

# Classroom-tested methods

## Report on Tool Testing in the Classroom



Erasmus+

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# Testing

## About the teachers and the methodology

This report is based on interviews with active teachers who use group work methods in their classrooms. In total, 12 interviews were conducted between October - December 2021 and each Partner organization interviewed two teachers. The interview questions concerned the teacher's pedagogical background, and the implementation of selected methods that the teacher wanted to recommend.

Interviewing teachers allowed us to collect expert feedback. All teachers were experienced practitioners (our 'least experienced' teacher taught for 5 years) who have used the method for years. The interviews revealed the teachers' deep familiarity with the method and critical evaluation. They were able to point out its strengths as well as downsides. We also learned about the context that shaped the teacher's own pedagogical philosophy.

The interviewed educators worked in formal and non-formal education. They also worked with different stages, from primary education to higher education. The teachers taught subjects ranging from STEM (e.g. computer science, biology) to SHAPE (communication, literature). This diversity let us collect team work tools that address a range of objectives, from the acquisition of key terminology to strengthening human relations. In addition, each teacher had their own idea about the duration of group work. Some methods functioned as one long process (e.g. drama, reflection), whereas others could be used as a series of independent activities (e.g. game of alias). There are also examples of tools tested online, in the context of distance learning.

## Lessons learned from testing

### **Objectives and challenges addressed**

The interviewed teachers used group activities for different purposes. However, the teachers understood the value of team skills regardless of the subject taught.

- Subject matter

In STEM courses, group exercises were used to teach discipline-specific terminology and concepts. Teacher Merja notices that learning in a group helps students really understand the topic and remember it. Subject matter methods included **hands-on** problem-solving tasks, playing **Alias** (board game) and experiential learning, such as **drama** (e.g. students ‘played’ the blood circulation system). **Inquiry Based Learning** is another useful method. Typically, the method is designed to produce one result. However, one of our teachers has adapted the tool to serve a more open-ended critical investigation, useful in teaching history.

In addition to helping students acquire the scientific language and boost motivation, group learning helped level knowledge inequalities and normalize difficulties with studying. Students get to see that their peers may also struggle with certain concepts. Individual assignments leave students alone with their challenges. This said, the teachers noticed that students may need extra support to develop social skills in teamwork.

- Group roles

To teach teamwork skills, teachers can use simulation in the form of a **collaborative project**. A prerequisite for completing the task is building a functional team. However, the method demands a lot of concentration from the teacher and extra resources (work rooms, extra teachers). The Maths teacher from Italy also uses **collaborative classroom projects**. The teacher divides students into groups, but group roles have to be divided among the students. For the method to be successful,

students must demonstrate independence. Nevertheless, PISH collected extra interventions that have proven useful in facilitating this complicated process. The **think-pair-share (TPS)** discussion exercise is a form of a gradual transition from individual assignment to a group activity. It also helps break the ice for the new class. As the first step of group work, one of our teachers - Merja recommends drafting a **contract**. Students have the freedom to decide what they agree to write in the contract but they can also use a template. Next, Merja introduces activities that guide students towards **recognizing their traits and most suitable roles** in the group. Students then **assign an official leader** for each group. During the project, the teacher encourages **peer feedback** but it is done in a structured form, so students learn to deliver it constructively. After the project is completed, comes the time for **reflection**. The lesson learned here is that the process of team building should take priority over task solving.

- Empathy, social skills and emotional wellbeing

Group work teaches students that sometimes there is no single 'truths' and different points of view can be valid. One way to help students accomplish that is to use tools that reveal how their peers think.

Group activities can help students get to know their peers better and make new friends. However, tensions can occur as students do not know their peers' expectations and each others' boundaries. To make this possible, the Information Technology teacher from Italy starts from **team building** activities.

Two teachers recommended **educational drama** as a tool of developing empathy and group relations. The method leads to the creation of a developed **theatrical play** but it can also be a smaller project. Joanna's approach to drama is more open - each participant brings their unique flavour to the play, as the roles are

crafted individually for each student. This approach leaves freedom for the student to bring in their own contribution and sometimes it is something that the teacher had not anticipated. The method can be used to strengthen belonging for vulnerable participants.

Tatjana presented a different approach to drama. She uses “**form theatre/theatre of oppressed**” where a life-like scene is recreated through acting but participants introduce any interventions necessary to introduce fairness and justice to the scene. Both approaches must include opportunities for reflection so students can process the experience and consolidate their conclusions. As Merja’s example shows, **reflection** is a powerful tool for maintaining emotional wellbeing and letting go of the challenging experiences. Reflection can be carried out as an open dialogue, but the use of coaching tools, such as picture cards or evaluation stars is also possible.

In addition, the **Crossing Borders** method is a complex framework for outside the classroom, completely informally. It is suitable for students who live in shared housing, with diverse neighbours. Learning takes place via everyday housework, like cooking and cleaning.

### **Problems faced and improvement suggestions**

Although the interviewed teachers firmly believed in the efficiency of their methods, they also identified room for improvements. Many teachers expressed a desire to have more time for group work activities. Also, teachers understand that team skills cannot develop in superficial conditions.

- Overall, correct time management is crucial for successful team work activities. Almost all teachers mentioned time as no. 1 resource.
- Dimitris would use extra time to involve students in planning activities.

- Several teachers would devote more time to team building and developing trust. Introducing the method properly also requires time.
- Several teachers would like to allocate more time to reflection and feedback sessions.
- As students' motivation is important for successful group work, teachers commented on how to make the activity more attractive (e.g. take it out of the classroom, cooperate with companies on real-life problems).
- Group projects could be made more attractive if more financial resources were available to enhance cooperation with industry representatives, and provide better facilities.

While time constraints were the most acutely felt limitation, course extensions are rarely an option. Instead, teachers can save time by choosing simple tools that can be used immediately, without special training. In certain situations accessibility is more important than functionality. Examples of such tools for the online environment are G Suite tools that can be used without registration. Naturally, online tools must be in compliance with relevant data management policies.

When it comes to students, the teachers generally agreed that strong motivation is the main challenge. In many methods, the group work's outcome depended on the individual's involvement. If one student dropped out, the whole task would be affected. Therefore, the teachers' efforts concentrate on motivating and searching for ways to make the task more attractive. Nevertheless, teachers need a back-up plan in case the students do not show much involvement. Also, the teachers should make sure that the activities meet the students' expectations. If students expectations cannot be met, there needs to be a pro-active discussion why.

## **Good practices**

- PREPARE

As time is limited, make sure that you have a plan. Make sure the instructions are clear. If you use any aids or tools, make sure they are accessible and intuitive. This said, group activities can always surprise!

- START FROM THE BEGINNING

A group is not a team. After dividing students into smaller groups, the next step is to build a team.

- DIVIDE and STRUCTURE

Do not leave students with a big task. Make sure that the students know how to manage the process. Prepare shorter supporting activities that you can use to guide students through different elements of the task.

- PROCESS OVER PRODUCT

A good solution is possible when people work together. Support the process of creation, before you turn to the end product.

- CONNECT DISCIPLINES

Learning methods can be adapted to any discipline. Draw inspiration from outside of your field.

- COMMENT

Any effort calls for a moment to process what has happened. Honest reflection helps to deal with emotions that build up during the activity. It also helps to identify the good things and learn from mistakes.

- ACCEPT UNCERTAINTY

A given method can be a great resource with one group, and a failure with another. Understanding the students' needs helps avoid such risks.

## List of tested methods

### **Form theatre/theatre of oppressed** - contributed by Tatjana via Crossing Borders

You create a scene from real life, something that has happened somewhere or you witnessed it, that has some problem and you present the problem. You have different roles, and the main roles are oppressor/oppressed/and neutral characters within the scene. With the group you need to work on seeing different points of view and creating possible solutions. You create possibilities of what could function in that scene to solve the problem/issue/challenge. The characters can also change roles and see the same situation from different perspectives. The observers are not just observing, but are actively included in the scene, and they can go and intervene if they want. Rehearsal for reality, and empathy comes as a result, they understand the issue better, regardless of if they're in the scene or in the audience. After the possibilities have been discussed, we reflect on what is happening or has happened, but interaction and reflection should happen on an ongoing basis. We come to a better understanding of the situation of what we can do, and empower participants to act in a different way in the future. Empowerment and awareness.

### **“Crossing borders” method** - contributed by Garba, via Crossing Borders

This method consists in bringing people from different backgrounds to learn how to live together. There are many things we need to learn from one another. This method will allow students from different nationalities and backgrounds live together in a residential college, where they will learn together, travel together and they will produce and write articles together. This will help them understand each other and accept each other in a better way avoiding stereotypes. This method will help students interact with each other in a more

respectful way, understanding that nobody has all the truth. Also the way of teaching in class will be nonformal therefore they wont have exams.

### **Collaborative project** - contributed via CRN

1) students are divided in groups/or can form groups by themselves 2) groups have to propose and complete a project in computer science, possibly with an external project client or research mentor (e.g. software system) 3) students have to propose, plan, design and develop a solution to a technical question, sometimes given by a client 4) they have to collaborate in teams, assign roles, manage the time and tasks by themselves to make progress on the solution 5) Evaluate the results of technical solutions to computing problems community of peers

### **Think-pair-share (TPS)** - contributed via CRN

It is a collaborative learning strategy where students work together to solve a problem or answer a question about an assignment. This strategy requires students to (1) think individually about a topic or answer a question; and (2) share ideas with the group. Discussing with a partner maximizes participation, focuses attention and engages students in comprehending the reading material.

Step-by-step instruction:

- Decide upon an assignment and develop the set of questions or prompts that target key content concepts.
- Describe the purpose of the strategy and provide guidelines for discussions.
- Model the procedure to ensure that students understand how to use the strategy.
- Monitor and support students as they work through the following:
  - T : (Think)** Begin by asking a specific question about the assignment. Students "think" about what they know or have learned about the topic.
  - P : (Pair)** Each student should be paired with another student or a small

group.

**S : (Share)** Students share their thinking with their partner. Then expand the "share" into a whole-group discussion.

### **Inquiry Based Learning** - contributed via Innoved

It is a method that I have as a starting point the principles of exploratory learning through the collaborative teaching model. The goals of teaching should be defined critically first. Teacher support is gradual and decreases as we reach the end of teaching. The aim is to create a collaborative learning project that reflects what the students have learned. Also, it is not implemented in a vacuum but there is a context that considers some parameters. In other words, the activities are structured in the logic of problem solving. Finally, an important part is the feedback in the plenary of the class on the learning projects.

This form of education should be used since the students are little. But all my experience doing this was with adults 18+.

The groups should be between 20/25 people from different nationalities.

### **Reflection** - contributed via Innoved

Reflection of the students for the teaching. At the end of the teaching, I give them various ways in which they can reflect mainly on the cognitive part. One of the ways is that I give them small pieces of paper that have 5 stars that correspond to a scale from 1-5 to 5 being the best and I ask them to draw the corresponding stars depending on how they think they have done. Below these are lines where I ask them to think and write down what they would like to improve on. Next, I try to discuss their answers either in class or individually.

### **Tools supporting group work** - contributed by Merja via UEF

a) Group rules: agreeing on rules is an important part of planning groupwork. Students usually start working together by setting the rules. The teacher provides them with a model agreement, but each group is encouraged to come up with their own list of rules. These rules have proven to be an invaluable asset to help students complete the task successfully.

b) Reflection: Feedback is an essential part of every course. Students must submit a course diary. Writing the diary or participating in feedback discussions helps students process the challenges encountered during group work and form more realistic expectations for the future

c) Peer review: Students comment on each other's work. Reviewers are given supporting questions, and based on these questions they formulate the feedback. Peer feedback can be a great resource for the student on how they can develop their project further.

d) Visual methods: during contact teaching, the teacher uses picture cards or asks students to draw things. For example, picture cards can be used to ask students to describe their moods, and drawing can be used to present students' academic interests. This way, students become more engaged, and their presentations are more memorable.

e) Chairperson: each group is encouraged to select a chair. This person will then present activities and oversee the completion of tasks.

f) Hofstede's dimensions of culture: the teacher uses these dimensions as a discussion prompt. Instead of introducing the dimensions of culture as 'always true', the teacher encourages the students to explore how well they fit the stereotype associated with their nationality.

### **Flipped Classroom** - contributed by Vesa via UEF

Flipped classroom approach re-organizes the traditional thinking about classroom teaching. It is useful in situations when students may have good grades, but have no knowledge how to work with others.

In FC, students follow lectures and complete individual assignments during 'homework time', whenever is convenient for them. The teacher pre-records lectures, in the form of 15

minute podcast episodes. These individual assignments are based on digital resources, including quizzes. The teacher uses a learning management system, which tracks such indicators, as the date of completing the task and time needed to complete it. Tracking these indicators makes it easier to implement suitable support, e.g. time management tools.

Classroom time is reserved for activities that require more effort from students, like group work. Group work can take different forms, from discussions to thematic games (e.g. based on popular board game, such as Alias). Group activities can be arranged online, with the help of breakout groups if necessary. Doing these activities together helps students develop realistic expectations towards their own learning, when they see that other students can face similar challenges with certain topics.

**Experiential learning** - contributed by Dimitris via UTH

I use experiential learning. I choose different teaching techniques such as humor, small plays, and storytelling to make the same students the protagonists of the teaching. You lift the student from the desk and place him in the center, he interacts, he takes the place of the other and what is being taught. For example, I teach blood circulation and distribute to each student from one organ in the body. Everyone embodies the instrument they have by creating an experience.

**Educational drama** - contributed by Joanna via UTH

The method is an Educational drama with a group of 17-20 people. Target group is the rest of the school or school guests if it is an open party. The pace I usually follow is to cultivate empathy through brainstorming and group discussion, role building collectively, Sometimes a collective text can be written that will then be played.

**Hands on exercises** - via AU

This is an original method developed by the teacher herself. It can be used to supplement a lecture. The objective of the method is to learn more about the theory, through a practical

assignment. The teacher gives students a task that they attempt to solve individually, or in small groups. During this stage, the teacher walks around the room, assists the students and actively gives feedback. Finally, the students discuss the solutions together, with the whole class.

### **Silent games** - via AU

Resources needed are: A sheet of paper with instructions,, A questionnaire with free text options can be helpful guides for the students,, Lego Bricks, A plate to mount the lego bricks, Gaming tables

Step-by-step instructions

- Group students in a group of 3 to 4 persons each.
- Ask the students to choose their role. They could be players or observers. You should have at least two players.
- The rule in the game is that they should collaborate without communicating their ideas to each other.
- Provide two portions of Lego bricks and a slab for mounting the bricks.
- The first player starts the game by placing the brick on the slab. The next player follows by placing the next set of bricks. The players take turns till the end of the game.. The duration of the game is set by player 1.
- The observers make mental observations of how each player communicated (without talking to each other) as the game progresses and communicate their observations at the end of the game..
- The observers' comments are followed by the other players and finally by player 1.

The game is repeated by players changing roles and following the same process.

### **Collaborative classroom projects** - via EURONET

“Collaborative classroom projects” helps college students learn in modern work environments: they often have to do research or work on problem solving in groups. This

enables them to learn the skills they need to work together efficiently and productively. In this way university students obtain the following benefits:

- develop project management skills,
- understand the importance of sharing activities,
- improve the interaction between them
- realize a better communication
- develop leadership
- carry out cultural exchange
- promote creativity and problem solving.

Firstly, we create small groups and then assign work to be completed in study groups at the beginning or in the middle of the semester: Study groups are required to work together and to share opinions, research and all work done. Then their work is evaluated.

### **Team Building** - via EURONET

Team Building is the first step to be realized and it starts with the creation of the best cohesive group, which could share goals, studies, researches and objectives, creating a synergic collaboration to work together and share successes and benefits. Then it is necessary to give a specific work to be done and a time to develop it, remaining at students' disposal in case of necessity to guide them.

Working in a team can create at the beginning some problems of cooperation among students because they are different persons with different characteristics and various behaviors and ways of studying completely different but finally it creates exactly the integration that they need at the beginning.