

# How to become a growth mindset teacher?

Manual for the training for teachers (I03)



**GRIT | Growth Mindset**

**Tackling ESL**

# KdG

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This material is intended to meet the needs of educators, trainers, headteachers, school leaders, specialists in teachers' professional development and others who would like to develop the growth mindset in their teams, schools, organizations etc.

The manual consists of two parts: scenarios of four sessions and the trainer manual. The last one covers essential knowledge about adults' learning, including establishing learning goals, selection and application of cognitive strategies and evaluation. We prepared it for those Readers who had no previous experiences with teaching adults.

The sessions are divided into four. The first one helps to understand the Growth Mindset concept in a school setting. It can be supported by session two, which allows participants to understand their mindsets developed during their school career. Session three lets the participants learn how to apply the Growth Mindset in a school setting. Session four is an introduction to the GRIT tools. Each scenario contains a session description, learning goals, timing, detailed description of the activities and list of necessary materials. Handouts are added at the end of each session.

If you need a more detailed description of the Growth Mindset concept and GRIT tools, please refer to the Guidelines Toolbox (I02). A rationale for using the Growth Mindset in teaching, scientific evidence and criticism, practical advice on how to enhance this mindset among the teachers can be found in the guidelines for trainers and principals (I04).

# Session 1 – Introduction to the Growth Mindset concept

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*Participants should get the IO4 before the training. Ensure that there are some copies available for newcomers and those who could not read IO4.*



*80-90 minutes*

## 1.1 Integration

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**Goal:** Creation of a safe learning environment

**Time:** 15 minutes

### ACTIVITIES

The trainer asks trainees to write down their:

- Names
- The institution they are from
- Teaching/training/professional expertise (subject, specialisation)
- What are they known for in their work?
- What are they known for outside their work?

After two minutes, trainees are asked to stand up, to find somebody they do not know yet and share information. After 1-minute pairs are to be changed, no more than 3-4 changes should be done.

After working in pairs, the trainer asks participants to sit down and briefly introduce themselves (name and institution only). The trainer should also introduce him/herself. In conclusion, adults learn to interact with the environment and actively construct their knowledge by using existing knowledge in this process. They store less new information, but they build knowledge structures from available information. Adult education aims to provide relevant knowledge and free the learner's mind from the current thinking patterns and show them new possibilities. Consequently, every learning process should allow independent re-knowledge through analysis, inference, various research methods, and assessment criteria.

### MATERIALS

- A4 papers
- Markers
- Questions (names, institutions etc.) for the first activity may be written on a flipchart

## 1.2 Introduction

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**Goal:** Presentation of the course goals

**Time:** 5 minutes

### ACTIVITIES

The trainer informs the trainees about the purposes of the course and asks for questions/comments:

- learn how a person's way of thinking – with a focus on sustainability or focus on growth – affects one's learning,
- learn about the benefits of the growth mindset for learners,
- reflect on how in practice, as teachers, they can use growth-oriented thinking in various educational situations,
- get to know the GRIT toolset, which contains school lesson plans that have been developed and tested within the international partnership in the Erasmus + GRIT project

## MATERIALS

- Goals described on a poster, prepared before the session
- Markers

## 1.3 Introduction to the Growth Mindset

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### Goals:

Reflection on your own mindset on participants' individual level

Getting to know the concept

**Time:** 60 minutes

## ACTIVITIES

This part of the session is based on the Kolb cycle (you can find a brief description of the Kolb circle in the trainer's manual)

### 1. Concrete experience (10')

Teachers work individually and can choose one of two options:

- a) Draw your own author's version of some famous painting

or

- b) Write and read a short dialogue in Swedish, in which two people meet and talk about what they like to do.

Note for the trainer: it is intended to make the attendees aware of the learning difficulties and strategies to cope with this situation. Therefore the task should be challenging – if trainees may know Swedish, choose another language.

### 2. Reflective observation (20')

The trainer applies a "flipchart survey" in the form of a shooting gallery (see the handouts below) 1). Participants indicate how far/ close they are to a particular statement.



Conclusions from the "flipchart survey":

- How did the members of this group make their choices?
- Why did they choose a specific task?
- Why didn't they take the second task?

A brief discussion follows. The trainer points out which answers indicate sustainability or focus on growth.

### 3. Conceptualisation (25')

The trainer comments on statements, using references to the Dweck concept. He /she introduces the Growth Mindset approach's theoretical background based on the Guideline to the Toolbox (IO2), chapter 2.1. and 04 (the latter should be sent out to the participants before the training).

Mini lecture up to 10':

- two primary states of mindset: a fixed mindset and a growth mindset, as presented in Figure 1
- the five critical components of Dweck's Growth Mindset concept, as presented in Figure 2
- Some pieces of evidence from a query
- Points of criticism

Group discussion. Trainers ask:

- What is your opinion on this concept?
- What is unclear for you?

Trainer distributes copies of Vanessa's testimony (pages 22-23).

- What was the most interesting thing in this testimony?
- Did the reading raise any additional questions about the Growth Mindset?

### 4. Active experimentation

Trainer asks:

- How can teachers use Growth Mindset concepts in their work with their students?
- Have you used a similar approach to your work? Please provide examples.
- How to engage parents in the development of a Growth Mindset?

## MATERIALS

- Crayons, A3 paper
- Flipchart survey poster on flipchart
- Some posters about fixed vs growth mindsets may be printed or presented on powerpoint slide or on a flipchart (see Figure 1 and Figure 2 in the Guideline IO2)
- Vanessa's testimony – one copy per trainee

## Handout: Vanessa's testimony<sup>1</sup>



This testimony is based on a French teacher's account provided during a testing in a secondary school (Collège in France) located in a sensitive urban area. Her students have different levels of education, are of different age and from other countries of origins: Afghanistan, Algeria, Bangladesh, Fiji, Hungary, India, Iran, Ivory Coast, Morocco, Mali, Moldavia, Poland, Romania, Santo Domingo, Senegal, Tunisia, United States of America, Venezuela. The many details provided below are meant to be as specific as possible in order to show the limits of the transferability but at the same time being a way to inspire similar testing as some points may be the same in other places, with similar students and schools with the same background.

1. The lifelong learning approach (Erasmus + approach) has been the main concern for Vanessa in the past years to improve her professional practice.
2. Vanessa is also very concerned with the competence approach. She developed an idea of the virtuous circle to be built between competencies gained at school, in the family and with friends. She means to enhance this bridge among the different "areas" her students are associated to.
3. Vanessa didn't know the growth mindset concept. She was curious to discover this approach even though the pedagogical strategy, enhancing a flexible mindset instead of a fixed one, has always been the primary concern among her students. They have

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<sup>1</sup> French testing conducted in June 2019 by iriv conseil (dr Bénédicte Halba together with Gizem Dere and Yazın Gunay) at the College Denis Diderot (Essonne, Ile de France) with the collaboration of Vanessa Kientz, a teacher specialising in French for foreign students aged from 11 to 15 years old

a particular profile, so the classical pedagogical strategies have to be combined with more innovative ones, more focused on their personal background - most of them had to leave their countries of origins, and sometimes they still live in challenging circumstances, in shelters or hotels far away from the school.

4. Vanessa has been convinced by the first step of the testing in June 2019 as it was conducted together with two interns of Iriv, who are also migrants. She presented them to her students as "role models" of a successful pathway.
5. Vanessa has also very much appreciated the tools focused on the motivations of the students as they may easily drop out, faced with the many difficulties they have to overcome. The language is the main barrier that may slow down their learning process.
6. Vanessa has especially enjoyed the tools meant to enhance awareness on the many ways to improve learning combining formal, non-formal and informal education, together with the key role played by the school, a place to meet other students, to create a fruitful collaboration with the teachers and to initiate new experiences of social integration.
7. Vanessa has selected the tools focused on Success & Failure as in French education failures and mistakes are considered to be very negative. On the contrary, the GRIT approach explains how fruitful the experience of failure and mistake may be to students who haven't had a linear educational path. The tools presenting examples of role models (in sports, movies, music), famous people who have succeeded after having overcome some difficult times are meaningful in this perspective.
8. Vanessa has already used some of the tools in her professional practice, for instance to start a working day or to finish it. Many of the tools may also be used during the breaks during the school day as they open perspectives and can offer a form of "positive distraction".

**Why did I not choose the other task?**

This task was too difficult for me.

**Why did I choose this task?**

I am not talented in this area.

I wanted to face this task.

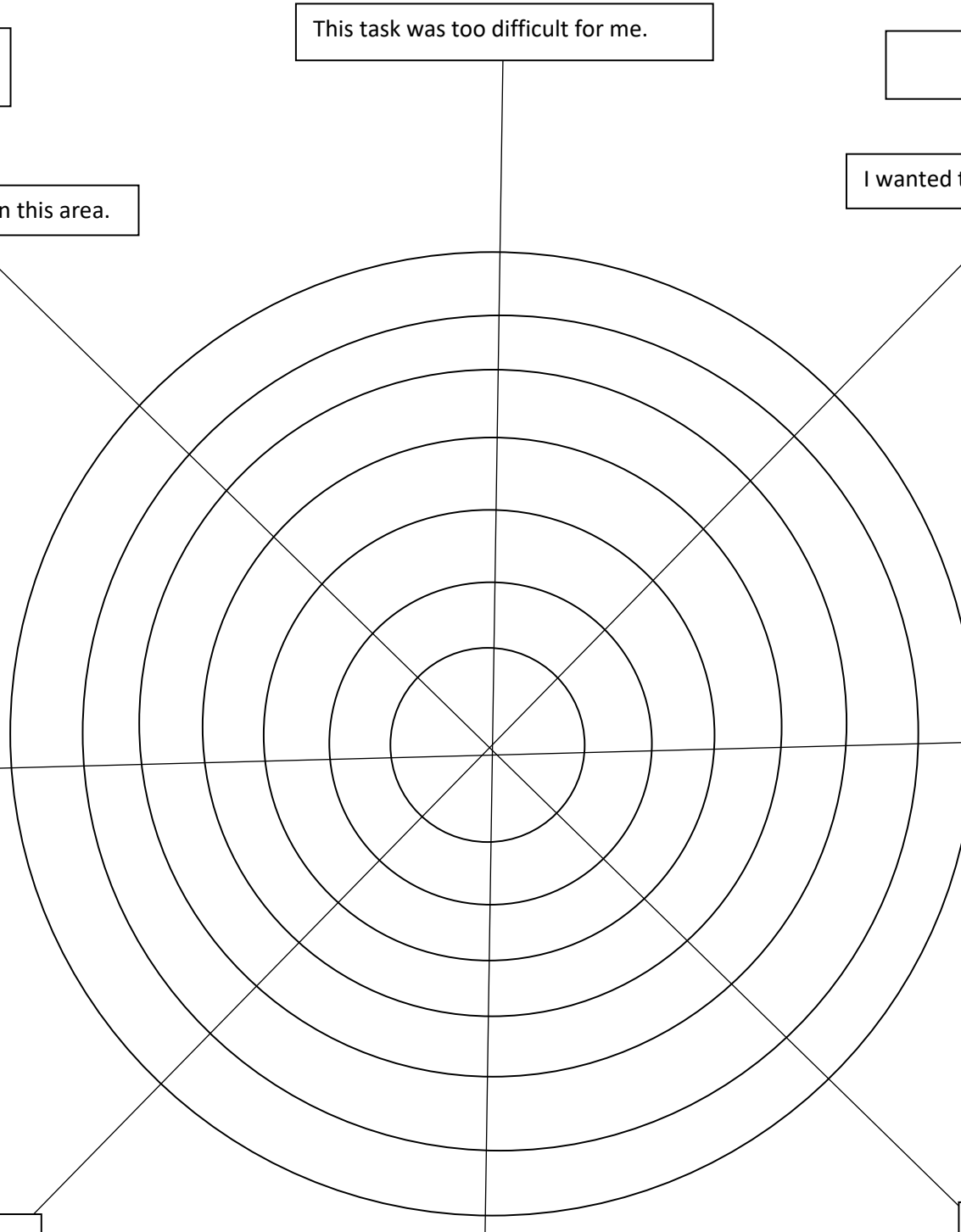
I prefer to do what I am good at.

I wanted to be able to give up while doing the task.

I believe that it is not worth the effort in such situations.

I chose this task because I know that if I work more on it, I will be able to improve myself?

I chose this task because it seemed more challenging.



## Session 2 – My own mindset – a storytelling session

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*This is a culturally specific session. Please consider using characters which are commonly known in the culture shared by the trainees or use pop-culture characters as examples. Remember that this session is neither a lecture about Propp, nor an exercise in analysis of a cultural text, but an attempt to reflect on the learning path. If your group comes from different cultures, present general types (protagonist, antagonist, mover, supporter etc.) and ask attendees to deliver examples from their cultures.*



*80-90 minutes plus 20 minutes for optional exercise. Be aware that timing depends on the size of your group. Time for individual reflection and sharing must be secured.*

### 2.1 Introduction

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Goal: Presenting the session goals and structure

Time: 5 minutes

### ACTIVITIES

This exercise is inspired by Vladimir Propp's classical analysis of the Russian fairy tales (1928). We won't, however, use detailed features of Propp's theory but build our stories based on his assumption: every fairly tale shares some similarities and main characters. The

"character" is usually anthropomorphised, but sometimes this role is "played" by an object (golden ball in Iron John) or an externalised characteristics of the protagonist (Athena restraining Achilles' anger by pulling his hair).

Our goal is to reflect on our process of learning from a long-term perspective. Propp's inspired storytelling will help us in finding suitable metaphors.

## 2.2 Creating the story

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**Goal:** Visualising own learning history

**Time:** 30-40 minutes

### ACTIVITIES

Every trainee is supposed to prepare a short story about his/her learning in the form of a fairy tale. The posters and pencils are to be used to give some visual framework to the story.

The trainer asks trainees to think about their history of learning – from early childhood, through middle and high school, up to university (college).

Please give some time for reflection between every step described below. Do not introduce all the characters at once, it will be difficult to manage. When trainees have problems imagining some of the characters, they can skip them. The metaphor is good when it works...

1. They first should draw a map to easily navigate their plot. It may start from the woods, the mountains ("long, long time ago...), a happy village and ends with something that symbolises the goal (a prince/princess tower, the Golden Fleece).
2. The next step is to add the main protagonist, a metaphor of the trainee him/herself. It may be a Little Red Riding Hood, Sir Lancelot, Puss in Boots or any other positively valued hero.
3. It's time to add an antagonist. Please remember that it doesn't have to be a human. A dragon is a nice metaphor, but objects – seas or high mountains that need to be crossed, walls that must be climbed – are also appropriate.
4. The third figure was called "a donor" by Propp. It is somebody (or something) who (or which) tests the main hero but can give an award.

5. The fourth figure is a mover: somebody who set up the plot; asked the hero to start a journey; organised some important event for this plot (like a wedding).
6. The last figure is a (magic) supporter – a figure that can support the main protagonist in his/her efforts, usually with a supernatural force.

## MATERIALS

- Posters, pens, coloured pencils

## 2.3 Sharing in groups

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**Goal:** Storytelling, reflection on the stories

**Time:** 15 minutes for sharing, 10 minutes for reflecting

## ACTIVITIES

Trainees are asked to sit in small (3 persons) groups and share their stories. The trainer should make sure that it is done in a friendly atmosphere. No criticism, reviewing, improving somebody else's story is allowed. If the trainee doesn't want to share the entire story – it is perfectly ok.

Trainers ask participants to talk in the group:

- Which figure seems to be the most important for my development as a student?
- Why did I choose this hero to represent myself?
- Who was the magician supporter? Was he/she a teacher? What "supernatural" power did he/she have?

The trainer should join each of the groups and listen to the stories and discussions.



## 2.4 Discussion

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**Goal:** Connecting the stories with GM concept

**Time:** 20 minutes

### ACTIVITIES

The trainer asks participants to sit together and starts with referring to one part of group discussion

- Who are the most important positive figures? How can their influence on the protagonist be described? Are they teachers?
- What was the role of the magical supporter? What activity of this figure was key? How can it be explained from the GM perspective?
- Which characters were chosen to represent the main protagonist? What kind of mindset do they represent?
- What fulfils the roles of:
  - antagonists (who symbolises difficulties, obstacles);
  - the donor (who brings challenges);
  - mover (who helps to start new chapters)?

Would the development have been possible without them?

The trainer asks participants about the changes in their plot if the powerful wizard (not a Propp figure...) were to be brought to the scene. What should happen to make this story flawless? How could the Growth Mindset help in it?

## 2.5 Additional method: Teachers' mindsets

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**Goal:** Being aware of mindsets

**Time:** 20 minutes

### ACTIVITIES

Reflection:

Teachers think about a student who they unfairly have underestimated. For instance, they reflect on a student who didn't make a good impression at school, but who has been very successful afterwards.

Teachers share their stories in pairs. (5 minutes)

Teachers answer additional questions in pairs (5 minutes).

- What does this story (experience) tell about the mindset of the student?
- What does this story (experience) tell about the mindset of yourself as a teacher?

Suggestions: make positive student stories visible at school. Use those students as role models.

Summary (10 minutes): the trainer prepares two empty flipcharts. One is titled "student", the second one "teacher". Trainees are asked to write answers to two questions (above) on the self-adhesive cards and put them on flipcharts. The trainer categorises and summarises.

## Session 3 – How to use Growth Mindset at schools

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*This session lets the participants learn how to apply the Growth Mindset in a school setting. There are two complementary sessions (3.2 and 3.3).*



*Depending on the selection of exercises, the entire session may take between 40 to 60 minutes*

### 3.1 Introduction

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**Goal:** Presenting the session goals

**Time:** 5 minutes

### ACTIVITIES

Trainer informs about the purposes of this session:

- Learning about practical implementations of the growth mindset concept.
- Learning on grit as a specific "skill".

## 3.2 Shaping the mindset

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**Goal:** Realising how teachers can develop students' mindsets

**Time:** 35 minutes

### ACTIVITIES

This part of the session is based on the Kolb cycle (you can find a brief description of the Kolb circle in the trainer's manual (p 37)).

#### 1. Concrete experience (15')

Read Ezra's case and follow the questions (handout Ezra's case, see page 21)

Which feedback would you give this student? Discuss with your colleagues which feedback you find (in)appropriate.

#### 2. Reflective observation and conceptualisation (20')

Trainer asks: which feedback shows a growth mindset and which shows a fixed mindset?

Group discussion. The trainer gives the handout **GROWTH MINDSET versus FIXED MINDSET (p 22)** and explains all doubts. Participants reflect on Ezra's case. Work in pairs to discuss the different feedback options and discuss why those are more related to a growth or fixed mindset.

#### 3. Active experimentation

Trainer says: How can teachers use GM concepts in their work with their students? – let's do the next experimentation after the break.

### MATERIALS

- Handouts: printed or posted online

## 3.3 Introduction to Grit concept

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### Goals:

Reflection on effort and obstacles as two out of five growth mindset elements

Getting to know the importance of the grit "skill".

**Time:** 45 minutes

## ACTIVITIES

### 1. Concrete experimentation and reflective observation (30')

This part is based on the GRIT TOOLKIT scenario "From Failure to Wisdom".

The trainer follows the scenario. Participants can play the role of students (it is up to the trainer).

### 2. Conceptualisation on teachers' level (20')

- What are the main conclusions from this experimentation?

The trainer collects the participants' answers. It should be mentioned:

- Moments of failure are constructive, and they are part of life and learning.
- It is crucial to keep students interested and keep them practising.
- Students need to keep their determination and their hope to succeed.

Trainer explains how the concepts of grit and Growth Mindset are intertwined (meaning that grit can be developed by having a growth mindset and that having a growth mindset can lead to grit).

### 3. Active experimentation

How can teachers develop grit and growth mindsets among their students? – Let's do the next session after the break.

## 3.4 Is my feedback growth mindset oriented?

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**Goal:** Reflecting on your own way of giving feedback information

**Time:** 20 minutes

### ACTIVITIES

*Additional exercise for teachers to reflect on their own feedback:*

Teachers show their feedback given to students (grading comments/feedback). Teachers discuss with each other to what extent the formulated feedback was more fixed or growth mindset related. Teachers give each other suggestions on how to formulate more growth-oriented feedback. Teachers come to a conclusion on what growth-oriented feedback looks like.

For suggestions on how to provide growth mindset oriented feedback, please refer to the IO2.

Three questions that will help you formulate growth-oriented feedback (thus fostering a growth mindset):

1. What do you want to achieve? (goal)
2. How much progress did you already make? (process)
3. Which steps do you need to take to improve? (next steps/process)

## Handout: EZRA'S CASE

An Autumn break is coming up. Up until now, Ezra has failed all of his mathematics tests. He is not failing any other subject. On the last maths test, he answered 60% of the questions correctly. While he was filling out the test he seemed more focused than usual. None of students failed this particular maths test .

1. Keep this up, and you'll get there!
2. Your talent lies elsewhere. Well done!
3. You did your best in previous tests as well. Only now your efforts have paid off. Keep up the good work!
4. You're not that good at mathematics, but you try.
5. You're one step further towards your goal.
6. Why do you think you did better this time?
7. Excellent result on this test!
8. You made fewer mistakes this time, well done!
9. What a difference with previous tests: you did it!
10. How did you manage to make so much progress?
11. You clearly gave this your all!
12. You were very focused on the test.
13. Well done, but this was a relatively easy test. Make sure to show as much effort on the test that will be more difficult.

## Conceptualisation stage

### GROWTH MINDSET versus FIXED MINDSET

1. Keep this up and you'll get there! > discusses development, effort, not results
2. Your talent lies elsewhere. Well done! > the word 'talent' implies that growth is not possible, only the results are looked at
3. You did your best in previous tests as well. Only now your efforts have paid off. Keep up the good work! > the 'bad' result of previous tests is seen as separate from the effort put into the tests
4. You're not that good at mathematics but you try. > discusses a 'stable trait' of the student, labels him, is not aimed towards development
5. You're one step further towards your goal. > discusses the development, the process, the student is not there yet but with some more effort he will get there
6. Why do you think you did better this time? > asks about the process, makes the student reflect on his growth: what did this student do to make progress?
7. Excellent result on this test! > discusses the final result
8. You made fewer mistakes this time, well done! > stresses the fact that a flawless end product is essential instead of stressing that making mistakes is an important part of growth
9. What a difference with previous tests: you did it! > stresses the final result instead of the fact that growth is still possible, the student 'is there', but he isn't yet
10. How did you manage to make so much progress? > questions the process, makes the student think about the road to success
11. You clearly gave this your all! > refers to the effort, the behavior of the student
12. You were very focused on the test. > does not refer to the process; circumstances made the student pass this test, not his effort
13. Well done, but this was a relatively easy test. Make sure to show as much effort on the next more difficult test. > compares the student to other students, does not focus on the growth of this particular student



## Session 4 – GRIT tools

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*This session introduces the GRIT tools using pro-active learning method..*



*Basic version should take up to 90 minutes, but please note that additional time is needed to become familiar with the tools.*

### 4.1 Introduction

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**Goal:** Presenting the session goals and structure

**Time:** 5 minutes

#### ACTIVITIES

The trainer informs the trainees about the goals of this session and the method. The method is explained in the material "jigsaw puzzle."

The trainer introduces the session goals:

Presentation of the session goals:

- Learning about the GRIT toolkit
- Learning about a pro-active teaching method

#### MATERIALS

A poster with jigsaw puzzle stages shown (see material at the page 32 for more details)

## 4.2 Jigsaw group – stage 1: learning

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**Goal:** Getting to know the tools

**Time:** 25 minutes

### ACTIVITIES

Four groups of the same size should be formed. Each group is assigned a the set of tools:

**Group one:**

challenges (violet) and feedback (yellow)

Tools:

Shaped reflection, Train your brain, Chain of progress, Storytelling, Growth conversation

**Group two:**

obstacles (blue)

Tools:

Letter to my peers, From failure to wisdom, F.A.I.L., Shared struggles, Reflection tree

**Group three:**

effort (green)

Tools:

Round table conversation, outside in, Create a bridge, Learning XL

#### **Group four:**

success (red)

tools:

Meet& greet, Learning diary, Brand your team, My network, What success looks like

#### **Objectives for the group work**

Trainees are asked to read the assigned tools (10 minutes) and discuss the following questions (15 minutes):

- What are the goals?
- What is the main activity (activities)?
- Which materials are needed?
- How much time is needed?
- Which of the tools can be easily adapted to my classroom/my work? Are they appropriate to my subject/curriculum?

Make sure that everyone understands that he/she will give an individual presentation, therefore having personal notes may be useful.

Do not allow participants to divide the tools inside the group, they should have first-hand knowledge about all the assigned tools. Depending on the set there are 5 up to 6,5 pages of scenarios (and it is not a plain text), so reading in their mother language should be quick.

#### **MATERIALS**

- Minimal version: one complete set of tools for one jigsaw group Tools should not be bound together to allow the participants to change inside the groups. If jigsaw groups are bigger than five, you may need more copies
- Preferable:
- One complete set of the GRIT toolkit for each participant
- Alternatively
- Secured access to the electronic version of the GRIT toolkit during the session
- Paper, pencils
- Poster with questions for the group work

- A mind-map of tools on a poster may help to organise the process.

## 4.3 Jigsaw group – stage 2: expert groups

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**Goal:** Sharing the knowledge

**Time:** 20 minutes

### ACTIVITIES

New – expert - groups are to be formed. The number of expert groups depends on the size of the smallest jigsaw group (you need at least one representative of each jigsaw group in every expert group). When jigsaw group sizes are not equal, you can assign more than one member of the jigsaw group to one expert group.

One of the methods to create expert groups is to prepare cards with numbers or different colours. Let's consider an example: the smallest jigsaw group consists of five persons. It means that you need cards numbered 1 to 5 (or cards in five different colours). Each member of the jigsaw group should receive a different number. If some groups are bigger than five, you can add an additional 1, 2, 3 etc. card. By handing out these additional numbers (that is by giving an additional "1" in one group, an additional "2" in the second etc.) you will equalise the size of expert groups.

Do not worry. Expert groups do not have to be perfectly equal. The only requirement is to have at least one representative of each jigsaw group.

Once the expert groups are formed, ask attendees to share outcomes from the jigsaw group. They should use questions from the previous stage to structure the process. Ask participants to include practical implications.

Monitor how fast groups are working and try to moderate the process to make them finish at the same time.

## 4.4 Jigsaw group – stage 3: summary

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Goal:

- Summarising the knowledge
- Selecting the most appropriate tools

Time: 15 minutes

### ACTIVITIES

Participants are asked to go back to their jigsaw groups and discuss which of the tools they learned about in the expert groups seems to be the most useful for their work. They should choose at least one tool from each category (challenges, feedback, obstacles, effort and success) and give a rationale for their decision.

The trainer should approach each group and learn about their decision.

### MATERIALS

- Complete set of tools per team/individual (handed out at the first stage)
- A mind-map of tools on a poster or presentation will help to organise the process of reflection

## 4.5 Summary

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Goal: Summarising the learning process

Time: 10 minutes

### ACTIVITIES

The trainer shows which tool(s) in each category were found to be the most appropriate tools.

Short discussion:

- How to implement these tools into daily teaching?
- Which classes are the most suitable?
- When during the school year should the tool be implemented?
- Will other teachers be interested?
- Optional questions: are there any other than Grit tools that can be used here?

## MATERIALS

- A mind-map of GRIT tools on a poster or presentation

## 4.6 Reflection

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**Goal:** Meta-reflection on the teaching method

**Time:** 10 minutes

## ACTIVITIES

- The trainer asks participants how they felt during the session. Were they engaged? Were they able to acquire knowledge from other jigsaw groups? What changes should be made to make this process more effective?
- The trainer summarises stages from the meta-level, explaining what was crucial from his/her point of view. The main benefits of this method are a high level of participants' engagement and the ability to work out the bigger portion of materials in a relatively short time frame. It goes along with the growth mindset assumptions.

## MATERIALS

- The jigsaw puzzle handout

## 4.7 Closing

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**Goal:** Diagnosis and evaluation

**Time:** 5 minutes

### ACTIVITIES

The trainer refers to the session goals.

Participants are asked to summarise their state of mind at the end of the session by briefly answering some simple question, for example:

- How do I feel at the end of the session?
- What did I learn during the session?
- Which metaphor may describe my state of mind at the end of this session?

The trainer shows a poster with symbols of a suitcase and trashbin and asks attendees to answer the following questions on the self-adhesive cards (separate cards for trashcan and suitcase):

- What was useful during this session? What will I take away with me? What would I put into my suitcase?
- What was not necessary? What should be thrown into the trashcan?

Participants stick the cards to the poster.

### MATERIALS

- Self-adhesive cards (post-it type)
- Poster with symbols of suitcase and trashcan

## About the jigsaw puzzle method

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Jigsaw puzzle or jigsaw classroom technique was developed by psychologist Elliot Aronson in the 1970s (Aronson, Blaney, Stephan, Sikes, Snapp, 1978). A simplified version of this method is easily adaptable to typical classroom/training situations and helps in keeping students/participants engaged. It is intended for a group of 12 up to 30 participants. It can be used with bigger groups, but it will require more time then. Typically to apply this method a session of 60-90 minutes is needed. Everything depends on the complexity of the task assigned to the groups and on the number of participants.

The process is divided into three stages: jigsaw groups (learning), expert groups, and jigsaw groups (summary).

### Jigsaw groups - learning

At this stage, participants are preparing for individual presentations. It is important to state clearly, that everyone will give a presentation, so it is worth taking notes. Divide attendees into (preferably) equally sized groups in which they can discuss a problem or work with a text. The time needed for this stage depends on the complexity of goals and group size.

For example, let's imagine that we have a group of 20 participants. We can divide them into four groups of five using any selection technique (preferably random, but when you know trainees'/students' abilities or expertise purposeful selection may be more effective).

### Expert groups

At this stage, new groups should be formed. Their number depends on the minimal size of the jigsaw group. For example, if one jigsaw group consisted of four members and five, four expert groups should be formed. Each expert group consists of at least one representative of every jigsaw group. The goal is to share knowledge obtained at the previous stage.

Trainer/teacher should monitor the work and moderate groups to make them finish at the same time.

### Jigsaw groups – summary

Participants sit together in original jigsaw groups and share what they learned in expert groups. This stage may be time-consuming and can be replaced with a whole group summary.

More information about the method: [www.jigsaw.org](http://www.jigsaw.org)



## The trainer's manual: what should we know about adult learning before the training starts?

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Good learning conditions are similar for everyone, regardless of age. The difference lies in the approach of adults' educators: they have usually more respect for the autonomy of an adult and agree that adults need more self-agency. Hence, it is easier to respect these universal principles of good learning when the adult-adult relationship is based on a partnership.

Malcolm Knowles, one of the founding fathers of andragogy, stated that children are taught while adults are helped in learning. This statement in its original form is more controversial than inspirational today but can be useful if rewritten in a mild form: a child requires teacher guidance and an adult practices self-education supported by a trainer. Let's try to indicate the principles of good learning, which should be kept in mind by every trainer or teacher creating a work environment for his/her students.

*Desired features of the learning process in Malcolm Knowles's andragogy*

Feature	Description
1. Student preparation	What should be secured: necessary information, preparation for participation, help in formulating realistic expectations, initiating reflection on the content of education
2. The atmosphere	Trust, mutual respect, informal, warm relationships, cooperation, support, authenticity, care
3. Planning	Made together by the student(s) and the teacher
4. Diagnosing needs	Estimated together by students and teacher

5. Goal setting	Obtained through negotiations
6. Creating a learning plan	Sequential, depending on the student's readiness, entirely focused on the problem
7. Methods and techniques	Focus on search
8. Evaluation	Mutual re-diagnosis of needs, joint assessment of the program

Source: M.S. Knowles, E.F. Holton III, R.A. Swanson (ed.), *Adult education*, Warsaw 2009

We will structure the manual by dividing the learning process into three elements:

1. **formulating goals,**
2. **the use of cognitive strategies,**
3. **control over the process.**

We are talking about elements, not stages, because it would be wrong to think that we are dealing here with a sequence in time. It is advisable to control the **cognitive strategies** used not only at the end of the process but already in progress. The effects of such a control often cause us to change learning goals, as we are adapting them to the challenges we face. A common coaching mistake is not returning to the goals after their introduction at the beginning of the class, as well as waiting with the evaluation of the training till the end.

## 1. Learning goals

### 1.1. Diagnosis of needs and formulation of goals

The beginning of learning is the **definition of goals** and **diagnosis** is the necessary previous step.

**The diagnosis** is an evaluation of the knowledge and skills of the participants. It is worth to encourage them at the beginning to reflect on what they already can/know and which areas they want to improve; what is their potential and what are their development needs. The trainer needs this to avoid repeating the obvious. However, it also has an impact on the extent to which participants treat training goals as their own.

The way the **training goals** are formulated should be discussed with the group. Even if the goals have been defined earlier, it is worth talking about the way of presenting them and about setting priorities. If the participants understand and accept the objectives of the classes, the trainer will be able to count on their cooperation during the workshop – which leads to higher involvement, asking questions deepening the subject or self-control related to ensuring that the classes do not deviate from the topic. If goals are imposed or carelessly adopted, the trainer may encounter resistance from the group during training.

Tips: <https://courses.lumenlearning.com/suny-educationalpsychology/chapter/formulating-learning-objectives/>

The adoption of goals should be followed by **the presentation of a work plan**. Thanks to this, individual activities will be perceived as a reasonable part of the planned activities from the very beginning.

## 1.2 Other preliminary activities

Working with training objectives does not end at the beginning - as we emphasised earlier, you should come back to them later, showing where we are on the road-map and conducting an on-going evaluation. However, the discussion on training goals is natural at the beginning of the course.

The beginning of the class is also a time to present people in the group to each other and an opportunity to build an atmosphere of friendly openness, preferably using one of the many ice breakers.

Tips: <https://www.sessionlab.com/blog/icebreaker-games/>

Besides, we set the rules of work, i.e. the contract. When working with adults, setting rules together is especially important as we have a small space only to admonish someone who will impede conducting classes. Prior acceptance of the rules will make this process smoother. The group expects the leader to provide order and security necessary for learning.

## 2. Selection and application of cognitive strategies

### 1.1 Activation methods

Adults' education is particularly focused on the needs of their professional and sometimes private lives. Therefore, work methods related to problem-solving and involving all participants at the same time are an obvious choice.

Problem-solving is typical for a constructivist approach. Within this paradigm, we assume that a learner is not an empty vessel that we fill with knowledge, but someone who cooperates in the process of constructing knowledge, gains new information using existing information, confronts it and asks questions. By choosing work methods, the trainer should provide the opportunity for such "creation of knowledge" and support this process by systematising its effects.

Tips: <https://teaching.berkeley.edu/active-learning-strategies>

Teamwork allows for a collision of perspectives. The division into groups means that participants can experiment with different ideas. They are not accompanied by fear of being assessed by the whole team or the leader. At the same time, a small group allows everyone to get involved, reduces the likelihood of stowaways or excluded participants f.e. because of shyness.

Tips:

[http://www.ucdoer.ie/index.php/Methods\\_and\\_Techniques\\_for\\_Use\\_in\\_Small\\_and\\_Large\\_Group\\_Teaching](http://www.ucdoer.ie/index.php/Methods_and_Techniques_for_Use_in_Small_and_Large_Group_Teaching)

## 2.2 Kolb's Cycle – how to systematise learning process's stages

David Kolb stated that learning is all about transforming old experiences into new ones. Hence, interaction with the environment is crucial because we gain knowledge by experiencing different situations and by exchanging experiences with other participants in the learning process. Kolb presented a vision of the learning process as a cycle in which the individual's experience plays the main role, followed by its analysis. There are four main stages in this process:

1. a very specific experience in which participants naturally activate their existing knowledge and skills;
2. reflective observation when this experience is problematised, analysed and captured from various perspectives, often absent in the learner's thinking so far;
3. building new knowledge, when the learner draws conclusions from the experience in which he/she has just participated, after analysing the acquired data;
4. testing a new theory - the learner changes his/her behaviour and begins to experiment with conclusions to see if newly developed theories are useful in solving problems and making decisions.

## 3. Process evaluation

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The entire learning process should be accompanied by its evaluation. It allows learners and trainers to see how the process goes and whether goals are achieved. Such on-going evaluation, or monitoring of learning, protects against the waste of time. At the same time, it helps build motivation, which grows when students receive systematic feedback and can track their progress.

The trainer takes advantage of the fact that the participants work in groups - thanks to this he/she has time and space to observe and initiate metacognitive reflection. Sometimes a

good question asked at the end, running "round" and a brief discussion after the exercise is enough for evaluation, you do not need to include additional time-consuming methods.

The trainer must be ready to modify the classes in response to the evaluation. This modification may consist of changing methods, slowing down or accelerating work, dividing into several groups depending on interests or advancement, creating groups for mutual learning, if there is a need for quick levelling.

After completing the classes, we evaluate the whole process. Participants' involvement in the evaluation should be guaranteed on a free basis. It is also worth emphasising the importance of open communication and the importance of their opinions for improving both the training process and the trainer himself.

[Tips: <http://www.icbl.hw.ac.uk/lti/cookbook/cookbook.pdf>

and [http://www.learnersfirst.net/private/wp-content/uploads/Resource-Self-Evaluation-Models - tools-and-Examples-of-Practice-NCSL.pdf](http://www.learnersfirst.net/private/wp-content/uploads/Resource-Self-Evaluation-Models-tools-and-Examples-of-Practice-NCSL.pdf)