

Design & Creative Thinking Development Toolkit

Research

EXECUTIVE SUMMARY

Quantitative and qualitative research was carried out in Latvia, Estonia and Denmark from September 2021 to May 2022. The purpose of research was to gather data about the available design and creative thinking methods already used in working with youth (age interval 13 to 16 years). Main criteria for existing tool selection was to find the ones providing a positive impact on adolescents' general well-being, motivation, self-esteem and growth-oriented mindset. It was also important to identify challenges, problems and necessary methodological support for productive use design and creative thinking methods.

Data gathered during the research phase was further systematized and analyzed. All conclusions served as the basis for the design and creative thinking development toolkit (second intellectual outcome), methodological material (third intellectual outcome) and e-platform (fourth intellectual outcome) developed within the project.



Figure No.1 *Subsequent phases of research process (LDC, 2023)*

The first phase of the research included collection of data about the youth policy implementation, youth demographics, educational systems, the subject of career education within educational curriculum, and gathering the NEET youth data in Latvia, Estonia and Denmark. It was also studied whether and which subjects in the school curricula and non-formal education are aimed at developing creative and design thinking in youth.

The second phase of this intellectual outcome was quantitative research. A survey was conducted among youth non-formal educational institutions and organizations in all three partner countries. The goal of the survey was to identify the most common methods used by non-formal education

organizations to work with youth (age interval 13 to 16 years) to increase adolescents' motivation, self-esteem, enhance growth mindset and help choosing further life scenarios.

- Majority of respondents in Latvia, Estonia and Denmark acknowledge that creativity is one of the most important competencies for successful career development.
- Youth in Latvia and Estonia don't have sufficient information about the professions that will be in demand in the future labor market.
- Youth in all three countries are not fully aware of the importance of creative thinking, critical thinking and the ability to solve complex problems to succeed in choosing the further life paths after the compulsory education.
- The respondents have a strong opinion that youth should acquire the theoretical basis of creative thinking at schools while practical application of creative thinking might be integrated into both - compulsory education programs and non-formal education activities.
- The surveyed youth centers indicated that they implement activities related to creative thinking 1-2 times a year on average, but less often related to design thinking. 40% do not have any design thinking activities at all. Survey results approved that the development of creative and design thinking skills among youth should be improved by providing more practical tools.

The third phase of this intellectual outcome was in-depth interviews with experienced youth workers, career counselors and youth organizations' representatives. The goal of the in-depth interviews was to deepen the understanding of the methods and tools used for working with youth, including challenges and possible problem causes. It was important to gather information about necessary methodological support and other related issues to increase adolescents' intrinsic motivation, self-concept, and development of a growth-oriented mindset.

Questioning process covered three main areas:

- 1) Tools that have already been used with in-depth evaluation of positive and negative aspects. The task was to understand if selected tools have been adapted to specific demographics and how they address the development of two particular skills: creative and design thinking.
- 2) Impact of existing tools to strengthen adolescents' intrinsic motivation, growth mindset and independent decision making. The task was to establish if the current tools affect the development of the three mentioned areas.
- 3) Gaps that need to be filled between compulsory education and non-formal education systems to ensure the best circumstances for development of creative and design thinking skills and exercising them to reach certain life goals.

Thirty five in-depth interviews were held in Latvia, Estonia and Denmark. The interviews consisted of three sets of questions covering two main research areas:

- 1) Interests and competences. Discovery, acknowledgement and development.
- 2) Different mindsets and thinking patterns among adolescents. Creative and design thinking within those mindsets.

The aftermath of the interview results in Latvia, Estonia and Latvia brought crucial assumptions and observations to the surface that were taken into consideration during the process of developing the creative and design thinking tool.

- There is a lack of creative or design thinking tools specifically adapted to certain age groups, e.g. the adolescents aged 13 to 16 years.
- The guidelines or unified methodology for developing creative and/or design thinking among youth is absent, fragmented or insufficient (depending on the institutional level).
- Youth workers, career consultants (specialists), NGO representatives working with youths are left on their own when it comes to selection, adaptation and implementation of creative and design thinking tools regardless of the fact that the importance of these skills have been broadly discussed and acknowledged.
- Various existing tools can be very effective, but they should be included in the more or less continuous implementation program with step by step guidance and evaluation system to follow up and measure the outcome of each method.
- Current tools can be amended and complemented by new ones aimed to address the specific outcomes - development of intrinsic motivation, critical thinking, ability to work with vast amounts of information, strengthening the growth mindset approach etc. Currently many tools promise to improve creative thinking skill, but that either is a too broad concept that needs to be broken down to smaller segments (especially for adolescent target group) or it neglects the assumption, that sometimes it is necessary to take one step back and estimate if creative thinking skill has been developed at all?

Results of all three phases of first intellectual outcome: desk research, survey and interviews were discussed in partner meetings, conclusions were made and put to use during the development of creative and design thinking tools. Results of each phase can be useful for further research and will be distributed as visual infographics to illustrate the urgent issues for the adolescent target group, especially to eliminate and decrease the number of NEET youth population in upcoming years.

SURVEY RESULTS AND FINDINGS

The goal of the survey was to identify the most common methods used by non-formal education organizations to work with youth (especially those aged 13-16) to increase adolescents' motivation, self-esteem, and enhance growth mindset. The result of the survey became a significant input to further conduct a qualitative study - the interview process.

Method

The survey was conducted based on a questionnaire consisting of **18 questions** (Appendix 1 "Questionnaire"). The survey was conducted using Google Forms and the SurveyMonkey web tool.

Questionnaire has been chosen as the most common research instrument.

1. Multiple choice questions (MCQ).
2. Likert scale type questions (to measure attitude and opinion about specific themes).
3. Open type questions to understand the broader perspective and give the respondents an option to express their specific point of view or share the specific data about them.

Language

Questionnaire was conducted in the native language of the respondents and later translated to English.

Scope

The survey was conducted among youth specialists working within municipal and non-governmental youth centers, career centers or schools in the three countries – Latvia, Estonia and Denmark in the period from September 2021 to January 2022.

A total number of 92 responses were received in three countries:

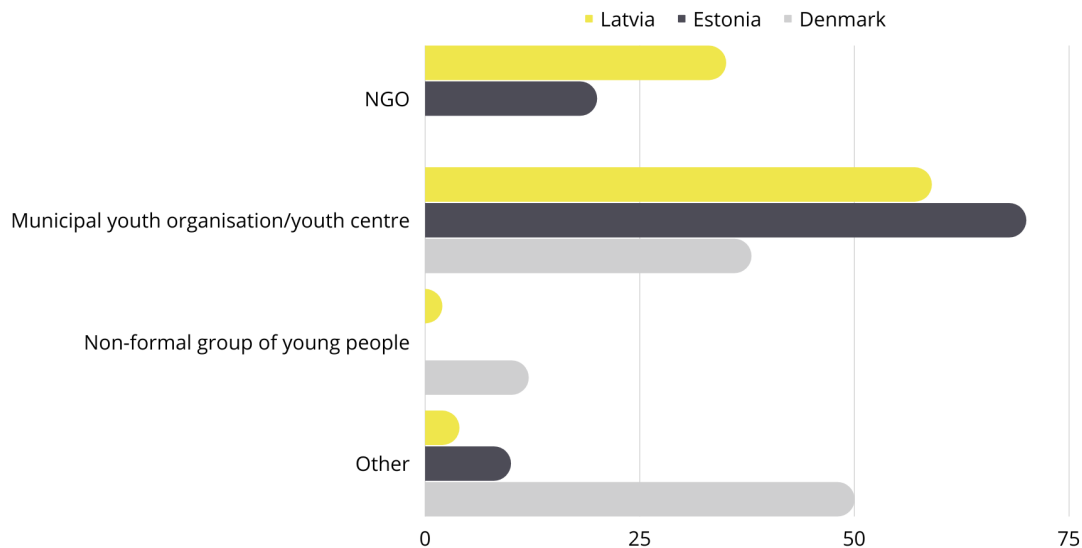
- Latvia - 54
- Estonia - 20
- Denmark - 18

Profile of respondents

Most respondents in all three countries represented a municipal youth organization or youth center. In Latvia and Estonia numerous respondents are working within the NGO sector. As was seen in the pre - research stage, each country has a different

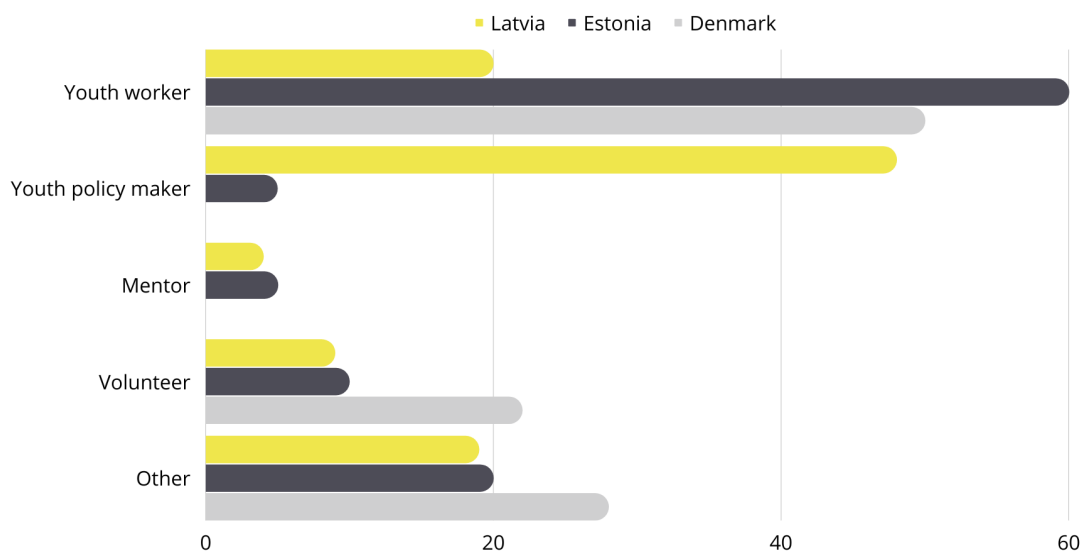
institutional hierarchy when it comes to youth policy and activities carried out for the adolescent target group.

Figure 2 *Types of organization represented by respondents (%)*



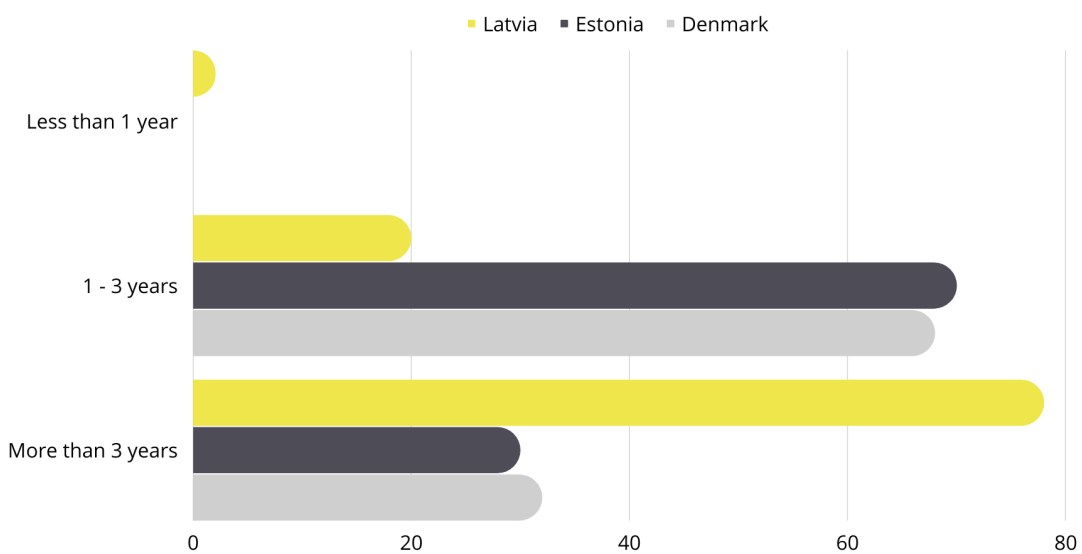
Majority of respondents work as youth workers or youth policy makers in Latvia and Estonia, while in Estonia and Denmark there is also a significant percentage of volunteers. In the “Other” category the most frequent answer was “Teacher”.

Figure 3 *Occupation of respondents working with youth (%)*



Among the respondents there were quite equally those who were located in a larger city, in town and in a rural area (village). Although there might be certain limitations within this research due to the rather small number of the respondents, the authors restrained from making conclusions about overall geographical spread of youth workers in all three countries. There were respondents who work in various cities or combine work shifts in rural and urban areas.

Figure 4 Experience working with youth (%)



About 70% of respondents have worked with young people for more than 3 years, about 30% of respondents for 1-3 years. Only a few respondents in all three countries have worked with young people for less than a year.

Figure 5 Average respondent's persona in Latvia, Estonia and Denmark



Rather low percentage of people with shorter professional experience can be explained with various factors, for example, less experienced youth

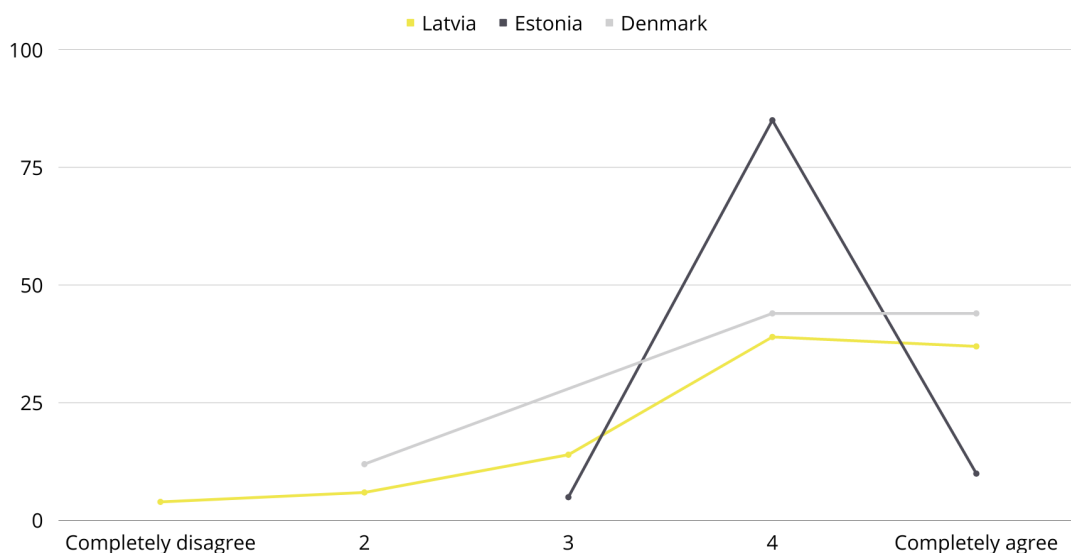
workers are not that hesitant to share their findings and observations due to lack of having ones. Gathering data from more experienced professionals allowed the authors to rely on a wider spectrum of exposure and deeper familiarity with the youth target audience. Data collected during the pre-research stage also confirmed a high percentage of migration within the different positions in this professional sector due to rather low wages, necessity of professional growth and also numerous psychological distress factors educational workers are exposed to.

Creative thinking: importance and skill level

Creative thinking in PISA 2021¹ guidelines is defined *"As the competence to engage productively in the generation, evaluation and improvement of ideas, that can result in original and effective solutions, advances in knowledge and impactful expressions of imagination."* It is considered to be a measurable skill, based on theoretical and empirical proof allowing individuals to gain better results, especially while performing in uncertain and unusual circumstances.

The respondents were asked to rate different aspects of creative thinking on a 5-point scale (choosing from "1" – Completely disagree, to "5" – Completely agree (with "4" rather agree, "3" partially agree, "2" rather disagree).

Figure 6 *The importance of creativity as a competence for successful career development (%)*

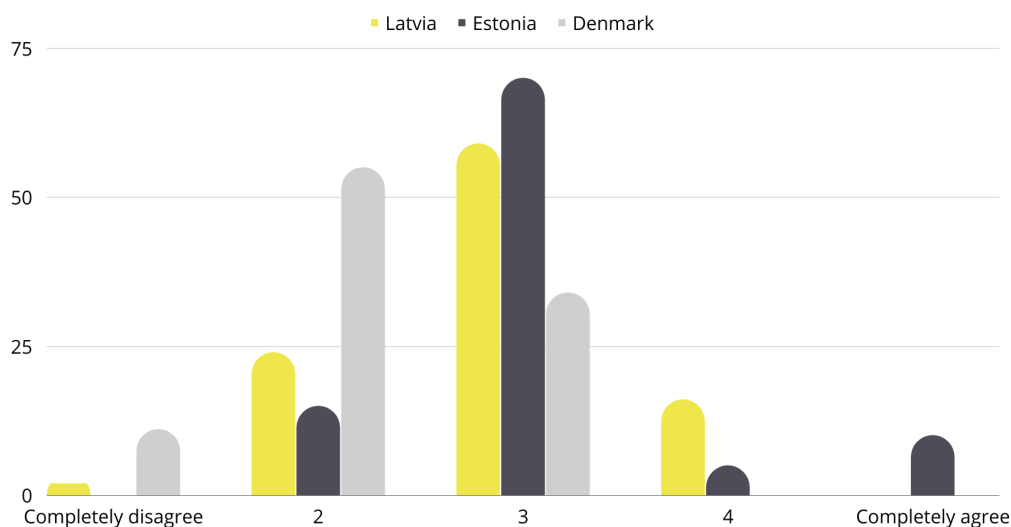


¹ <https://www.oecd.org/pisa/publications/PISA-2021-creative-thinking-framework.pdf>

It can be said that nearly 90% of respondents in Latvia, Estonia and Denmark estimate that creativity is one of the most important competencies for successful career development. In Latvia and Estonia the curve is rather flat compared with Danish respondents who overwhelmingly responded with firm “Agree” to the statement. The curves with Latvian and Estonian answers develop gradually which might indicate that people are not entirely sure about the scope of the creative thinking skill and its growing significance.

At the same time, respondents from all three countries assume that youth do not have sufficient information about the professions that will be in high demand in the future. Those results show that additional research is needed to understand whether and to what extent it is related to the knowledge of youth specialists themselves in this topic to support adolescents and which of the knowledge development activities are missing.

Figure 7 *Youngster’s awareness about professions in high demand now and in the future (%)*



Majority of respondents consider youth as not being aware of the importance and demand for creative thinking while choosing the future professions.

Market research by LinkedIn Learning finds that creativity was the most demanded “soft” skill by companies in 2019 and according to the McKinsey Institute forecasts, the demand for creativity will increase by 30% by 2030 in the Western Europe (Source. Forecasting Students’ Creativity and Critical Thinking).

When it comes to institutional and systemic responsibility, the majority of respondents agree that basic concepts and theory of creative thinking should

be taught at school. Same applies to practical implementation of creative thinking. Practice should go along with the theory.

When youth workers were asked to evaluate the level of creative thinking skill among youngsters, about 70% marked it as insufficient. It should be noted that the current survey contains only a broad formulation of the statement without giving more detailed criteria to measure creative thinking skill. The purpose of this question was to estimate the general opinion e.g. to find out what youth workers think about the creative thinking skill as well as the awareness of the students about its significance.

Figure 8 Annual frequency of creativity and creative thinking related events and activities for 7 - 9 grade students

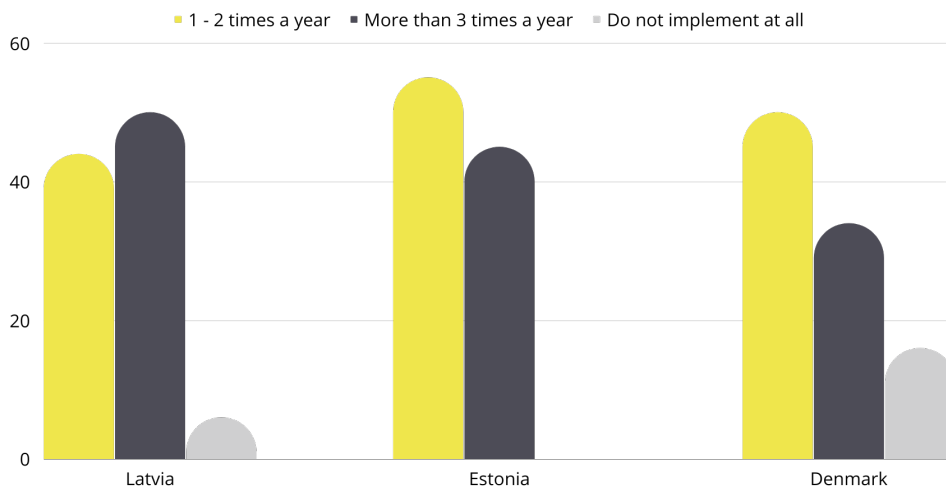
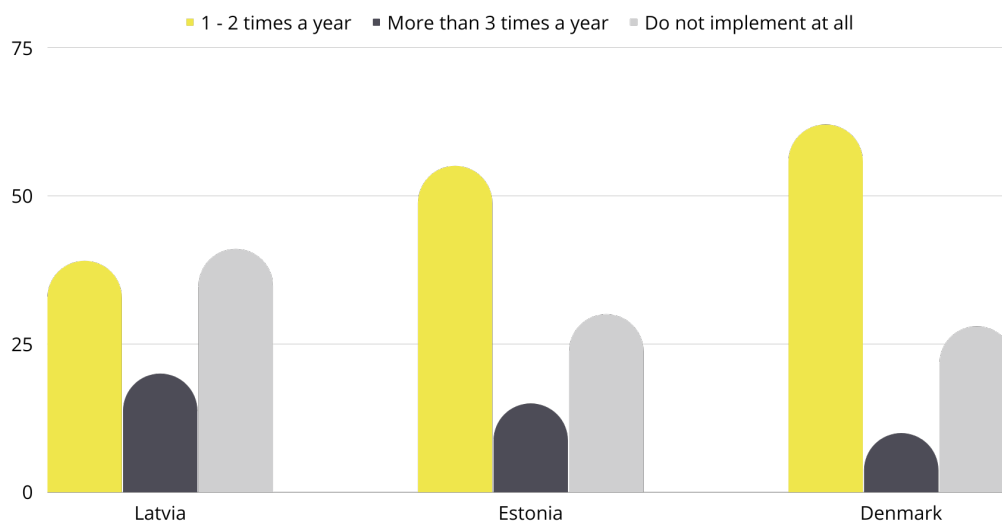


Figure 9
Annual frequency of design thinking related events and activities for 7 - 9 grade students

frequency of design thinking related events and activities for 7 - 9 grade students



It is significant to underline that a total of 40% of respondents do not deal with activities developing the design thinking skill.

According to respondents, all three activities are equally important/ effective for youth to understand the diversity of professions and the necessary competencies for profession choice.

- Specialized classes or included materials in lessons in primary school classes.
- A practical set of tasks for self-knowledge, getting to know personality traits under the supervision of professionals.
- Tools for developing creative thinking and training in their practical use.

In the concluding part respondents were asked to **share good examples for creative tools** from their experience, such as workshops, activities, materials, tools, apps, human resources – trainers, coaches, etc.

There was a great response from the respondents. More than half of the interviewees shared the name of a specialist working with good methods and 15 recommendations were made for methods and tools to be used. Most suggestions were made about general creative methods for various activities to engage the audience, create a judgment free zone, etc. It should be noted that no specific, age adapted tool was mentioned for creative thinking skill development.

CONCLUDING REMARKS

Respondents estimate that creativity is one of the most important skills for successful career development, but at the same time youth in Latvia and Estonia rather don't have sufficient information about the professions that will be in demand in the future labor market.

The assessment of the availability of self-development tools for youth showed a mixed opinion. Latvian and Estonian respondents supported the view that youth has access to various self-development tools (games, tests, applications, etc.) that help them to make independent choices about their future career/employment choices. The Danes widely disagreed with this statement.

Majority of respondents consider that youth is not aware of the demand for creative thinking in any profession along with critical thinking and the ability to solve complex problems. About 70% of the respondents assess adolescents' creative thinking skills as insufficient and consider them to be significantly improved.

Respondents have a strong opinion that youth should acquire a theoretical basis of creative thinking at school. Also, about 90% of the respondents think that a practical application of creative thinking for young people should be integrated into both - compulsory education programs as well as non-formal education activities.

Surveyed youth centers indicated that they organize career and employment events on average 1-2 times a year for youth in 7th-9th grade. Respondents rated their personal competences for providing support to youth in their career choices as sufficient or rather sufficient (70% in Latvia and Estonia, 40% in Denmark).

Among the methods and tools that might help youth to understand the diversity of professions and the necessary competencies for profession choice, respondents stated these three with equal importance:

- Specialized classes in the school curriculum.
- A practical set of tasks for self-knowledge, getting to know personality traits under the supervision of professionals.
- Tools for developing creative thinking and training in their practical use.

Finally, survey participants shared a number of good methods and creative tools from their experience, such as trainings; activities, materials; tools, and applications. They were studied during the next project stage and served as the basis for the design and creative thinking development toolkit.

RESULTS AND FINDINGS FROM THE IN-DEPTH INTERVIEWS

During the quantitative research phase project partners conducted **35 in-depth interviews** with youth educators and/or youth organizations' representatives to gain an in-depth understanding of the importance and use of creative thinking competencies in each of the countries (Estonia, Latvia and Denmark).

Interviews with youth specialists, career counselors and youth organizations' representatives were aimed to gain a broader view of the methods and tools used for working with youth, including challenges and problems in the use of design and creative thinking methods, as well as the necessary of the methodological support and other related issues to increase adolescents' motivation, self-concept, and development of a growth-oriented mindset.

Number of interviews conducted in each country:

- Latvia - 17
- Estonia - 10
- Denmark - 8

All interviews were conducted between November 2021 and April 2022.

Among the interviewed persons, more than half of the professionals were youth specialists or leaders from youth centers (19 in total), 6 career counselors or coaches, 3 teachers, 3 social educators or workers, 2 youth policy specialists and design educator and NEET specialist.

The interviews were conducted based on a predefined questionnaire consisting of introductory question about 21st century skills and 14 questions which covered three main research themes:

- Interests & competences. Discovery, acknowledgement and development
- Different mindsets and thinking patterns among adolescents.
- Creative and design thinking: tools, good examples, and possible issues

The interviews were conducted virtually via Zoom / Teams in the native language of each country. All interviews were recorded and later transcribed and translated into English.

“21ST CENTURY SKILLS. UNDERSTANDING THE CONCEPT OF CREATIVE THINKING

First set of questions was designed to explore the general understanding of creative thinking concept, its role and implementation among professionals working with youth.

When asked *what comes to mind as “21st century” skills, that go beyond literacy and mathematics, which a teenager should master in order to fulfill one’s potential*, respondents highlighted the next most important skills in the 21st century which a teenager should master such as:

- Digital skills
- Communication skills
- Critical thinking
- Teamwork/co-creation
- Time planning
- Creative thinking
- Self-management skills/ Self-awareness
- Problem-solving skills
- Entrepreneurship
- Importance of being critical, inquiring and curious

One respondent from Latvia answered: *“Young people need to **learn and think independently**, which is one of the most important skills to be encouraged among young people.”*

Youth specialist from Latvia: *One of the most important skills that the school unfortunately doesn’t teach is teamwork, ability to work together in a team, ability to think outside the frame, find substandard access to things, self-study, ability to find information.”*

It was pointed out various times that there is a clear understanding of certain important skills, but the method and tools are lacking to facilitate the development of such skills among youth. Simply put, professionals do know what to teach, but sometimes do not know - how.

General interpretation for creative thinking is quite similar among youth educators and/or youth organizations' representatives in Latvia, in Estonia and in Denmark.

The following were highlighted the most:

- Thinking outside of the box
- Open minded thinking
- Courage and ability to connect variables in new, unconventional ways
- Finding new solutions to existing problems
- Ability to find creative, often unexpected solutions to different problem situations using a non-standard approach and methods.

Leader in international youth camps and teacher of young people from Denmark: *Creativity comes from creating. So, I think that creative thinking is to code itself with that there are always new ways to go, that there are always new possibilities, that there are always new combinations, that there are always new solutions, that when you are "STUCK" try another way. That creative thinking is a super resource that one must keep alive, by continuing to insist and try again and again.*

Every respondent had an opinion about creative thinking. It was interesting to unveil the nuances in the follow up questions, e.g. describing the components of creative thinking or the conditions that need to be provided in order to encourage, pursue and lead the successful progress of such skill.

INTERESTS & COMPETENCES. DISCOVERY, ACKNOWLEDGEMENT AND DEVELOPMENT

In order to assess the issue and form an opinion about the situation in all three countries, the next block of interview questions was aimed to gather detailed information about the level of support the environment provides for the adolescents to define and pursue their future life goals.

When asked **to describe the sufficiency of information and knowledge required to make an informed decision about further steps after school graduation**, respondents in Latvia, Estonia and Denmark were congruous with earlier statements. In general, there is enough information (too much in some cases). The level of information and knowledge varies in each individual case depending on personal experience, knowledge, information and **the environment** (home, school, friends, mentors etc.).

The problem is rather that certain skills are lacking **to process and compartmentalize the vast amounts of information** e.g. youth is not capable to evaluate and deal with the overwhelming data, mainly because everything nowadays is marked as urgent and important.

This is the point when the surrounding environment, namely school and family, plays a crucial role. How much are the school systems and support youth? Are family values aligned with the ones taught at school etc.

Respondents in all three countries emphasized the importance of structured information before its delivery to youth target groups. Sometimes **the use of social networks** e.g. Instagram, TikTok needs to be considered to meet the youth half way, on their own playground. It helps to re-confirm the information through various channels. If adolescents hear and learn something at school e.g. on theoretical level and then come across the same information but differently presented through more casual, common mediums, this information settles through repetition.

Career counselor from Estonia: *„It depends very much on the school, how much the teachers in the school are able to make connections and relate to further choices, how much young people are involved in different projects. The more young people are involved in projects, the greater the awareness of young people.“*

Interviewee from Latvia: *“There is quite a lot of information, but do young people know where to look and get it? It's probably not a priority for them. Information is plentiful but some may not be available or so easy to understand. For example, about alternative options after graduation. Adolescents are confused, they are lost in all the expectations directed towards them. We need to understand, at this age they go through so many physiological and cognitive changes. Yes, they are not little kids*

any more, nevertheless adult attention and patience is still crucial. We need to be present, available, ready to guide them. Yet, are we? What we see is the reality when adults, even professionals, find it difficult to adjust to technological changes and fast growing pace, so how can they provide comfort for youth? It starts from the top, not the bottom. We as grown ups need to be confident yet flexible, nothing is permanent nowadays, but this concept does not sit well with the dogmatic systems. And the educational system is dogmatic.“

During the interviews one of the tasks was to discover the everyday practice, **how youth are introduced to the possible professions and the most important competencies needed to succeed in those professions.**

There are a number of ways in which young people can be introduced to their opportunities. Everything depends individually on each school, educational or recreational center, on the interest level of educators and their willingness to spend additional time.

In practice, Estonian respondents pointed out that career counseling takes place in schools, but there are not enough hours, so it can be considered as introduction to career possibilities, not a decent counseling with necessary follow up.

Latvian respondents also shared information about career days at schools, career events, career classes, career games, open days, visits to universities, and representative presentations of certain professions to school, but the general impression is quite similar to the one Estonian partners shared.

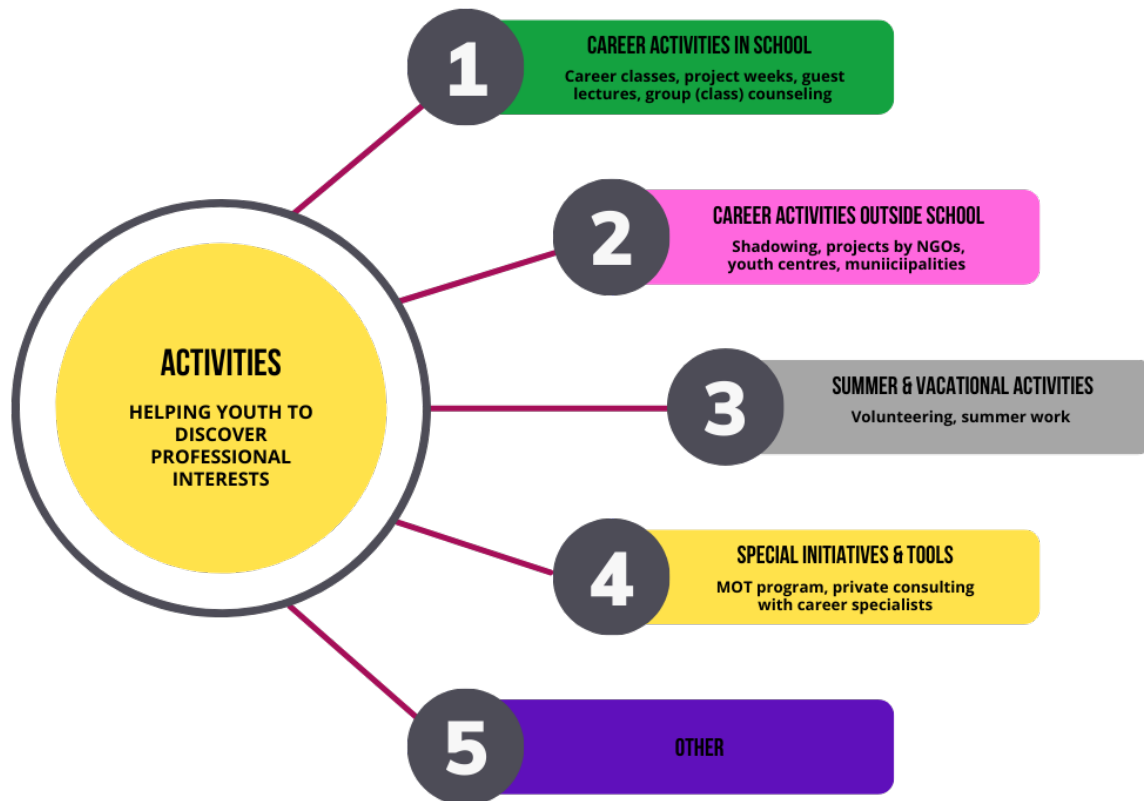
In Denmark education counselors use a tool called the *Kompetence Hjulet* (Wheel of Competences). They also use *Brobygning* (Briding) where the young people visit different education institutions in the last years of ground school which resembles activities like Shadow day or shadowing in Latvia and Estonia.

Problems identified by respondents:

- Lack of qualified modern career specialists in schools.
- Project-based career activities are insufficient.
- Lack of individual consultations and follow ups.

Non-Formal Education trainer and coach from Latvia: *„Career consulting we have is still "old schoolish", it does not teach that a young person is valuable. At school, formal and career education focuses on being accomplished later in life, meaning becoming successful. And success is still defined by earning a lot of money or at least getting a decent, stable job. What is a decent job? If the job is stable, is it also fulfilling? What about true interests, talents? In Latvia, if adolescents say they are willing to take a gap year and explore the world, it is still met with a big question mark and doubts. If a person is smart, with good grades, it is almost unquestionable that they should go straight to university. This mindset is still so deeply rooted.“*

Image No 17 Activities and methods currently being used in practice to help youth discover their interests in the professional field in Estonia, Latvia and Denmark



In each country there are specific activities targeted at youth with mediocre achievements and low motivation, or other risk factors of NEET youth.

In Estonia the work with NEET youth is carried out on individual level through 1 on 1 consultations with a social tutor (pedagogue), on municipal level programs like assignment of local case manager are put in place (not active in all municipalities, lacking cooperation with regional youth centers) or Youth Support program (ended in 2022 and involved only ½ of all municipalities), and on national level by monitoring the grades through electronic school system (*Studium*).

Programs and activities in Latvia are similar to its neighbor country. Individual work with NEET youth is carried out by social workers assigned by municipalities (not every municipality due to lack of people applying for this position). With the help of the European Social Fund, a major project to decrease the number of NEET youth in Latvia was carried out. Now the project (*Pumpurs*) has entered its final stage and the results are being evaluated before proceeding to further steps. Another initiative led by Agency for International Programs for Youth called “Proti un dari” (*You can and you do*) is also aimed for NEET youth and will be completed by December 2023.

The situation is slightly different in Denmark, where adolescents are given the opportunity to take a year (10th grade) in partially state subsidized private boarding school if they are not ready for further education after the 9th grade. If adolescents are not ready to pursue education: counseling parents and teachers is involved in making a full plan to address the situation and make a step by step action plan.

Apart from official programs carried in each country, the main burden and responsibility lies on people directly involved with adolescents in need - youth specialists, NGO workers, teachers, municipality representatives etc. Success of all activities carried out depends largely on the initiative and energy of those individual personalities. In many cases, especially in rural, geographically remote areas or places with prevalent numbers of minority population it is not just professional abilities but rather personal charisma, role model qualities and simple, yet constant presence play the most important role to gain trust of the adolescent. There is no map, no rule book to follow which is both an advantage and disadvantage. Respondents in all three countries mentioned the importance of a variety of tools to be chosen from, mostly because one of the reasons for quitting is burnout, lack of psychological support or insufficient wages.

It was important to discover, **how are youth supported and counseled to make informed decisions about their growth path after basic education (in terms of further vocational or general secondary education)?**

Apart from mentioning already established activities and tools, such as group and individual career lectures, shadowing, internships, masterminds and workshops, summer programs and other well known options, respondents emphasized lack of continuation and importance of further change between the fixed and growth mindset. Even if the mindset concept was not brought up in concrete terms, the idea behind it illustrated the basic flaws of fixed mindset, currently present in majority educational systems e.g. fixation on grades as a marker of success, shaming of mistakes etc.

DIFFERENT MINDSETS AND THINKING PATTERNS AMONG ADOLESCENTS. CREATIVE THINKING: TOOLS, GOOD EXAMPLES AND POSSIBLE ISSUES

While in Denmark Carol Dweck's theory of growth and fixed mindsets did not require an explanation, in Estonia and Latvia few examples to illustrate the concept often were necessary. Dominant highlight that stood out in all three countries was the fact that current educational systems do not provide an essential environment for the growth mindset to thrive.

For growth mindset development respondents mentioned tools that mostly overlapped with the ones for creative thinking, such as cards, role plays, table games, improvisation activities etc. Among necessary environmental qualities encouragement, freedom to perform on a trial and error basis, shame free zone, team support and feedback were mentioned.

Interviewees pointed out aspects of how the use of creative thinking is applied to provoke the formation of multiple ideas for a specific problem solving. Most of them were the direct or indirect outcome of creative thinking in practice, because creative thinking provides:

- Positive atmosphere, safe space.
- Learning by doing approach.
- Freedom to experiment, make mistakes and learn from them.
- Opportunities for brainstorming and idea pitches.
- Enjoying the process rather than the end result.

For further project steps, it was important to establish the most common methods already in use in order to either include them in the tool and (if necessary) adapt to selected target audience, look for the alternative tool or develop a brand new one to fill the existing gap.

Interviewees in Latvia, Estonia and Denmark mentioned quite well known methods to develop youth's creative thinking competencies:

- Coaching, individual mentorship.
- Brainstorming, idea pitching.
- Practical workshops.
- Games (physical and virtual), e.g. Edward De Bono's "How to Get Creative Ideas"
- Idea workshops - world cafe, idea market, *Delft* method etc.

The main challenges in developing creative thinking among youth in all three countries were also similar, regardless of the systemic and socio - economic differences.

Latvian respondents emphasized the overwhelming amount of information and the inability of youth to navigate in such an environment where everything is marked as "urgent", "important" and with the deadline "as soon as possible". They pointed out through empirical examples how adults, professionals are not able to cope with technology and fast paced informational changes, therefore how can youngsters with hormonal and cognitive fluidity succeed?

Danish colleagues agreed with the importance of “practice what you preach” concept. If in theory everyone is familiar with 21st century skills and the importance of being flexible and adjustable, then decent methodology and tools need to be developed and applied to facilitate the learning and re-learning process.

Estonian respondents once again reassured the already mentioned factor of continuation, meaning that most of the activities are project based and short term, without a decent follow up and meaningful long term impact.

The concept of design thinking is relatively new for the school systems Latvia and Estonia. Upcoming school reform “Skola 2030” (*School 2030*). *The Ministry of Education and Science proposes changes to the education approach in Latvia in order to develop, approve and successively introduce such a curriculum and approach to education, which would develop value-based knowledge, skills and attitudes necessary in the 21st century. Schools should attempt to offer children and youths such learning experience, which would result in a pupil's expertise or competence: the ability to use knowledge, skills and express attitudes in a complex way, solving problems in various real-life situations.* (Ministry of Education and Science of the Republic of Latvia, 2023). The reform has already started and is being implemented gradually. New school curriculum is a competence based approach, one of the competences being design thinking.

As one of the youth specialists in Latvia pointed out: *Currently it is good on paper. Teachers and youth workers try their best to dig through the theory of design thinking approach and implement it in practical everyday tasks. Detailed methodology is lacking, especially when it comes to different age groups. We need tools, many tools that could actually help to awaken and then strengthen one skill or another. For example, before we even mention critical thinking, we should acknowledge that adolescents often cannot deal with big amounts of information, let alone critically analyze it. So tools that might help compartmentalize information would be useful first. If we skip this step, youth is left exactly where they started. It's like having a good recipe. If we only have a list of ingredients and a description, how healthy these ingredients are, we still cannot make the dish without step by step instructions and actual measurements.*

In Denmark professionals are more familiar with design thinking concept, but respondents admit that a more integrated approach would be valuable, continuing activities in school systems and youth centers or NGOs. Currently there is no unified system or toolbox but professionals say it might facilitate their work in a great way.

In Estonia, one of the activities where a design thinking approach is applied, is creating an own business company prototype, but this is only in secondary school curriculum, and not meant for the target audience of the current project.

CONCLUDING REMARKS AND RECOMMENDATIONS

1. Youth workers generally are aware of the trending demand for competencies involving critical and creative thinking, digital, communication, teamwork/co-creation, time management, problem-solving, and entrepreneurship skills. They admit to the vast amounts of information and theory, and simultaneously underline the lack of **clear structure** and **tools** to implement the mentioned skills in current educational systems in Latvia, Estonia and Denmark.
2. Youth is described as confused and experiencing difficulties dealing with enormous amounts and fast changing information. Lack of interest and intrinsic motivation often is contributed to inability to connect the ongoing demands in school curriculum and the actual ones of the labor market.
3. Adolescents are expected to be more curious yet remain critical, inquiring and analytical to make weighted decisions. Adults are the ones who need to encourage, facilitate and guide the development of above mentioned skills, but this activity is often missing due to overwhelming work hours, lack of methodology and guidelines for continuing steps from theory to practice.
4. There is evident lack of connection between school curriculum and out of school activities that are or might be connected with further career and life choices that go beyond the grades in certain subjects. In certain cases there is even a competition for youth's attention and time between schools and out of school centers e.g. youth centers which causes even bigger confusion among adolescents.
5. School systems (and professionals working within the school systems) in all three partner states still tilt to fixed mindset rather than growth mindset. This is explained by difficulties to adjust to changing demands, and partially unwillingness of adult professionals to learn or relearn new approaches.
6. Systemic differences in Latvia, Estonia and Denmark do not affect the similar outcome and the situation among youth is similar in all three states according to statistical data, including the numbers of NEET youth.
7. Everyday work with youth in youth centers is conducted in groups and individually. Most success stories on an individual level is attributed to the enthusiasm, energy and motivation of the youth worker.
8. Youth workers who participated in surveys and interviews in Latvia, Estonia and Denmark admit there is no road map or guidelines for their activities with

youth when it comes to developing skills like creative, critical and design thinking hence all steps are derived from imagination, research and knowledge gained by the youth workers themselves.

9. All respondents admit the lack of continuity within the realm of developing and implementing creative thinking skills. Adolescents are experiencing difficulties with cause and effect of the use of creative thinking. Once or twice mentioned as a theoretical concept without empirical testing, creative thinking does not become a cross dimensional everyday practice. There is none or very little advice on how to develop creative and design thinking skills, how to strengthen and spread it and how to evaluate it. Tools and methodology adapted to specific target groups, e.g. youth aged 13 to 16 are non-existing in Latvia, Estonia or Denmark.
10. Career consulting is fragmented and project based, without an individual approach and decent follow up which leaves youth with the same or extended amount of unanswered questions, because of difficulties not connecting the dots between the knowledge received in school and actual demands of the labor market. Teachers often guide youth towards a small set of traditional professions disregarding the spectrum of available professions nowadays apart from becoming a lawyer, accountant, doctor or engineer.
11. Youth are overwhelmed with demands coming towards them from all around therefore often do not even reach youth centers. Big part of youth in rural areas, living in impoverished conditions also do not reach any youth worker, therefore an effort needs to be made to reach those adolescents in need and guide them.
12. Personal qualities of a professional working with youth are essential. In order for an adolescent to feel accepted, understood and not judged, it often has to be a different profession from the one that is available in school. That implies social workers and in house career consultants, therefore youth centers can play a crucial role.
13. There are a number of ways in which young people can be introduced to the opportunities laid upon them. Non-judgment environment is one of the first steps.
14. At the moment, **different schools apply very different practices and approaches to career education and counseling** (in Estonia and in Latvia). It is necessary to develop an ideal career education and services model for schools, which would clearly define the school's role in it, and provide a set of recommended activities for career education.

15. Any developed tool and methodology for creative and design thinking should focus on raising young people's self-awareness and trust to make informed, well weighted decisions - at first guided by an adult professional, later - on their own. Tool should be easy to use, yet comprehensive and explanatory.
16. **Suggestions** from interviewees in developing design and creative development thinking tool for youth aged 13 to 16 years:
 - The toolkit should be designed in such a way that its content can be used in different ways, depending on the need - as a whole and only a certain part of it or a tool, so that it can be easily integrated into no-formal and also formal educational activities with youth.
 - The toolkit should provide opportunities for both individual and group work, and requires guidance and support from youth workers/ mentors.
 - Toolkit must have continuous use. After completing the toolkit, a progress assessment activity should be planned for youth by youth workers/teachers and the opportunity to use the tools again.