginstitute.org) with author notes, 2023.

## 2.7. Results and Discussion

### 2.7.1. Student results and reactions from Ukraine

Table 1 presents the survey data collected from the students of Vasyl Stefanyk Precarpathian National University (VSPNU), Kyiv School of Economics (KSE), and Odesa I. I. Mechnikov National University (ONU).

From the results displayed and the statistical analysis conducted, the following key findings were identified:

TABLE 1. EVOLUTION OF DBP COMPETENCIES IN KSE, ONU AND VSPNU STUDENTS

Competency	Entrance Survey: Before first call	Entrance Survey: After First call	Positive Change	% Positive Change
Knowledge	2.50	3.43	0.93	37.14
Interest	3.00	4.21	1.21	40.48
Sense of empowerment	2.44	3.50	1.06	43.59

Source: Own compilation/calculations based on Microsoft Forms Digital Bridge Project VSPNU entrance survey, 2023.

The findings indicate that on a 1-5 scale, students rated their knowledge and interest in topics studied and discussed as well as their sense of empowerment to have increased by roughly 40% after just one joint interview.

The KSE and ONU students chose to volunteer on an extra-curricular basis. Therefore, the following discussion is based mostly on the observations of the instructors that incorporated the DBP into their course at VSPNU.

Participation in international projects can have a profound impact on people's preconceptions by challenging, expanding, and altering their existing beliefs and perspectives. Building personal relationships with individuals from different backgrounds fosters a deeper understanding of their lives, values, and experiences. One of the benefits of the DBP is humanising people who were previously seen through stereotypes or generalisations. The results when compared demonstrate that the evolution of VSPNU students' pre-existing beliefs about their foreign peers reaches 3.68 out of 5 points. Being exposed to other cultures and communicating with people with diverse backgrounds presupposes adopting a more culturally relativistic perspective. The students need to keep in mind ethical considerations, which are essential in decision-making, especially when discussing potentially sensitive topics.

Thus, 50% of VSPNU students agree that being tolerant and open to other people's opinions contributes to successful intercultural communication. All the students claim that during the joint interviews, they tried to avoid controversial uncomfortable topics and radical opinions. The Ukrainian students reported that all the discussed issues within the project were appropriate and did not cause them any emotional distress. Most Ukrainian students have experienced the devastating effects of the Russian-Ukrainian war. Therefore, if students chose to discuss political issues amongst each other, especially with individuals directly affected by the conflict, sensitivity and respect for their experiences was required.

One of the aims of the DBP was to focus on understanding the human impact of conflict rather than getting into political debates. Sometimes discussing their experience during joint interviews was described as therapeutic by the Ukrainian students to process and share their feelings. In the context of a war involving Ukraine, it is crucial to recognize that any nation could find itself facing similar circumstances. The impact of conflict extends beyond borders, influencing geopolitics, economies, and, most importantly, the lives of individuals. Wars can disrupt the fabric of societies and create a ripple effect that touches nations far beyond the immediate conflict zone.

The VSPNU students claim that the DBP has influenced their emotional well-being in a positive way (3.85 on a 5-point scale). During the interviews, the students were equipped with mental frameworks that enhanced their problem-solving abilities, making them feel more seen, heard, and appreciated as individuals. This encouragement empowered them to tackle challenges as active citizens. During such interviews emotional well-being contributes to effective communication. In a friendly atmosphere students express themselves freely, understand others, and engage in constructive dialogue, which is vital in international collaborations.

During international joint projects, it is necessary to be mindful of cultural differences and avoid imposing one's own cultural perspectives on the conversation. Hence, it is crucial to understand that different cultures may have varying ways of processing and discussing major events. 36% of the respondents feel that cultural differences are one of the most important challenges in such projects, and both sides should be respectful and mindful of diverse cultures.

The topics of joint interviews honed the critical thinking and systems thinking skills of Ukrainian students, revealing, and changing fundamental beliefs that uphold systems. Systems thinking is an approach to problem-solving and understanding complex phenomena by examining the interactions and relationships between the components of a system which considers the system rather than focusing solely on its individual parts (Midgley, 2003). Systems thinking principles closely align with the presencing concept proposed in Theory U, the framework for leading profound change developed by Dr. C. Otto Scharmer. It promotes holistic understanding, interconnectedness, future orientation, and the recognition of collective

intelligence, reinforcing the importance of a systemic and transformative approach to change (Scharmer, 2018).

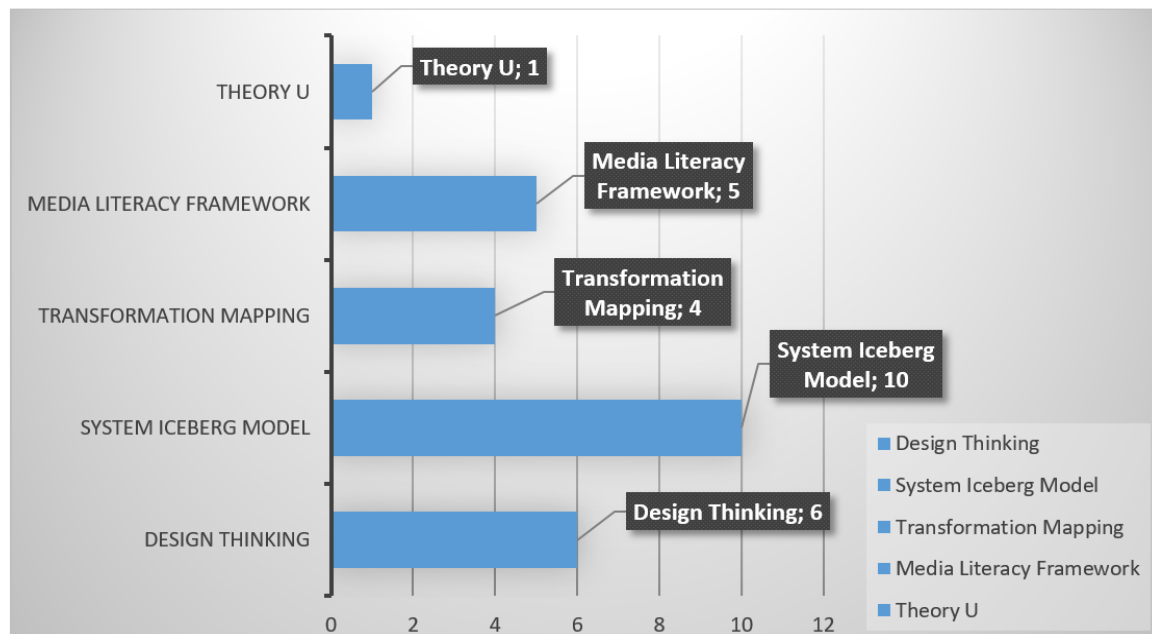
Systems change is always consciousness-based and is related to getting out of one’s own bubble and “co-sensing” – immersing yourself in new contexts that matter in your situation and that are unfamiliar (Scharmer, 2018). During the interviews, the students went beyond habitual ways of thinking and operating, exploring emerging future possibilities and how to align actions with a more sustainable and desirable tomorrow. While answering the question 'What values, priorities, and abilities are crucial for democracy to remain functioning?' 71% of VSPNU respondents point out critical thinking skills, media and civic literacy, freedom of expression, and open-mindedness.

Media literacy is important for facilitating effective, culturally sensitive, and ethical communication during international projects, and one of the aims of the DBP was to empower students to critically engage with media content and navigate diverse perspectives. In the exit survey the students claimed that the DBP has greatly influenced their understanding of media literacy and ability to critically evaluate information from various sources (3.85 points on a 5-point scale).

The Systems Iceberg Model (chosen by 10 respondents), Doughnut Economics and Design Thinking (chosen by 6 respondents), and the Media Literacy Framework (chosen by 5 respondents) were the most appealing and compelling topics for the students among the suggested ones for joint interviews (including Doughnut Economics and Design Thinking, the Systems Iceberg Model, Transformation Mapping, the Media Literacy Framework, and U Theory) as seen in Figure 9.

FIGURE 9. VSPNU EXIT SURVEY, FAVOURITE TOPICS QUESTION

**My favorite topic(s) from the frameworks provided to discuss was/were (chose as many as desired):**



Source: Microsoft Forms Digital Bridge Project VSPNU Exit survey, 2023.

Most respondents considered Design Thinking and the Systems Iceberg Model important for a deeper understanding of complex systems and the exploration of assumptions and beliefs that shape them. Joint interviews within the DBP allowed for the exchange of knowledge and

expertise beyond borders. While answering the question about important values for the future of democracy (Figure 10), VSPNU students claim that it is crucial to prepare future leaders who excel in personal skills and contribute to social cohesion:

FIGURE 10. VSPNU EXIT SURVEY, VALUES QUESTION

**For democracy, an essential foundation to employment as it is known in many countries, to remain functional, the values, priorities and/or abilities I find most important to encourage in schools in democratic countries are:**

“Critical thinking, moral and ethical values”

“Work on emotional maturity, geopolitics and other intercultural subjects”

“I find it crucial to encourage values such as critical thinking, civic responsibility, and respect for diversity. Prioritizing an education that fosters open-mindedness, ethical decision-making, and a sense of social justice is essential. Additionally, nurturing abilities such as effective communication, collaboration, and information literacy are key to preparing individuals for active and informed citizenship in democratic societies.”

“I believe that fostering principles like civic engagement, respect for diversity, and critical thinking is vital for democracy, which is a necessary precondition for employment in many nations. It is crucial to place a high priority on education that promotes moral reasoning, social fairness, and open-mindedness. Furthermore, developing skills like information literacy, teamwork, and effective communication is essential to empowering people to participate actively and intelligently in democratic societies.”

“In schools, children should be taught to listen and hear their interlocutors, schools should also develop students’ emotional intelligence and their ability to empathize and analyze situations.”

“School should prioritize fostering civic literacy, critical thinking skills, and open dialogue. Cultural understanding, empathy, and cooperation are essential to nurturing socially responsible citizens.”

“Equal opportunities, information literacy, civic responsibility”

“Critical thinking, coming up with creative ideas for the solution to modern problems, basic IT knowledge, teamwork and friendly atmosphere.”

“Be open to ideas.”

“Responsibility, empathy, politeness”

“Friendly atmosphere during classes”

Source: Microsoft Forms Digital Bridge Project VSPNU Exit survey, 2023.

Open questions gather qualitative data, involving descriptions of feelings, opinions, impressions, etc. (Tomal, 2010). These elucidated student thoughts and feelings and gave a voice to the participants. The above-mentioned open-ended question in the survey helped to gauge the students' perceptions of the values, priorities and abilities that need to be encouraged in democratic countries. By means of the qualitative analysis of the responses above, the authors concluded that the students believed that it is necessary to foster an environment in schools that respects civic literacy and diversity (9 mentions), promotes empathy (3 mentions) and collaboration (5 mentions), information literacy and critical thinking (7 mentions), contributing to the meaningfulness of every person's life.

### 2.7.2. Student results and reactions from Germany

Table 2 presents selected survey data collected from the UE students.

TABLE 2. EVOLUTION OF DBP COMPETENCIES IN UE STUDENTS

Competency	Entrance Survey: Before first call	Entrance Survey: After First call	Positive Change	% Positive Change
Knowledge	2.89	3.19	0.30	10.28
Interest	3.00	3.59	0.59	19.82
Sense of empowerment	2.22	2.86	0.65	29.27

Source: Own compilation/ calculations based on Microsoft Forms Digital Bridge Project UE entrance survey, 2023.

The German students' percentages were about half those of their counterparts, perhaps due to the lack of perceived threat to their ability to pursue these competencies in other ways. However, the upheaval their online classmates were experiencing in real time was an impactful reminder that the opportunity to develop and exercise critical thinking skills and personal agency is not something to be taken for granted.

As mentioned earlier, one of the key propositions within Theory U is that to achieve meaningful change, stakeholders should engage on three levels: with their heads (knowledge), hearts (interest and empathy) and hands (using their power to act) (Scharmer, 2018). An indicator of how the roughly 20% increase in interest in the topics discussed in the teams seen in Table 2 came to pass in some participants after just one meeting is reflected in the UE student reflection seen in Figure 11.

FIGURE 11. UE STUDENT REFLECTION POST INITIAL JOINT INTERVIEW

“...Before the interview started I was not aware that emotions could be indirectly exchanged across Teams. My first ... were based on my first impression...of compassion and sadness. I personally think what these two emotions caused were the compassion that I had with them. People who are the same age as me, but who go through more in life. The best way to react in that case is to show compassion and back strength. Giving them a feeling, being not alone is in my point of view a key not just for this interview but also for humanity.”

Source: UE student reflection, 2023.

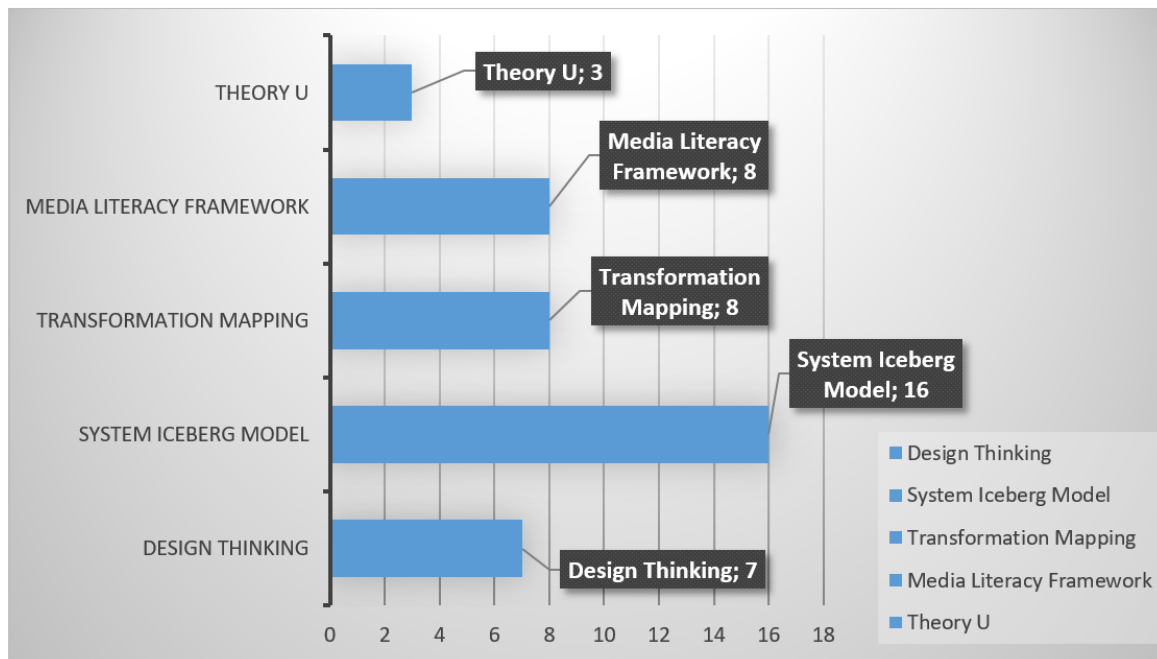
This quote indicates how the interviews themselves gave UE students the sense that they were already doing something positive actively by listening to their Ukrainian counterparts after completing the first session, whose template was chosen as a favourite by 7 respondents or 27% of UE students. It also reflects the evolution of UE students' pre-existing beliefs as seen in their average rating to the exit survey question: “Over the course of the exchange, my thoughts/feelings/preconceptions about the people I met and country they are from evolved because of The Digital Bridge Project (1 not at all to 5 a lot)” of 3.95.

The DBP provided insights from a first-person perspective of young students experiencing history in the making. In answer to the exit survey question about whether the DBP experience affected their sense of well-being on a scale of 1 (not at all) to 5 (a lot) in terms of providing their “heads” with knowledge of others' first-hand experiences directly as well as of mental frameworks that can help them analyse problems more effectively, and/or helping their “hearts” feel more seen, heard, and appreciated, and/or by encouraging them to use their “hands” to handle challenges actively at school, work, and/or other life situations with more tools, confidence and skills, students responded with an average rating of 3.37.

The Systems Iceberg Model was chosen by 16 respondents, or 67% of the UE students as one of their favourite topics, as indicated in Figure 12. Reasons for their choices included in the responses to the follow-up question, “This is because...” on the exit survey included the observation by one student that it was “easy to understand and practical for better explaining events.” Another noted that the Systems Iceberg Model made it “interesting to recognize a pattern of things that are first seen as lonely events”, while a third participant wrote that “the Iceberg Model can always be reused for almost all problems and is very helpful.” For one UE student, it was “useful for understanding complex systems by showing visible components above the waterline and emphasising the importance of understanding hidden factors below for comprehensive analysis.”

FIGURE 12. UE EXIT SURVEY, FAVOURITE TOPICS QUESTION

**My favorite topic(s) from the frameworks provided to discuss was/were (chose as many as desired):**



Source: Exit survey in Microsoft Teams, 2023.

A demonstration of the power of students to apply the Systems Thinking Iceberg Model in original ways can be seen in the group that chose to use it to assess overeating, as seen in Figure 13, in which one participant describes how it encouraged them to go beyond addressing issues in a superficial manner.

FIGURE 13. UE STUDENT REFLECTION POST SECOND JOINT INTERVIEW

“To go further into the topic, we now asked ourselves in the second phase of the iceberg model what happened over a long period of time that led to our overeating. We came to the conclusion that regular overeating and generally unhealthy eating occurs in many people who have the problem.

But that wasn’t enough for us, which is why we went deeper into the iceberg and asked ourselves in the third phase, “What is influencing the repeating behaviour?” In our opinion, this is often triggered by reasons such as stress, the feeling of being alone, which also damages our mental health and makes the problem all the worse. Other emotional problems can also be the cause, such as family problems or a separation of any kind.”

Source: UE student reflection, 2023.

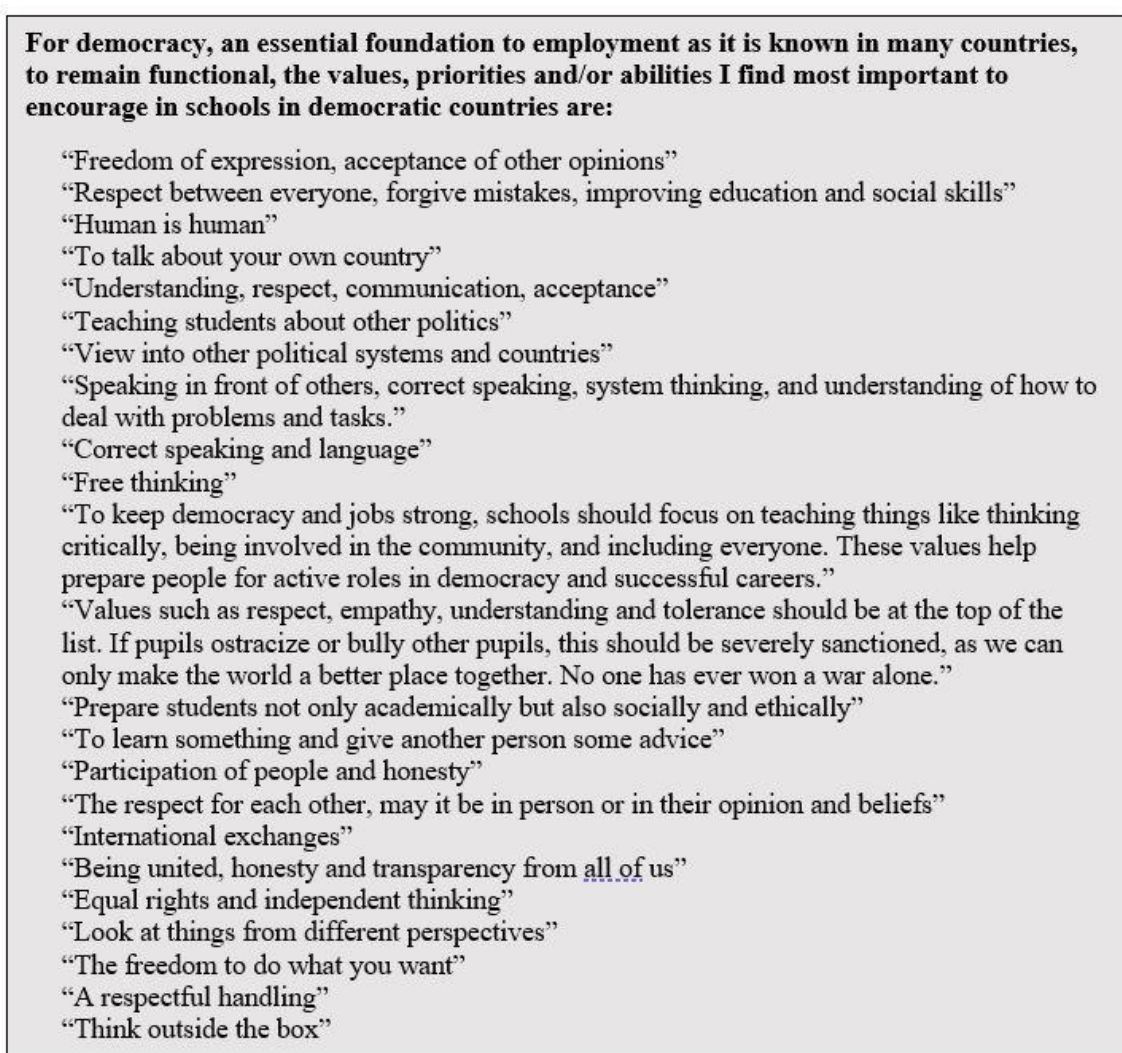
Key benefits of the Transformation Mapping topic, which was chosen as a favourite by 8 respondents, or 30% of UE students, were seen to be how it made it “easy to create connections and make them visible” and that it was “a possible system for a job later.”

Regarding the Media Literacy Framework, also chosen by 30% of UE students as a favourite topic, UE students noted that “it is quite helpful for your daily life” and that “people often get wrong information, so now we all have a better understanding for what information we get from different kind media.” One group member stated that after exposure to this framework, “in the future...[I] will definitely look at media with a more critical eye than before.”

Theory U, selected by 3 of the 27 respondents, or 11% of the UE students, as a preferred topic, was described by one student as beneficial because it can help a civic, school, or professional leader become “a facilitator of positive change, leading the team towards a future they collectively envisioned.”

Throughout the semester, UE students were asked to think about what a good course featuring “important conversations” would include if they were designing it for their country. This was the backdrop to the exit survey question on values. The responses are noted in Figure 14.

FIGURE 14. UE EXIT SURVEY RESPONSES, VALUES QUESTION



Source: Microsoft Forms Digital Bridge Project UE exit survey, 2023.



What the responses from both Germany and Ukraine share is an affirmation that conversations about important things have a place in educational institutions, and that their role should be to create better prepared future leaders by fostering individual abilities to question and reflect deeply as well as social cohesion.

One concern educators may have when considering organising their own DBP is that exposure to their counterparts in a country that is experiencing conflict directly may be “too much” for their students. To address this possible issue, attendance at the meetings can be made voluntary, and students can opt to cover each framework on a stand-alone basis for their grades.

One UE student went so far as to encourage educators to be fearless in organising global projects in general, as seen in Figure 15, in the pursuit of such exchanges.

FIGURE 15. UE EXIT SURVEY STUDENT RESPONSE

“Teachers should not be put off by online events with international students, nor should the students, of course. We should also see the positive things in it, such as the exchange with people who live so far away from us and who have gained different experiences that may help us move forward or make us think. Just the fact that we HAD to speak to them in English all the time was a really good experience and might make it easier for us to approach people on our next vacation outside of Germany.”

Source: Microsoft Forms Digital Bridge Project UE Exit Survey, 2023.

## 2. Conclusion

The Digital Bridge Project provides a tangible way for instructors to build cognitive resilience in both countries experiencing conflict and in those who wish to strengthen their ability to prevent it or address it more effectively, be it at work, in school, or in a broader social context. Participants exchanging their experiences and aspirations contributed to a collective knowledge base and shared commitment to building together what Scharmer identifies as the emerging future (Scharmer, 2018).

The DBP has proven itself to be applicable across a wide range of courses to develop critical thinking skills, knowledge, empathy and agency without dogma. Students can also employ it to organise international exchanges independently. Participants can increase their capacity to analyse information critically with the frameworks explored in the DBP. As demonstrated in the context of this case study, such a project can increase students’ ability to articulate, develop and achieve their own ideas and desired changes by working with the three aspects discussed throughout the semester: head, heart and hands (Scharmer, 2018).

Perhaps the purpose of this learning experience is best described by a Ukrainian student who answered the question in Figure 14 by stating that “to sustain a functional democracy and support the principles underpinning employment, schools should prioritise fostering critical thinking skills to empower students to analyse information and engage in informed decision-making.”

The responses from students in both countries demonstrate a prioritisation of values on enriched living experience and individual development as well as social well-being. As another Ukrainian student put it: “Ukraine and Ukrainians belong to Europe and share the same values as the common European citizen.”

The instructors' goal was to encourage students to be engaged, empathic and active members of society who see their future as in their hands. Through the five frameworks and other DBP

aspects, the authors hope to inspire future users across the world to apply the model for inspiration and tools to help young people develop their own ideas and turn them into reality.

### **3.1. Implications**

In terms of overall impact, one UE student noted on an Exit Survey response that “these frameworks have an effect on my critical thinking. I can understand my thoughts deeply and evolve simply for new ideas.”

The DBP proposes that educators do not have to teach in a vacuum, but rather can function as facilitators, going from ‘sage on the stage’ to ‘guide on the side’ (King, 1993 and Morrison, 2014) and making their classrooms places where analytical frameworks are applied to real-life problems in ways that foster personal and academic development as well as social cohesion and dialogue.

### **3.2. Limitations and Future Research Plans**

One of the starkest limitations of the DBP was the lack of reliable Internet connection during air raids. On occasion, due to these sudden alarms, the Ukrainian students had to evacuate to underground bunkers during the times the sessions were planned. However, the fact that so many clicked back into the meetings after a few minutes of getting resettled beneath the deep layers of concrete, albeit only with audio access, was a powerful reminder of both the literal, visceral threat to exercising critical thinking skills the students were experiencing, and of how much these meetings with their counterparts in the EU meant to them.

It is the authors’ opinion that the experience of ordinary college-age students in Ukraine is severely underrepresented in Western media and that direct exchange is a potent counterpoint to potentially misleading narratives. In the future, the authors plan to share the invaluable, if unwelcome, knowledge they are acquiring in further exchanges, encouraging research with young people across the world.

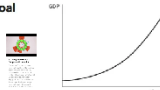










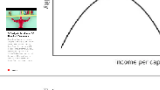


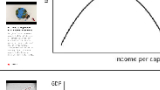

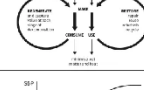
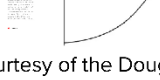
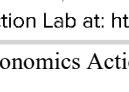

### **3.3. Further Recommendations and Development**

Student suggestions for improving projects of this nature included leaving more time for more informal “breaking the ice” or “speed meeting” activities initially to help participants get to know each other as well as more time to chat freely on topics of their choice, both in terms of non-course related subjects and in terms of more co-decision-making power about the underlying frameworks covered in the project. These proposals touch on key aspects of the “Connection before Cognition” and “Taker to Maker Mindset” principles (Shtaltovna & Muzzu, 2021) promoted at the outset of the project and should not be overlooked in future iterations. Other participants suggested making the frameworks easier to use. This can be accomplished by adding more time before each interview on both sides to cover the framework concepts in more depth before and perhaps after each session.

In Germany, after all, five interviews were completed, a concluding discussion on Doughnut Economics was followed by a final class activity in which students were shown a portion of an interview with Kate Raworth (Hagens, 2023) in which she presented key concepts, and were then asked to read a segment and watch a short introductory video (Doughnut Economics Action Lab, 2020) on one of the seven proposed paradigm shifts in the book (Raworth, 2015), after which they were to present on their section and indicate how any one or more of the mental frameworks they had studied during the DBP related to it, as seen in Figure 17. Educators seeking to provide their students with a big-picture view of the interrelationship between the

mental frameworks selected as pillars of the DBP and key concepts from Doughnut Economics are recommended to consider adding additional “closure” to the project in this manner.

FIGURE 17. UE CONCLUDING REVIEW AND REFLECTION

Doughnut Economics: 7 Ways to Think Like a 21st-Century Economist	7 Ways to Think: From 21st-Century Economics		To 21st-Century Economics		
	<p>Listen to Kate Raworth's summary of each of her 7 suggested 21st century thinking frameworks and take notes on yours. Then click on the link and read the intro to yours (<a href="https://doughnuteconomics.org/tools/2">https://doughnuteconomics.org/tools/2</a>). Explain how the "from 20th-to 21st century" paradigm shift images here relate to your chapter. <b>1</b></p> <p>Watch the video in the link about the chapter. Deconstruct it using the Media Literacy Framework (Author is Kate Raworth/ Purpose/ Audience/ Content/Format). <b>2</b></p> <p>Consider and explain possible connections between your chapter and the other frameworks seen here that you worked on this semester. <b>3</b></p>	<p><b>1. Change the Goal</b></p>  <p>GDP</p>	<p>GDP</p> <p>Video summary: Min. 9 to 17 at: <a href="https://www.youtube.com/watch?v=7h6X7WBANKY&amp;t=975s">https://www.youtube.com/watch?v=7h6X7WBANKY&amp;t=975s</a></p>	 <p>the Doughnut</p>	
	<p><b>2. See the Big Picture</b></p>  <p>income's growth labor &amp; capital income goods &amp; services consumption expenditure</p>	<p>self-contained market</p>		 <p>embedded economy</p>	
	<p><b>3. Nurture Human Nature</b></p>  <p>100% ME</p>	<p>rational economic man</p>		 <p>social adaptable humans</p>	
	<p><b>4. Get Savvy with Systems</b></p>  <p>PPPT supply demand</p>	<p>mechanical equilibrium</p>		 <p>dynamic complexity</p>	
	<p><b>5. Design to Distribute</b></p>  <p>income per capita</p>	<p>growth will even it up again</p>		 <p>distributive by design</p>	
	<p><b>6. Create to Regenerate</b></p>  <p>income per capita</p>	<p>growth will clean it up again</p>		 <p>regenerative by design</p>	
	<p><b>7. Be Agnostic about Growth</b></p>  <p>GDP</p>	<p>growth addicted</p>		 <p>growth agnostic</p>	

Source: Author design with images by Doughnut Economics Action Lab & rawpixel.com (© rawpixel ltd.), 2023.

The development of an online platform for educators building their own digital bridges with other institutions could facilitate organisation. As well as providing a “matchmaking” service for interested parties, curricular planning modules could be uploaded based on the frameworks, readings, slides, and visual collaboration formats employed. Future practitioners could add their adaptations to enrich and inspire a dynamic community.

Educators considering a DBP can help students benefit from the open-ended nature of its frameworks, related tasks, and interactive style by encouraging them to consider examples they wish to discuss with their partners before each meeting.

Interested parties are encouraged to contact the authors for more information about the templates, teaching materials and methods used to prepare for and conduct this project.

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