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IMPETUS PROJECT GUIDE

TOC FOR EDUCATION

AND SCHOOL MEDIATION

OUTPUT 01

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Introduction

The Impetus Project is a collection of educational activities for the benefit of the wider school community, parents and those interested in education. The foundation of the project is the use of the idea of TOC for Education and school peer mediation in response to the challenges posed to man living in the 21st century. The project is a platform for students and teachers and those involved in education to draw on in the acquisition of: critical thinking, communication and mediation skills, the development of entrepreneurial attitudes, as well as a number of competencies among which are: time management, group work, decision-making.

The direct beneficiaries of the project are elementary school students, i.e. children and adolescents aged 6-15, and the teachers who teach them. Parents are an important part of the project. All these groups learn about the philosophy and tools of TOC and are invited to use them at school during lessons and for personal purposes. Teachers, during training sessions with certified TOC trainers, learn about the methodology of working with these tools, their possibilities for developing the important qualities of critical thinking. Parents understand the role and use of TOC tools during lessons. After training, they know how to use them and how to support their children in using these tools. Parents are also invited to share their knowledge and actively participate in their children's education.

1. General objectives of the project

1.1. Main objective

The project involves the dissemination of TOC tools, by teaching students, teachers and parents to use them. It is intended to contribute to the development of key competencies of the 21st century, which include learning critical and creative thinking, communication, cooperation, the ability to set and achieve goals, perceive cause and effect relationships; perceive, name and solve problems; set goals, strive to achieve them.

Next, the project involves the development of fluent communication and peaceful conflict resolution skills by equipping a group of students with mediation knowledge and mediator competencies. As a result of these activities, a form of mediator group capable of undertaking peer mediation can be formed at school. That is, a group of students who understand the causes of conflicts and know how to attempt effective communication to bring conflicting parties to understand their angst and try to find a good solution for everyone.



Another important aspect of the project is to pay attention to proactive attitudes. Students, in the project's assumptions, acquire skills and knowledge during lessons at school that have their application in shaping them as people who understand reality, who learn communication based on understanding their needs and distinguishing them from strategies (here often called demands), and who communicate in a way that does not hurt themselves or others. The function of shaping proactive attitudes is also played by the part of the project concerning the formation of knowledge and entrepreneurial attitudes.

The international exchange of teachers and students planned in the project, as well as cooperation between countries, is expected to contribute to the creation of knowledge, exchange of experiences, openness, broadening the perspective of seeing the world around us. International contacts also play a motivational role, as they are an attractive and interesting form of sharing knowledge and skills. They open up to linguistic cultural and worldview distinctiveness, and provide an opportunity to experience different thinking about education and its implementation.

Sharing of innovative practices in the implementation of the school program is also one of the important goals of the project. Sharing knowledge, developing teaching strategies using TOC tools, mediation, entrepreneurship all these take place on many levels. That is:

- in the form of training of teachers and parents in partner countries,
- in written form as lesson plans and training materials, guidebooks for teachers and parents,
- through conferences.

1.2. Presentation of project partners

The project involves three partner partakers:

- NSP Lokomotywa in Poland,
- Istituto Comprensivo "Berlinguer" in Italy
- Anykščių Educational Support Center - švietimo pagalbos tarnyba in Lithuania.

1.2.1 NSP Lokomotywa, Poland

Niepubliczna Szkoła Podstawowa Lokomotywa is a primary school in Sopot, Poland, with about 300 pupils and 50 staffs, together with kindergartens. School for children from 6 to 15 years old located close to the beautiful Baltic Coast. School is administrated by the Lokomotywa Educational Association.



School is a community based upon values working in partnership with parents, to develop full potential of each child in a secure and caring environment. Pupil-teacher-parent triad is of essential importance in the development of an individual's personal characteristics. One of the cornerstones of the Educational Project is the comprehensive/holistic education, which involves working in three main areas: academic, social and human.

School promotes teaching methods which focus on critical thinking, autonomous judgment and action together with the skill of responsible social participation.

Niepubliczna Szkoła Podstawowa Lokomotywa tends to ensure functions and education priorities enabling the development of a creative and responsible personality, helping each student develop his abilities and skills, allowing for him to reveal the chosen scientific, artistic, sporting activities, carrying out health-enhancing activities and the prevention of crime, addictions and bullying.

Students, from the very first year, take part in the extended study program of foreign language teaching. They learn two foreign languages: English and Spanish. Teachers use various alternative way of teaching foreign languages, to main a few: CLIL Content and Language Integrated Learning, Jogging with English. Not only does CLIL improves the language and subject skills, but within its specificity it also rises the key competences.

All students are encouraged to participate in a wide variety of activities, like TOCfE, school mediation, literary, ICT, mathematics or national and foreign language contests; sports competitions and international projects. Moreover, we offer art, language, history, music, sport and science clubs.

Each student is included in the individual tutoring program. Tutoring enables students to discover their individual talents and life ambitious goals which lead to personal development. School is the lider of TOC, Tutoring and mediation, using this methods for several years. It has a significant impact on the level of education at the school. It helps students to increase motivation, discover their strengths and work on weaknesses, as well as forming their individual path of development.

Education in school:

- Extended language program (English, Spanish, Polish)
- Extended sport program
- Religion and values
- Mathematics in action



- TOC
- Mediation
- Tutoring
- Computer classes from the first grade
- Activities
- School Sports Club Programme

1.2.2. Anykščių Educational Support Center, Lithuania

Anykščių Educational Support Center is an institution that offers non-formal education for adults. Established in 2004, the organization is a training institution that targets European, national and regional needs taking into account educational, cultural, political and social orientations and the needs of the local community.

The main goals of Anykščių Educational Support Center, are:

- Organizing qualification training for teachers, members of educational institutions and other communities;
- Initiating active participation in education reform;
- Providing methodological and pedagogical support to teachers and schools;
- Supporting teachers who work with students with special needs: providing information, consultation and recommendations.

Spaces of activity:

- Improving teachers' qualifications
- Informal adult education
- Support for students, schools and teachers.

The organization is guided by the creation of lifelong learning opportunities for teachers and adults to be flexible and ready for changes in the world.

The activities of Anykščių Educational Support Center include researching the training needs of educators and specialists in other fields and designing training programs; organizing refresher courses, lectures, workshops, conferences and other events; sharing the good practices of teachers who work creatively as well as the practices of educational institutions; cooperating



with educational institutions in Lithuania and non-governmental organizations engaged in the professional development of educators and other specialists; promoting and supporting cultural activities, organizing exhibitions and works of educators and other adults.

The center conducts various activities: seminars, courses, exhibitions, projects, educational excursions, aimed at different groups: teachers, pre-service teachers, social workers, senior citizens, people with disabilities and anyone interested in acquiring new skills.

Each year, more than 2,000 participants take part in activities and more than 200 students with special needs are taken care of by the staff of the Anykščių Education Support Center. The center cooperates with all educational institutions in the region.

Anykščių Education Support Center provides educational support by introducing programs for teachers, educators, trainers, parents and professionals, as well as for educational organization and management, administration, organization of courses for adults, youth, volunteers, students and parents.

Anykščių Education Support Center has long and extensive experience in organizing international workshops and conducting local as well as international projects.

Anykščių Education Support Center is based on creative teaching, effective working and development methods and implementation of innovative teaching methods, and sees critical thinking as a guiding element.

The center has been providing training in TOCfE (Theory of Constraints for Education) since 2015. The organization conducts workshops for teachers, students on how to implement TOCfE in everyday school work. In 2016, Anykščių Education Support Center became the official representative of TOCfE in Lithuania. The center also publishes materials for schools and teachers.

The center organizes TOCfE trainings for anyone interested in the topic of critical thinking, and is also an ambassador of the program among school principals in Lithuania.

1.2.3. The "Berlinguer School Complex", Italy

The "Berlinguer School Complex" in Ragusa is located in the south of Sicily

- It is a public school consisting of 7 buildings
- School for children: 4 (age 3/6)



- Elementary school: 2 (Age 6/10)
- Secondary school - I^o Grade: 1 (Ages 10/13)
- The school complex has 79 teachers and 920 students

The strategic goals at Berlinguer School Complex are to develop language, mathematical and logical and scientific skills; develop skills through active and democratic citizenship, commitment to intercultural education and peace, respect for differences and dissimilarities and dialogue between cultures, foster the undertaking of responsibility and solidarity and care for common goods, as well as awareness of rights and responsibilities; develop digital citizenship skills; prevent school dropout, prevent discrimination and bullying; strengthen inclusive education and the right to education. In all Berlinguer School Complex classrooms, teachers develop computational thinking through coding. Berlinguer School plays a key role in the context of teacher training, evaluation, monitoring and assessment of teaching, organizing courses and experimental workshops. Berlinguer School Complex stands at the head of a network of schools that includes half of the province.

Berlinguer School Complex's main goal has always been to promote new educational experiences in the school system with special attention to the local environment. We take advantage of all opportunities that can expand and strengthen the latest developments in education and didactics. Teamwork and continuous professional development to improve the quality of teaching and student performance in our school have been our hallmark for years.

1.3. Presentation of planned activities

The project involves a series of training activities in TOC philosophy and tools. TOC training includes education of staff of partner institutions and parents. Students are targeted for lessons using TOC tools, development in mediation and entrepreneurship. Forming openness to new solutions, going beyond thinking, creativity, communication. The project also involves the dissemination of the methods used, sharing knowledge through materials for use in schools and educational institutions, as well as conference presentations and workshops.

1. Series of training hours on TOC tools for teachers in Poland, Lithuania and Sicily.
2. Series of training for parents of students.
3. Lessons implementing the curriculum for a given age group using TOC tools; additional lessons. Classes conducted both on-site and online.
4. Classes developing communication and mediation skills for willing students.
5. Classes shaping entrepreneurial attitudes, for a selected group of students. With the involvement of experts from outside the school and co-created in international groups.



6. Knowledge sharing took place at two international TOC conferences and a conference in Gdynia, August 2022.

1.4. Presentation of materials

As a result of the project, numerous materials have been produced in the form of educational aids aimed at separate groups, teachers and educators, parents and students. The materials can be downloaded from the website, which is the project's repository. The materials include:

- TOC and Mediation Implementation Guide for Elementary Schools.
- TOC training materials for teachers with numerous practical examples.
- Scenarios for classroom lessons and lessons taught online. These are lesson plans using TOC tools.
- Workshop materials for parents on TOC critical thinking tools.
- Guide for students for the entrepreneurship project "Ambitious Target Project".
- Fairy tales for younger children - for introducing TOC tools.

1.5. Expected results

The project's activities will result in the creation of educational materials.

According to Objective 1., the TOC assumptions and the three basic TOC tools will be implemented during school lessons of elementary school students aged 6-15. Students and teachers of partner institutions will be equipped with understanding of the ideas and skills to apply TOC tools. A group of students will be introduced to the process of peer mediation, as a result of which students will become mediators capable of mediating peer conflicts. They will gradually become independent in the process.

In accordance with Objective 2., methodological materials will be created for teachers, students and parents.

According to objective 3., teachers and students will be trained by certified TOC trainers, become certified, and will be able to train themselves and use TOC tools in education working on model materials, and over time develop their own ideas for classes using TOC tools.

In the institutions involved in the project, teachers will participate in long-term preparation for working with innovative methods. Stage one, teachers have the opportunity to participate in training courses plus are invited to hospitalize lessons conducted using TOC tools. Stage two - willing teachers co-create materials - lesson plans under the guidance of an experienced trainer,



implementation of new materials during lessons in the subject taught. Evaluation of these lessons.

2. The philosophy of TOC for Education

TOC is not just a tool box, it is much more. It bases on people's wisdom, critical thinking, and common sense. The idea gathers people who want to teach peace, who admire values such as equality, social justice, high quality communication, children's development and many more. All these for change to make the world a better place.

2.1 What is TOC

TOC tools that have been used in business for years can and, thanks to the TOC for Education branch, have applications in education in many countries around the world.

TOC - Theory of Constraints, is a method proposing the use of three simple tools in education to support critical thinking. The task of the TOC tools is to identify constraints or places that inhibit development and the introduction of fruitful change. The tools have many applications. They can be used for learning, analysis and interpretation, and can also be used in implementing curriculum content, acquiring information, organizing knowledge and structuring information. Through the use of TOC tools, we can illustrate and show in a simple way the complex relationships of the problem being analyzed.

TOC tools can be and are used by teachers of all subjects. In education, they are used already at the level of kindergarten and early childhood education. Introduced in the first years of schooling, they make it possible to form habits of developing thinking in students from the beginning. TOC supports higher-order thinking skills, which are (after Bloom): analysis, synthesis, inference, application, versus only memorization and understanding. At the same time, TOC tools support the learning potential of children and adults by enhancing aspects of learning such as teamwork, collaboration, joint goal-setting, and students taking ownership of the learning process. They support the autonomy of the learner, who can logically argue their statements, apply knowledge in new contexts, make responsible decisions, make logical inferences and support their positions with arguments. Students, working with these tools, take responsibility for the learning process. They create knowledge, rather than merely learning to assimilate ready-made schemes and content. TOC supports learning to distinguish facts from beliefs and common knowledge. TOC teaches reading between the lines understood here as



critical reading of information, i.e. extracting facts and the most important information from the plethora of content.

In addition to the intellectual aspect, working with these tools supports emotional development and improves the communicative competence of their users. TOC supports both intellectual and emotional development of the student. It contributes to the precise expression of the goals that students, teachers and educational managers want to achieve.

TOC tools contribute to the peaceful resolution of an individual's internal and external conflicts, which are an integral part of school life. Children learn to see the world in all its multicoloredness and complexity, with a variety of human dilemmas, desires and aspirations. Working with these tools teaches us to find solutions that are good for everyone. Solutions that are not compromises, but answers to deep needs. They are tools that contribute to distinguishing between demands or strategies and needs, which determine human actions.

These tools also have a function in supporting memory and consolidation of material because of their simple graphic form. Simple in their graphic structure, they clearly illustrate thoughts and contribute to the reproduction of knowledge while providing a graphic representation of the content in such a way as to support the visualization of thoughts and the memorization of new knowledge.

In summary, the use of TOC tools at school supports critical thinking and memorization (branch), communication and psychoeducation (cloud). They are excellent for the various stages in project work. They are used to set goals, to diagnose the current state of knowledge and recognize the direction of students' interests, and in obtaining understanding. They are tools for awakening curiosity about the world and man.

TOC tools are designed to support education toward development by clearly setting and naming goals. "Every development is a change, not every change brings development." These words were spoken by Dr. Eliyahu M. Goldratt, creator and originator of the Theory of Constraints. According to TOC, in order for planned, sustainable growth to occur, one must answer three questions:

1. **What** do I want to change?
2. **What** do I want a change for? (What kind of change do I expect)
3. **How** to bring about the assumed change?

TOC works on the basis of deep humanistic values and is based on four basic pillars, i.e.



1. **Reality is simple, every system has an inherent simplicity.** Perceiving reality as a very complex system keeps us from taking on challenges and solving problems.
2. **Every conflict can be resolved.** We don't accept conflicts as they are.
3. **Every one is good.** We don't blame things or people. Believing in people's good intentions is to get conflicts resolved on a win-win basis.
4. **Never say "I know",** assuming that I know everything or that I know nothing deters further work. Every system can be strengthened, improved, developed.

2.2. TOCfE – TOC for education

TOC is a tool used in business, TOCfE (TOC for Education) is a separate branch of TOC and has its applications in education. This method reinforces the shift from frontal teaching focused on teaching and the teacher to teaching focused on the student, learning and knowledge creation. An important aspect of using TOC is giving voice to children, activating students in the lesson. The students become responsible for the learning process. The goal of working with these tools is to acquire independence in creating knowledge, making hypotheses, and arguing their points. An important aspect of the use of TOC tools is also that their use does not require spending additional time, and all work is done on the content included in the curriculum. They can be used in all teaching subjects.

2.3. Description of the TOC tools

There are three tools in the TOC method, which we call: the logic branch, the conflict cloud and the ambitious target tree. All TOC tools have a simple graphic form and are simple and practical. The simple graphic form makes it possible to use them widely. Each tool has its own well-defined application inside what they all have in common, which is to support students in developing the aforementioned aspects of critical thinking and autonomy in the process of learning, acquiring and processing information and overcoming barriers. The simple form of the tools is to make their use available to even the youngest children who have not yet acquired the ability to use writing, by encoding information in the form of pictograms. Younger students manipulate pictures or other pictorial forms. In their case, TOC tools are used to depict a story, a story, an event. At the same time, even in the youngest years, the use of these tools is accompanied by challenging, age-appropriate problems to solve. The older ones use TOC tools to solve more complex dilemmas, challenging tasks and when searching for answers to difficult questions. They use complex diagrams and a multi-faceted combination of tools.

Technically, TOC tools are used to introduce new content, deepen knowledge, consolidate material, and build communication. Mediation tools in conflict resolution are used to learn how to see, name and resolve both internal and external conflicts. They provide an opportunity to see the conflict from both sides and recognize needs. They are a communication tool. The way to learn TOC tools is to use them.

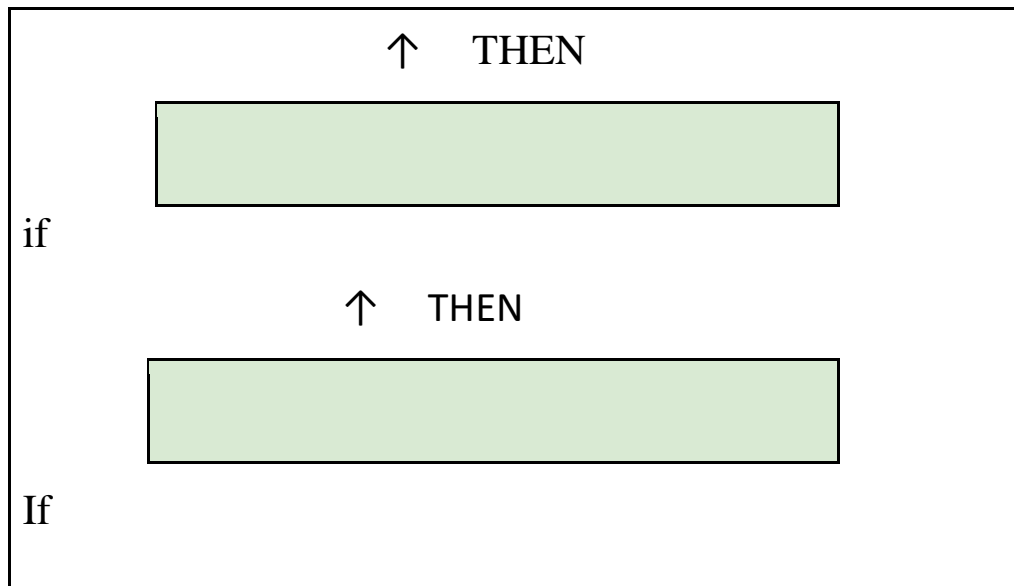
Below is a brief description of the application of each TOC tool.

2.3.1. Logical Branch

- It is a form of analysis of the provided text or material.
- The use of a branch makes it possible to transform a solid text into a branch, that is, a structure based on cause-effect relationships written in the form of an IF-then relationship.
- The purpose of the branch is to learn to distinguish between facts and opinions.
- It enables and accelerates the acquisition of independence in the learning process.
- Facilitates seeing connections of information that may seem independent, unrelated.
- Allows one to see the consequences of one's own behavior or decisions.
- Teaches the argumentation of choices (if THIS is THAT, THEN ...).
- Teaches to distinguish between information given in the text and conjecture, content rooted in common knowledge.
- It teaches you to read between the lines.

The logical branch teaches how to logically present an argument. Linguistically, we use words that show the relationship: IF - THEN. If a condition occurs, it will produce a certain effect. The figure below shows a graphical representation of a SIMPLE logic branch, which we work with the youngest children. It is worth noting that logic branches at higher stages of education are/may be much more complicated. Very often enriched with the condition and (if TO and TO → TO), and the justification because.





rys.1 LOGICAL BRANCH

The branch has its uses in all subjects. With its help we can explain phenomena and facts, as well as relationships between people. Examples of the use of the branch in nature lessons:

- Why leaves change color
- Why birds fly away to warm countries
- How coal is formed

Branch as an educational tool

The branch is a valuable tool for supporting students, teachers and parents in understanding certain educational processes. It allows one to understand the behaviors and decisions that are made in the classroom and the broader educational process, such as changing the date of scheduled homework assignments, changing or not changing decisions about a student's final grade, or informing or not informing parents/guardians about undesirable student behavior in the classroom. The branch shows that every behavior has an origin, that sometimes we can completely fail to predict the reasons why a student behaves in a certain way. Through the use of the branch, we can see - written down - the consequences that may arise from our behavior and be the result of our decision.

Below, there are some examples to practice “what happens if” for educational work with students, as well as behavior analysis for parents and teachers.

- For students:
 - If I don't practice in gym class, then
 - If I talk in class, then ...
 - If I accost/kick/stab/intimidate, then

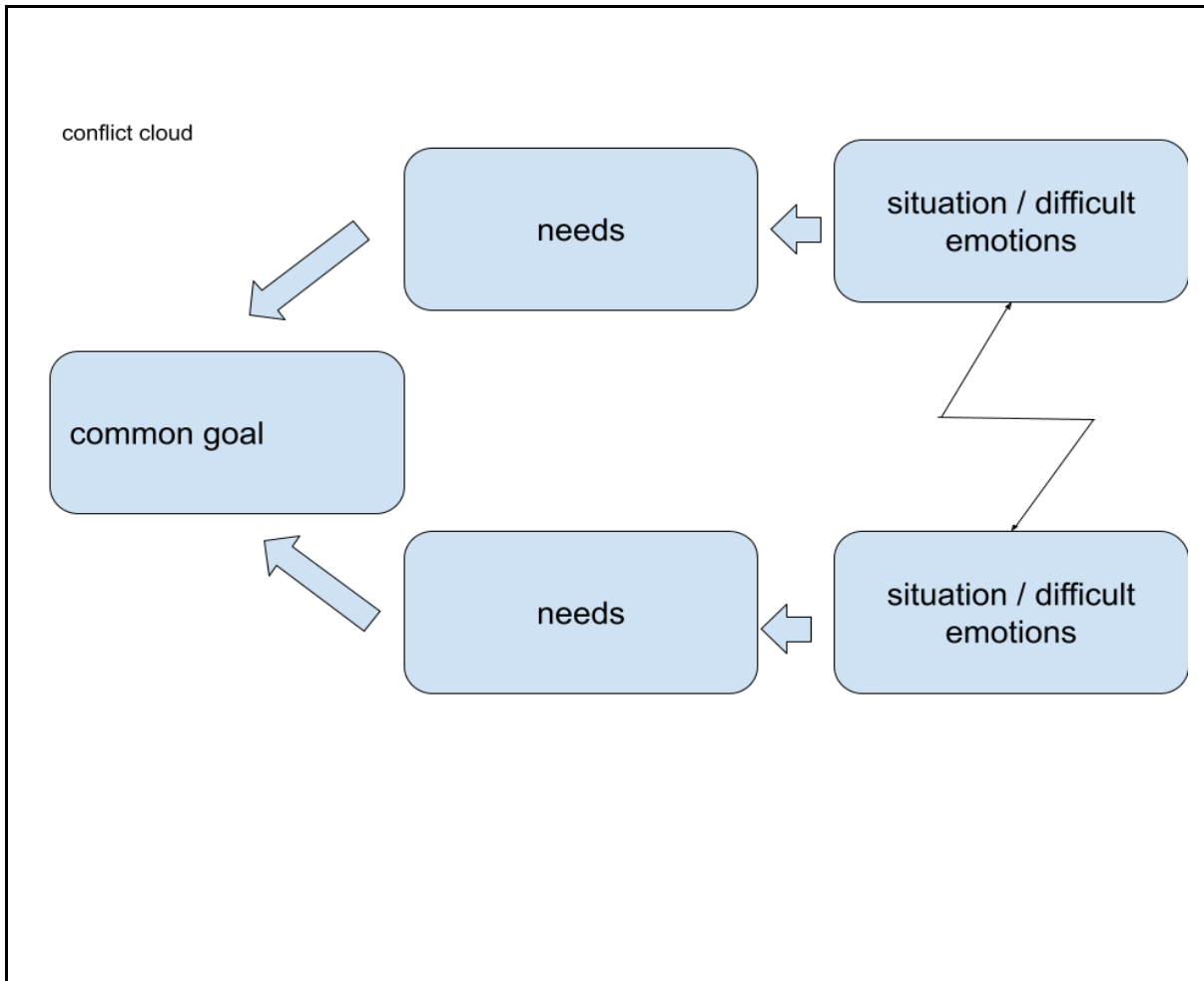


- For teachers:
 - If I don't tell about a student's difficult behavior to his parents, then ...
 - If I tell about a student's difficult behavior to his parents, then
 - If I am consistent, then ...
- For parents:
 - If I focus primarily on my child's shortcomings and deficiencies, then ...
 - If I help my child with homework, then ...
 - If I clean my daughter's room for her, then ...

2.3.2. Conflict cloud

- The purpose of the cloud is to deal with conflict situations, name it and understand it.
- The cloud helps to analyze the causes of conflict by naming the opposing demands, the underlying needs, and the common goal that unites the conflicting parties despite their differences.
- The premise we follow in TOC is to seek a win-win solution; we do not settle for compromise.
- We strive to identify and satisfy needs (or consciously decide to postpone satisfaction of a need or bemoan its unfulfillment). All needs are treated as equally important, good and worthy of satisfaction. The needs of both parties are equally important.
- The cloud can be a high-value tool in educational lessons or mediation.
- The cloud provides a tool to help evaluate existing solutions and support the creation of new ones of our own.
- The base for cloud work can be real situations, conflicts experienced by students or source texts, stories, fairy tales, stories, legends.
- The graphical representation of the cloud shows that there is a conflict - this is expressed by the arrows of the thunderstorm lightning.

Graphic presentation of the TOC tool - conflict cloud.



rys.2 CONFLICT CLOUD

The cloud has its uses in the mediation described below. It can be used to model behavior, and can also serve as a prelude to mediation by visualizing an internal or external conflict for oneself. Drawing a cloud helps to name the conflict, highlight the support needs of each party to the conflict, and show that both parties to the conflict have a common goal that unites them despite their difference of opinion.

Examples of conflicts to which the tool can be applied,
conflict cloud:

1. Educational aspects, daily dilemmas:
do homework late - go to bed at a fixed time;
go to training - meet with friends;

2. Example from literature:

Greek myths, e.g. Daedalus and Icarus, Icarus' conflict: to fly according to his father's orders,
to try to fly higher/lower;
to fly - to stay on an island, ...



3. Nature, ecology:

build new roads - don't build;

4. Economics:

fair trade, e.g., buy cheap - buy expensive products, verified that no children worked in their production, and workers were fairly compensated;

5. Geography:

e.g., conquering new lands, e.g., introduce one's religion and culture - preserve the local one;
religion/ethics, e.g., take risks with one's own life or health - save others' health/life

6. History, you can show here using the cloud the complex and simple dilemmas of great rulers, leaders, politicians, kings, emperors, etc., and the conflicts of ordinary people in very different life situations, e.g.

- divide the country into districts - maintain a large strong state
- start a battle - seek peaceful solutions
- join a war - remain neutral
- impose new laws on people - let people decide for themselves



2.3.3. The ambitious target tree

- The ambitious target tree teaches you to set targets to increase your performance.
- The purpose of the ambitious target tree is to help you achieve your set goal by defining and planning strategies to reach a specific goal.
- The ambitious target tree consists of successive action steps, starting with identifying a need, a state of affairs that needs to be changed.
- The procedure for working with this tool involves naming the obstacles to achieving the goal and turning them into intermediate objectives (IO), makes one realize the time frame, resources needed, possible means and support persons, and determines the order of action.
- The ambitious target tree teaches you to look for multiple solutions to one intermediate objective.
- It is a tool perfectly suited for group work.

Ambitious Target		
Obstacles	Intermediate Objective	Actions

rys.3. AMBITIOUS TARGET TREE

Working the ambitious target tree consists of the following action steps:

1. Identifying and clearly defining the goal.
2. Writing out a list of obstacles that prevent the achievement of the ambitious target.
3. Proposing intermediate objectives that emerge from the obstacles noted and named.
4. Systematize intermediate targets in the order necessary/required for implementation.
5. Planning specific actions within a certain time frame.

Examples to work with the ATT tool - Ambitious Target Tree - set the measurable goals.



1. I will pass the English exam at the end of 8th grade with a very good grade.
2. I will learn what "entrepreneurial attitude" means and how to develop it.
3. I will develop my entrepreneurial skills in planning and sales.
4. I will figure out how to earn 200zł in the vacations.
5. I want to go to the mountains on vacation and climb Mt. Swinica. My goal: I will plan a trip and a week's stay in the mountains - the Tatra Mountains, with the summit of Świnica.
6. I have no money to go on vacation. My parents will work, and I will actively relax for 2 weeks. My goal: they will spend an attractive two weeks in the Tri-City with a small budget.

3. Introduction to School Mediation

"Mediation and other approaches to conflict resolution are also being introduced in primary, secondary and higher education. Some ventures are geared toward teaching conflict management skills by integrating the topic into the general curriculum, while others focus on developing real-world peer mediation".¹

School mediation focuses at resolving conflicts in schools. There are many different methods of dealing with difficult situations at school proposed by teachers, school counselors and principals. There are also quite a few expectations from parents regarding conflict resolution at school. In Poland, until now, a lot of school efforts have focused on finding the perpetrators, the culprits, determining who was at fault, and once the fault is determined, the consequences follow. Throughout this process, the teacher is heavily involved, and it is the teacher's responsibility to resolve the conflict. The teacher establishes the facts, determines who is harmed, who is at fault, and in many cases takes responsibility for determining the consequences of the event. Often students present the facts in a way that conflicts with the version of the other people involved in the conflict, making it difficult to determine the true version. By consequences we mean remarks in the gradebook, exclusion from lessons, exclusion from student privileges, school outings, etc. Unfortunately, in many situations such conflict resolution is short-lived, focusing on punishing the culprit. The teacher's attention is redirected primarily to talking to the person who is the perpetrator of the event. Resolution of school conflicts based on determining blame and consequences for breaking the rules very often overlooks making amends to the person who was harmed during the conflict, and the focus of

¹ Moore Ch. W., „Mediacje. Praktyczne strategie rozwiązywania konfliktów.” Oficyna Wolters Kluwer Polska Sp. Z o.o., Warszawa 2009, s. 40.



the teacher's attention to resolve a school conflict tends to be more on the culprit than on the harmed party.

Another consequence of the aforementioned conflict resolution strategy is that the responsibility for the conflict is taken off the shoulders of the students, both children and adolescents. A situation in which teachers take control of the conflict causes students not only to remove responsibility for the course of the situation they are in, but also, in most cases, to have little influence on how the conflict will be resolved. In addition, they miss a unique opportunity to learn how to deal with a similar situation that may occur in the future. Students get into a pattern of shrugging off responsibility, avoiding confronting a difficult situation or difficult emotions, and expect adults to take the lead on solving their personal problems.

The consequence that the described strategy for resolving school conflicts brings with it is also a situation in which parents adopt this way of dealing with conflicts and expect the school to take responsibility for the difficult situation and resolve it. Moreover, a similar style very often functions in resolving disputes between parents of students, or between a parent and a teacher. How else to deal with school conflicts, which are a school daily reality? One way to deal with school difficulties is through school mediation. The movement promoting school mediation has been developing in the United States since the 1960s. "Resolving school conflicts is essential in creating a safe and disciplined environment. It is an alternative to the system of punishments and rewards. It allows teachers to change their approach to students and gains their approval and goodwill."

School mediation can take two approaches. In the first case, the mediator between the quarreling parties, the students, is a teacher or two teachers. In the second case, it is peer mediation, when the mediators are students who mediate between other students who are in conflict. School mediation can involve not only students, but also adults who are involved in any way in the school space, i.e. teachers, parents, principals, administrative staff.

In school mediation with students, children are invited to meet. The main difference arising from the use of the mediation process at school is the transfer of responsibility for resolving the conflict to the parties involved. First of all, in order to participate in mediation, students must be willing to join the process. Students have the opportunity to tell not only how the conflict developed from their perspective, but how they felt about it. A good mediator will conduct the mediation in such a way that the parties have a chance to talk about what their needs are. During a mediation meeting, students not only present their point of view, but also have a chance to listen to the other side. The most difficult part seems to be creating the space for students to



listen to each other. Listening and being listened to are essential elements of empathy. In turn, developing empathy in children is hugely important for building good relationships between them and better communication. Developing the ability to empathize with the other party is a difficult skill, almost unattainable in a state of emotional arousal. Through the use of mediation at school, students have the opportunity to practice this skill from an early age. In addition, students have the opportunity to express their needs, name them and hear the needs of the other party. During mediation, the focus is on resolution. The parties to the mediation, in this case the students, regardless of their age, are invited to seek a solution. If the mediation involves the teacher as mediator and the students as parties, the students are invited to seek such an agreement, possible solutions that will be satisfactory to both parties. While in situations of conflict resolution by the teacher, the responsibility for the conflict was largely taken off the students, in mediation it is the students who have a say in the course of the conflict and it is on their side how they will resolve the conflict, they bear the responsibility for the conflict. This change in approach to conflict situations has a not inconsiderable role in shaping young people's awareness and skills, which they will develop throughout their lives. School mediation is not only a way of dealing with difficult school situations, of which there are many, which can have a different course and varying nature, but above all, mediation creates a space for children to learn how to resolve conflicts, how to cooperate with others despite different opinions or other views. Participation in mediation, which is conducted with due diligence and in accordance with the aforementioned principles of impartiality, neutrality, voluntariness and confidentiality, shapes in children a sense of empowerment, builds the belief that they are capable of dealing with conflict situations. In addition, it shapes in children and adolescents a sense that it is the situation in which they find themselves that is difficult and needs to be resolved, and that is where attention should be focused, while it allows them to avoid accusing and negatively judging others with whom they are in conflict.

4. First stage of project implementation

The project implementation process can be divided into several stages. The guide is intended to be an aid to facilitators in implementing the project and managing the change. The process we have described to support schools, the teacher training center, principals and teachers in introducing key competence education in the classroom as a permanent element of school work has been based on the experience of specific institutions and individuals with specific resources. Each time the implementation of a project requires critical thinking about



the team's and institution's own resources and adapting it to the capabilities and requirements of the supported group.

The implementation of the IMPETUS project is a process, but it is not a one-time step and it is necessary to have a long-term work attitude.

4.1. Team building

At this stage it is necessary to identify the people who will be responsible for implementing the change in partner institutions. The project coordinators naturally took on this task, while it is important to build a team at the very beginning to support the implementation of the project.

It is important that those involved in project management have previous experience in implementing new methods, training programs.

Joint goal setting. Discuss the joint activities to be undertaken to achieve the set goals. Setting deadlines for activities. Establish approximate dates for meetings to enable effective training.

4.2. Trainers' training

The success of the implementation of the IMPETUS project is based, among other things, on the training in the TOC method for Education, of all project participants.

TRAINERS' TRAINING

Each institution recruited individuals who were willing to undertake the TOC for Education trainers' training. The training for Italian and Lithuanian participants was conducted in February 2019 in Sicily. The training lasted 3 days stationary, then, due to the pandemic, it was held in several online sessions. The training was interspersed with homework assignments that allowed participants to work on their own, and further meetings began with questions and concerns about the application of the method. Below is the trainers' training agenda.

AGENDA, PART 1.

1. Introduction
 - 1.1. What is TOC
 - 1.2. About TOC creator
 - 1.3. Possible applications of TOC for Education, why not just in school
 - 1.4. The role of critical thinking in education
2. Change



- 2.1. What to change?
- 2.2. What to change into?
- 2.3. How to implement the change?
3. Logical branch
 - 3.1. Identification of key facts
 - 3.2. Integration of key facts
 - 3.3. Drawing conclusions - reading between the lines
 - 3.4. Group and individual work
 - 3.5. Reflection
 - 3.6. Evaluation of assumptions and conclusions
 - 3.7. Application in work with students: in lessons, decision-making, behavior change
 - 3.8. Making connections between the topic of the lesson and student motivation (relevance, connection to life, creative problem solving)
 - 3.9. Application- student decision-making
 - 3.10. The most common mistakes in creating a logical branch

4. Summary

AGENDA, PART 2.

1. Introduction
2. Conflict Cloud
 - 2.1. Identifying demands in conflict
 - 2.2. Naming the needs behind the requests
 - 2.3. Checking the logic of the assumptions
 - 2.4. Evaluating the proposed solutions
 - 2.5. Creating relevance between the lesson objective and life situations using the "conflict resolution cloud"
 - 2.6. Application in everyday life
 - 2.7. Group and individual work
 - 2.8. Examples of activities
 - 2.9. Cloud as a tool to support communication of children with disabilities - example



4.3. Implementation of methods in partner institutions

Future trainers were given tasks during training, related to implementing the change at their institution. One of the elements of the training on the TOC tool - the ambitious target tree, was the discussion of potential obstacles related to the implementation of the methods, also in the context of the pandemic, which significantly hindered the work of the new tools. In addition to the list of obstacles, participants reflected on and created intermediate goals and then a list of actions, which supported the process of achieving the ambitious goal. The trainees also prepared their own scenarios for working with children, which were discussed at subsequent training meetings and during individual email contact. Some examples of work, lesson plans are made available as part of the teacher's manual.

5. The second stage of project implementation

The next stage of the project's implementation is the introduction of peer mediation and the creation of School Mediation Clubs. Due to the fact that the project was implemented during the pandemic, when schools in Poland and Lithuania were in remote education mode for many months, and the school in Italy was often in hybrid mode, the School Mediator Clubs project was delayed. Any mediation training, due to its very demanding content and the need to conduct many forms of workshops, mediation scenes require direct contact.

5.1. Second Trainer Training

Due to the pandemic, the second part of the trainer training was conducted in an online setting. Attached to the chapter is a sample presentation from one of the online training sessions held during the meetings.

AGENDA, PART 3.

1. Introduction to the Ambitious Target Tree tool.
2. Identifying and defining what an ambitious target is.
3. Identifying obstacles that prevent goal achievement.
4. What intermediate objectives are.
5. Defining actions.
6. Creating a diagram of the ambitious target tree.
7. Examples from the lesson.
8. Individual and group work.



foto 1. Online training session. In the picture: trainee Marta Piernikowska-Hewelt with participants from a partner school in Italy.

During the online training, examples of online lessons were also presented. Ready-made scenarios, along with presentations, were included in the materials for teachers provided by the IMPETUS-TOC project.

MEDIATION TRAINING

The mediation training was conducted by certified mediators. It consisted of 3 components:

1. The mediation training was conducted by certified mediators. It consisted of 3 components:
 - 1.1. Building a school environment conducive to conflict resolution
 - 1.2. Building a class team (Team-building in the classroom)
 - 1.3. Principles of consensual coexistence
 - 1.4. Theory and types of conflict
 - 1.5. Interpretation in conflict
 - 1.6. Anger management
 - 1.7. Effective listening
 - 1.8. School mediation
2. Combining the TOC method during school mediations



- 2.1. Use of "cloud" to resolve school conflicts
- 2.2. "Branch" as a process of coming to the consequences of one's own actions
3. Creation of the School Mediator Club
 - 3.1. Selection of future school mediators
 - 3.2. Construction of a school trust survey
 - 3.3. Mediation training for students
 - 3.4. Mediation scenes
 - 3.5. "Promoting" school mediators among the school community
 - 3.6. Supervisor of the School Mediator Club - role and tasks

5.2. Creating a Mediator Club

IMPETUS promotes mediation as a permanent part of conflict resolution at school, both by teachers and by students. The School Mediator Club initiated by "IMPETUS" is an innovative project, not only because we train and invite students to mediate school conflicts, but also because we expand mediation to include a TOC element. The goal of such activities is for students to acquire communication and cooperation competencies with different people. In addition, teachers have the opportunity to expand their pedagogical workshop with new skills.

The formation of the Mediator's Club can follow the scheme created in the IMPETUS project:

1. Selection of future school mediators - conducting an anonymous survey of the school trust.
2. Organizational meeting
 - 2.1.1. Creation of a joint agreement of the Mediator Club, signed by members.
 - 2.1.2. Workshop on mediation
 - 2.1.3. The difference between the court process and mediation.
 - 2.1.4. Principles of mediation, creation of a mediator's monologue.
 - 2.1.5. Rumor versus facts.
 - 2.1.6. How to ask during mediation - the role of asking open-ended questions.
 - 2.1.7. Attentive listening and paraphrasing.
 - 2.1.8. "Being in someone's shoes" - empathy during mediation.
 - 2.1.9. Types of conflicts.
 - 2.1.10. Mediation scenario.
 - 2.1.11. Integrating TOC tools into mediation - exercises.
 - 2.1.12. Role-playing.



- 2.1.13. Presentation of School Mediators to the school community. Certificates.
- 2.1.14. Peer mediation and care of teachers.
- 2.1.15. Meetings of School Mediators - discussing difficulties, successes, sharing experiences.
- 2.1.16. Summary of work.

5.3. Parental involvement - workshops

Bringing change to a school requires the interaction of all stakeholders, namely teachers, students and parents. It is important that train-the-trainer, teacher, student work be followed by a workshop for parents. The purpose of such workshops is:

1. To familiarize with the methods with which students work.
2. To involve parents in educational interactions.
3. Promotion of school activities.

Due to the completely different nature of meetings with parents, we propose the following activities:

1. Invitation to workshops during parent meetings, at the beginning of the school year.
2. I workshop meeting - discussion of the philosophy of TOC, discussion of the tool "logical branch", exercises - group work individual.
3. II workshop meeting - presentation of the "conflict resolution cloud" tool, exercises - group and individual work.
4. III workshop meeting - presentation of the tool "ambitious target tree", exercises - individual work.
5. Distribution of training materials to parents.

We propose that the workshop for parents last 2 hours.

During the implementation of the IMPETUS project, due to the number of willing parents, the workshops were held on several dates and conducted by different trainers.

Training workshops for parents, is also an opportunity for new trainers to improve their skills during training.



5.4. Creating scenarios based on the core curriculum, educational activities and developing fairy tales for the youngest participants of the project

After a period of training in which the project participants took part, the period of implementing the new knowledge into everyday work and looking for interesting solutions during lessons began.

Through online meetings, participants were able to exchange knowledge and ideas. The pandemic period created space and, in a way, forced the need to create and develop lessons that would be engaging, interesting and, at the same time, convey the necessary content in a virtual version. Therefore, within the framework of the project, scenarios were created both to work in the stationary version and scenarios with ready-made presentations and materials for teaching in the online version. The materials were created on the basis of the core curriculum of elementary schools in Poland, Lithuania and Italy, and there are materials for both early education students, as well as scenarios for conducting subject lessons aimed at older students.

In addition, the goal of our project was to implement school mediation with elements of the TOC program, in order to create an atmosphere that fosters conflict resolution, creating relationships based on respect, mutual understanding of needs. Accordingly, scenarios were created for activities that we conducted during parent-teacher meetings, the mediator's club, or in conflict situations. Some of these scenarios have been included in the teachers' handbook with scenarios, and some are discussed in the training materials.

In order to encourage teachers teaching the youngest children to use TOC tools and to show how the materials available can be used, fairy tales written specifically for the project were created. The fairy tales have been written in such a way that TOC thinking tools, logical branch and cloud for conflict resolution can be introduced from them.

6. Ambitious Target Project using the TOC "Ambitious Target Tree" tool

As part of the project, we conducted an entrepreneurship project involving students from Italy, Lithuania and Poland.

The coordinators from Lithuania and Poland, together with the students, decided that they would invent and develop products to sell, and donate the total proceeds to support those affected by the war in Ukraine. The Italian coordinators, together with the students, decided that they would develop a book of fairy tales, which they would publish and give to the other students at the school. The project proceeded in the following stages:

1. Determining the topic.
2. Involving experts.
3. Working with students.
4. Training with the ambitious target tree.
5. Working on your own project using the tree method.
6. Business plan - working with experts.
7. Division of labor.
8. Cooperation with designers (jewelry designer, book authors, handcraft - authors).
9. Working in groups and division of tasks.
10. Production of products (key rings, books, small crafts).
11. Development of marketing strategy - creation of logo, name, posters, flyers, cooperation on fb page.
12. Selling products at school fairs, festivals, school events.
13. Donation of funds for predetermined purposes.



foto 2. SP LOKOMOTYWA students making BreLOKO keychains.

Business Week - differently than planned, the event took place in online form. Despite previous arrangements, due to covid-19. For three days, the participating youth had sessions with male and female experts on the following topics:

1. Marketing, building marketing strategies.
2. External financing, possible sources of funding.
3. Business psychology - cooperation in the project.
4. Global market. About the impact of war and other events on the global market.
5. About empathetic approach in business - special TOC guest - Yumiko Yoshida, TOC business consultant in Japan.

In addition to the lectures, students participated in joint online sessions during which they exchanged experiences. They presented their products, talked about the whole process of making keychains, felt objects, books. Everyone had a chance to talk, make presentations, and develop communication skills in English.

The business week ended with a celebration and an online meeting with the president of the "TOC for Education" foundation, Kathy Suerken, who summarized the cooperation to date, talked about educational youth projects around the world and read out the list of students who received certificates.

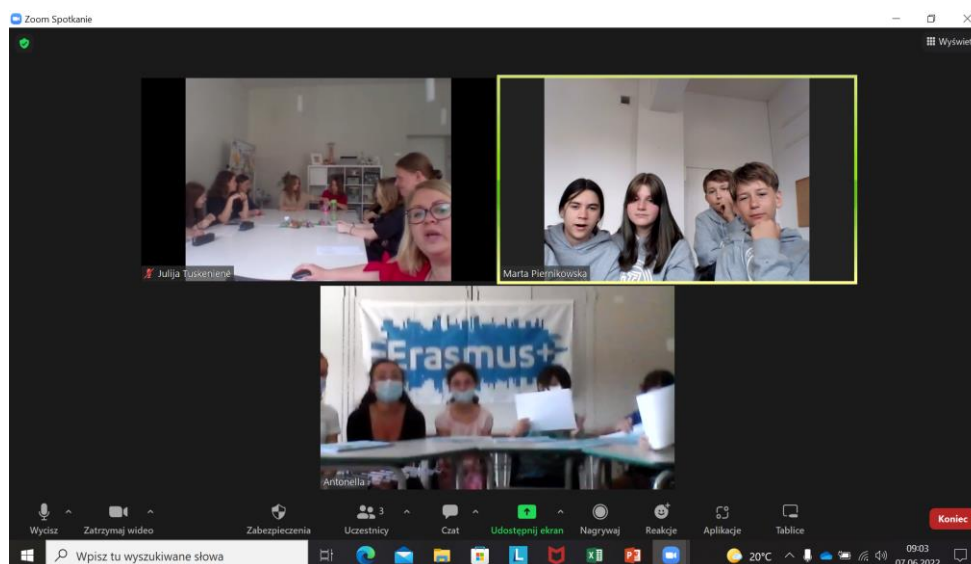


foto 3. Sharing the results of their work. In the picture there are three groups of students from partner institutions.



foto 4. Cake. Celebrating.



foto 5. A group of students with certificates and trainees.

7. Project Summary

The IMPETUS project is a very large project, requiring the effort and commitment of a team of people at the school. It takes commitment for the project to be carried out:



1. Project coordinators - financial and substantive. Among other things: taking care of contacts with foreign partners, exchange of information, numerous organizational and coordination arrangements, including setting dates for training, implementation of the next steps of the project, setting dates for meetings and next milestones.
2. Teachers willing to develop and modify their workshop by introducing innovations. Teachers open to working and implementing the curriculum with innovative methods.
3. Teachers willing to train and devote their extra time to development.
4. Teachers who like to share knowledge, open to training of school staff, sharing new skills and tools with parents and teachers from other schools.
5. Teachers who want to develop and acquire new competencies in new methods of work, communication, mediation, development of entrepreneurial attitudes.
6. A team of people involved in the creation of materials, creating lesson plans, describing lessons conducted and translating materials into English.
7. A team of people who will organize and speak at a conference to share the results of their work.

The implementation of the IMPETUS project fell during an extremely difficult period in the history of Europe. The first huge obstacle to the project was the outbreak of the COVID 19 pandemic, caused by the pathogen SARS-Cov-2. The pandemic involved forced isolation on many levels: country, city, school, home. Numerous restrictions, bans, border closures and even isolation in homes and periodic school closures were imposed. The restrictions imposed severely hampered contacts between partners. Education and communication periodically shifted and restricted to virtual space. The pandemic was accompanied by periodically severely reduced health of teachers and children. Weakened health, new challenges, the transfer of material implementation to electronic space, zoom platforms, and teams did not stop the work of the project, but prolonged it and posed new challenges to those involved.

On February 24, 2022, during the pandemic, Russian troops entered Ukraine at the end of the winter vacations in Poland. Poland was flooded by a wave of refugees from invaded Ukraine, and massive anxiety spread throughout Europe. Project partners were unable to travel freely. The interactions between students planned in the project were severely affected. The joint work was carried out in groups and transferred to the online space. Classes were modified in favor of



international group work and knowledge sharing. Due to limitations on the length of work in front of the monitor, it was necessary to change the formula of the classes. However, this did not stop the project. Invited experts gave online lectures. Students met in subgroups following the same formula. It was good to observe the students' joy at being able to share with other students. Admire their communication skills, the joy of meeting, the willingness to share knowledge, the attempts made to understand the other side and the appreciation of their work.

7.1. International Conference and Experience Sharing

For the start of the new year 2022/23, the Non-public Elementary School Lokomotywa, in cooperation with the Experiment Science Center in Gdynia and the Gdynia Teacher Training Center, organized a conference to which teachers and educators were invited. The conference was informative and training, as well as practical - thanks to workshop activities that complemented the plenary sessions. Its purpose was to present the results and share their experience of participating in the European Erasmus Plus project, Impetus TOC.

The conference, which marked the final stage of the three-year IMPETUS project, was opened by Jakub Gorski, director and co-founder of NSP Lokomotywa, and Kathy Suerken, TOCfE's global president. In addition to NSP Lokomotywa teachers, the speakers included project partners from Lithuania and Sicily. The audience was able to learn about TOC tools, deepen their knowledge and test it in practice. During the conference, the project partners shared knowledge and good practices in the use of tools in education to develop thinking and communication and support students' proficiency. Due to the post-project nature of the conference, the speeches became at the same time an encouragement to take advantage of foreign exchanges and participation in projects, especially international ones, which allow to get acquainted with solutions developed in educational institutions abroad. TOC tools were discussed in relation to other tools used in teaching/learning and educational work. In turn, the workshop showed how the development of 4K - key competencies can be combined at school. During the conference, teachers from partner schools presented the benefits of such a combination. They talked about their teaching work using TOC in conjunction with school mediation, methods developing creative thinking, empathy-based or needs-centered communication. As the project participants told us, an important element of the project was the implementation of TOC tools at school in the implementation of the core curriculum and during extra-curricular activities. The idea was for students to gain confidence and practice in using these tools, and thus develop self-reliance and agency, and see their potential and ability to influence the reality around them.



The conference at the Experiment Center was one of the elements of promoting tools and activities to support teaching/learning. The results of their work were shared by trainers and teachers of NSP Lokomotywa during two international conferences. Lesson scenarios and guides for parents, students and teachers, as well as educational materials will be available on the school's website www.lokomotywa.edu.pl under the IMPETUS tab.

The success of the project was influenced by the entire school community. Key was the role of coordinators, on whose shoulders rested a huge amount of work and great responsibility. The success of the project, however, belongs to all involved, who are at the same time its beneficiaries: children, parents and teachers of all partner institutions. We learned to work, but we also celebrated together. We learned from each other - sometimes the teachers were the students, sometimes the parents, at other times the situations themselves. This is what happens when you push the framework and when you create teaching opportunities, when you try to get out of the desks and classrooms with the students.

The TOC philosophy is supported by four pillars: belief in the goodness of people, the conviction that no one possesses all knowledge, that simplicity is always worth pursuing, and that every conflict can be resolved so that both sides emerge victorious. We strive to create opportunities to test the validity of these claims, and encourage our students to be open to what is new and different, to transcend their limitations and make an effort to learn about themselves and the world. We based our work on synergy - combining the talents, skills, interests and knowledge of the entire school community. The experts were teachers, parents, but also students themselves. We can already see the fruits of this project today, but we are also aware that many of them are only quietly maturing in the students and in us. We are convinced that each new project activity opens another door to development, which cannot be measured, and which brings numerous benefits.²

²Chapter 8 is a fragment of an article by M. Marcinchuk. The entire article can be found at the link: *Developing 4K competencies using TOC tools*, September 2022.