



**Neuroandragogy**  
against exclusion

# NEUROANDRAGOGY IN THE EDUCATION OF ADULTS FROM GROUPS AT RISK OF EXCLUSION

Training Materials for Workshop Participants  
- Adult Learners from Disadvantaged Groups

*Project: "Neuroandragogy Against Exclusion"*

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# INTRODUCTION

The training in which you are going to participate in is part of the **“Neuroandragogy against exclusion”** project. This educational material which focuses on neuroandragogy's principles, achievements of neuroscience in education of adults, knowledge about the functioning of the human brain and the neurobiological aspect of the learning process aims to impart self-determination skills that will help you be more successful when you transition to the workplace or school. Adult students need to understand themselves as learners in order to understand their needs as self-directed learning students.

You can use it during workshops, as a kind of didactical tool that facilitates active learning. It has six Modules. Each Module contains a short, theoretical introduction with simplified information on brain processes and efficient learning, which will help you to understand potential reasons of educational failures and favorable conditions for faster and more effective knowledge acquisition and skills development. In the material there are also explained issues, such as the importance of motivation and awareness of one's own preferences and educational needs in efficient organization of one's own education. The essential part of the materials will deal with getting to know one's own predispositions and preferences in the scope of learning and independent organization of one's own learning environment, the selection of methods and tools. Thus in the material there will be surveys and questionnaires, exercises and tasks, and bibliographic sources to be used during the workshops as well as for independent education.

Our aims are to set skills and attitudes that allow adult students to self-direct their lives – to be autonomous, to self-regulate their behavior and then feel empowered, to engage them in the learning process and to emphasize the learner's role as an active learner. Thus, to prepare the adult learners from disadvantaged groups for the 21st century workplace, to support them in their independent studies, away from the face-to-face sessions, focusing on the use of information and communication technology.

Learning is a lifelong process. Learning can take place anywhere, at any time, and use resources ranging from nothing to modern information technology. If you develop a will to learn, have a skill to learn, are motivated to learn, and have a supportive environment to learn, you will have a lot of opportunity and be able to initiate and guide yourself to learn. You can take into account the emphasis of lifelong learning skills which include the ability to analyze problems, define what needs to be learnt, the knowhow and when to access information, evaluate information, and be aware of one's own limitations.

You can develop your knowledge and interests related to neuroandragogy based on the project's website: [www.neuroandragogy.eu](http://www.neuroandragogy.eu).

**We wish you the best in all that you do!**



# 1. HOW THE BRAIN LEARNS – WHAT WHETHER YOU SUCCEED OR FAIL WHILE LEARNING?

## 1.1. a bit of theory...

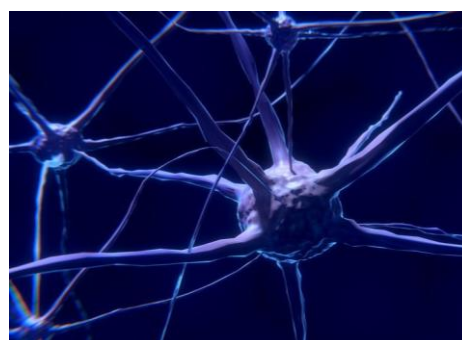
Neuroandragogy is a strategy that bases the process of adult education and learning on knowledge about brain and neuroscience. Brain based learning is learning in accordance with the brain how it is naturally built to learn.

Knowing how the brain works makes it easier to teach for educators and makes it easier to learn for the students.

The base of “learning” in the sense of neuroscience is the setting up of neurons. (A neuron is a basic structural unit of our nervous system.)

In a person’s brain between 50 billion and 100 billion neurons are developed. Neurons generate, forward and connect information across synapses, while linking one cell to another.

In the brain, the knowledge is stored in the form of neural networks. Each new information changes the neural structure of the brain. This process is called the plasticity of the brain. After about 20 minutes of training, a neuron population can be detected in the subcortical area but to pass into the cortex the cooperation with the limbic system of the brain is necessary.



### The limbic system

Amygdala: lies in the front part of the temporal lobe and affects emotion and memory in different ways. In case of fear and danger the amygdala becomes active.

Hippocampus: controls the relevance and emotions and it is the “goalkeeper” for the process of passing information. Therefore, the hippocampus is very important in the learning process.

When new information arrives, the frontal lobes hold it in our very short time memory for 5-20 seconds, but most of the information will not get further stored because it is not evaluated to be relevant or compelling enough.

In case that the new learning is evaluated to be important, it will be stored in the cortex, in one of the lobes that also received the information at the beginning of the process. (Occipital lobe for visual information, temporal lobe for listening and language information).

Only the stimuli that are passed from neuron to neuron to the cortex can reach the long term memory via the working memory. This process depends on the individuality of the learner, but also due to the release of neurotransmitters.

In the process of learning the neurotransmitters play an important role. Besides amino acid neurotransmitters, glutamate, GABA or glycine, which activate ion channels in the cell, there are the following essential transmitters for the learning process:

**Acetylcholine** is one of the most important neurotransmitters, responsible for attending to and storing the information.

**Dopamine** is credited with an important role in motivation. It is considered a reward system including curiosity, concentration, and willingness to act.

**Serotonin** is responsible for pain, sleep and wakefulness and mental state.

**Norepinephrine** is a neurotransmitter that stands for alertness, attention and responsiveness. The right amount of norepinephrine leads to a good learning success.

Basic principles of brain based learning - What decides our success in learning?

- Motivating teaching methods for the learner and to avoid learning blockages like stress and anxiety.
- Generating interest so that the importance of a task is made clear.
- Solid structure in teaching and learning: a logical sequence enables the brain to produce meaningful links between new and older information.
- Multi-sensory approach to meet different needs of individual learners.
- Regular Revision and repetition: in order to reactivate neural connections.
- Taking breaks as the learning action in the brain needs time to process the learning material.



## 1.2 Independent Tasks – Questionnaires and exercises



### 1.2.1 Activity no 1

<b>Title of activity</b>	<b>Kinesthetic exercise for learners to be completed between classes</b>
<b>What will you learn?</b>	Kinesthetic exercise will appeal to the limbic system (amygdala and hippocampus), as active, moving learning. Kinesthetic exercises will reinforce learning, therefore connections between nerve cells are built up.
<b>How much time do you need?</b>	15 Minutes
<b>Required materials</b>	Space
<b>How to do this exercise?</b>	<p><b>Kinesthetic Exercise 1:</b></p> <p>You should feel as steady as a tree while balancing on one leg in the exercise. To achieve this balance, it may helpful to imagine the roots to the ground just like a tree. In case you find it difficult to hold the pose, even for a couple of seconds, you can use a support to help you.</p> <p>Put your hands together over your head, come up on one leg, bend the knee and then focus on your belly and try to contract your stomach muscles to help get balanced and focused. Put your leg down after doing the exercise for about 30 seconds. Shake your body out with your feet and arms. Then go back up on the other leg. Try to concentrate on yourself and let your thoughts run free. Afterwards come down and again shake your body out.</p> <p><b>Kinesthetic Exercise 2:</b></p> <p>The lying Eight: Movement that stimulates the collaboration between the left and right hemisphere of the brain. It also trains the collaboration between the arm, eyes and the balance.</p> <p>The knees should be slightly bent to exercise the lying eight.</p> <p>Use your arms and thumb, (sitting and standing versions of this exercise are both possible). Stretch the arm out in front of you and let your thumb point up. Focus with your eyes on your thumb while you draw a lying eight in the air. The eyes should follow your thumb rather than your whole body. It is important that the crossing point of the lying eight is directly in front of you. Exercise this movement three times slowly with the right arm and after that with the left arm and thumb.</p> <p>As a last step do the movement with crossed fingers (folded hands). Then shake your body, in particular your arms and legs.</p>
<b>Source</b>	Adapted after Classroom exercises makes learning lively: <a href="https://www.edutopia.org/video/classroom-exercise-makes-learning-lively">https://www.edutopia.org/video/classroom-exercise-makes-learning-lively</a>





## 1.2.2 Activity no 2

<b>Title of activity</b>	<b>Structuring and organizing information</b>
<b>What will you learn?</b>	By structuring and organizing information, it can be recycled into portions for long-term memory.
<b>How much time do you need?</b>	10 Minutes
<b>Required materials</b>	Paper and pen
<b>How to do this exercise?</b>	<p>3 methods that can help structure information:</p> <ol style="list-style-type: none"><li>1. Summarize similar pieces of information and highlight the important facts in color with markers. Bundle this information into smaller groups.</li><li>2. Summarize important ideas into groups of three. The summary of three ideas gives the reader a good structure for learning. Many jokes, poems and speeches are written in a trisection.</li><li>3. Build up a mind map, which supports the encoding in the brain. A mind map is basically a diagram that connects information around a central topic. All Mind Maps have a natural structure that begin in the center and use lines, symbols, words, color and images.</li></ol> <p>Try to memorize following enumeration using one of the strategies or even another:</p> <p>Table, knife, plate, spoon, cup, fork, jug, window, saucer, flower vase, cat, carrot, cabbage, chicken.</p>
<b>Source</b>	Adapted from „ Gedächtnistraining“, Übungen & Fakten für ein leistungsstarkes Gedächtnis, M. Powell, Parragan



### 1.2.3. Activity no 3



#### Title of activity      **Method of Loci and repetition**

<b>What will you learn?</b>	Using the loci method you will experience long lasting memories through the use of lots of connections to different locations, objects, people, colors, noises, and smells. You have to practice the method several times to succeed; therefore it is best to repeat the exercise – repetition.
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<b>How much time do you need?</b>	The time depends on the items that you want to learn.
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<b>Required materials</b>	Paper, pen, one room or place that you know very well (like your flat, class, office)
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<b>How to do this exercise?</b>	<ol style="list-style-type: none"><li>1. Make a list of all of the things that you are going to learn. Divide the list into sections so that each section contains between 6-15 items. (For example, formulas or vocabulary)</li><li>2. Choose a location (your flat, classes, office,) that has enough rooms so that you are able to place your items in different places. The location should be someplace that you know really well. This is because you are going to practice thinking of each item in that location until the item is a consistent memory.</li><li>3. Move around in the location but always follow the same direction. (i.e. always go left when you can). Following the same direction will make it easier to know where you are, exercising the loci method again and again.  In each room, also ensure to follow the same rule when walking through it. It will make it easier to remember all of the items in the room.</li><li>4. Draw a map of the whole location and label where the things have been placed.</li><li>5. Now connect each item and you will have to learn a path from item to item. For each item find a good story that connects it to the room.  Try to create these stories as funny and strange as possible. Use all of your senses: color, sound, smell, taste, and moving.  The more detailed that you make the story for each item, the more likely it is that you will remember them.</li></ol>
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<b>Source</b>	Adapted from <a href="http://www.snsfc.org.uk/data_files/letters/Revision%20techniques%20SNSFC%202015%20v3[1][1].PDF">http://www.snsfc.org.uk/data_files/letters/Revision%20techniques%20SNSFC%202015%20v3[1][1].PDF</a>
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### 1.3. Additional material to read and sources for self-education

#### Books:

M. Powell, „Gedächtnistraining“, Übungen & Fakten für ein leistungsstarkes Gedächtnis, Parragon.

F.L. Hütter, S. Mareike (2017): Neurodidaktik für Trainer.

Trainingsmethoden effektivergestalten nach den neuesten Erkenntnissen der Gehirnforschung. Bonn: ManagerSeminareVerlags GmbH.

R. Göppel (2014): Gehirn, Psyche, Bildung. Chancen und Grenzen einer Neuropädagogik.

Stuttgart: W. Kohlhammer.

H. Reiter (2017): Handbuch Hirnforschung und Weiterbildung. Wie Trainer, Coaches und Berater von den Neurowissenschaften profitieren können. Weinheim und Basel: Beltz Verlag.

#### Internet articles:

T.J. Carew, S.H. Magsamen (2010): Neuroscience and Education: An Ideal Partnership for Producing Evidence-Based Solutions to Guide 21<sup>st</sup> Century Learning. In: Neuron. Volume 67, Issue 5, p. 685–688.

J. Trníková, E. Petlák (2012): Neuroscience as a Basis for Innovations in Education. In: Acta Technologica Dubnicae. Volume 2, 2012, Issue 2, p. 43–51.

R. Cheney (2017): "Kinesthetic Teaching Strategies for Adults in a Lecture Setting" (2017). Honors Senior Theses/Projects. 121. [https://digitalcommons.wou.edu/honors\\_theses/121](https://digitalcommons.wou.edu/honors_theses/121)

D Cullen, N Andrews (2015): Revision Techniques that work. St Neots Sixth Form Centre. ePub eBook, <http://book-me.net/files/revision-techniques-that-work-st-neots-sixth-form.pdf>

#### Thematic websites:

Annenberg Foundation (2017): Neuroscience and the classroom: Making connections. A course for K-12 teachers, Online program, <http://www.learner.org/courses/neuroscience/>

Peg system for Remembering Lists, Blog; <https://www.memory-improvement-tips.com/remembering-lists.html>

Blog York University, PART 1: Learn How to Memorize – Top 6 Memorization Techniques, <https://oneclass.com/blog/york-university/4671-part-1-learn-how-to-memorize-top-6-memorization-techniques-2.en.html>



## 2. FROM NECESSITY TO PLEASURE – HOW TO BUILD SELF-MOTIVATION FOR DEVELOPMENT?

### 2.1. a bit of theory...

Perhaps you know the following feeling very well. I don't want to... get up, go to work, learn...

One can hardly manage their own life and achieve their own goals when motivation is lacking. People who care about you – your family, friends and colleagues - may give you some motivation but despite their best intentions, motivation from the outside is not usually as strong or effective than an inner source of information.

Inner motivation is considerably stronger and allows you to focus on learning for a much longer time. You won't be learning because you must, but in fact you will be learning because you really want to and enjoy doing so. You will realise that learning moves you towards your goals. You know that what you're doing is for your own good. The combination of inner motivation and personal goals can boost your progress more than anything else.

External motivation = I do that because someone wants me to do so

Inner motivation = I do that because I want to do so.

Personal development is always fuelled by inner motivation. The first step on the personal development path is the decision to make a change. It doesn't matter whether what you want is acquiring a new skill, changing some behaviour or any other kind of change; all these goals are not reachable without strong will and perseverance.

Making a change usually requires the courage to leave your comfort zone. But the comfort zone is so comfy, pleasant, full of well-known stuff, routines and stereotypes. So why should we leave it?

Imagine the comfort zone as being comparable to a living space area that gives you a feeling of comfort and safety. Simply put, this is a state of mind where you feel in your own niche. Everything (like self-development, further education etc.) encourages you to get out of there, makes you feel uncomfortable.

The problem is that our brain perceives change as a risk. And when a healthy person stays in the comfort zone for a long time and makes no effort to move out and self develop, their self-development stops by generating the personality degradation. So that's why we should leave it. Try to think about what you have achieved in your life. Paint a picture of your life and give yourself an answer to the following questions:

- What have you achieved in your life?
- What obstacles and difficulties have you had to overcome?
- What are you proud of?

And now an important question: Have you achieved this by staying in your comfort zone? Most likely, the answer is that you didn't. We are proud of things that we have had to earn and earning happens outside of the comfort zone. The outside is the place where we develop and grow where challenges hide and where we can win over ourselves.

The ground rules of motivation are:

- Don't be afraid of leaving your comfort zone
- Don't be afraid of making mistakes
- Have a positive attitude and expectations
- Find the inspiration in people and literature
- Skip the hurdles and focus on solving the issues
- Finish everything that you started
- Don't listen too much to other peoples opinions
- Don't take things personally
- Don't compare yourself to others, you're an original

Unsure about the first step? How to find the right motivation to learning and self-development? The following exercises will guide you.



## 2.2 Independent Tasks – Questionnaires and exercises



### 2.2.1. Activity no 1

<b>Title of activity</b>	<b>My motivation to self-develop</b>
<b>What will you learn?</b>	You will set the goals for your self-development for the next 6 months and think about the source of your motivation, what you want to achieve and why.
<b>How much time do you need?</b>	60 minutes
<b>Required materials</b>	pens paper colour pencils or crayons
<b>How to do this exercise?</b>	<p>Find the answers to the following questions:</p> <ul style="list-style-type: none"><li>• What do you want to achieve in your self-development during the next 6 months? •What do you want to improve? What do you want to work on?</li><li>• Why do you want to change exactly this? What benefits will this have on your life? What is your motivation?</li><li>• How will you work on it?</li><li>• Who can help you?</li><li>• How will you measure the change after the six month period?</li><li>• What can complicate the change? Can you prepare yourself for the complications? Can you prevent them? How? Are you currently afraid of something?</li><li>• Is there something that blocks you now and prevents you from getting out of the comfort zone?</li></ul> <p>Try to imagine the change as detailed as possible. Imagine that 6 months have passed and you are talking about a successful change. What would you say? How would you look? How would you feel? Whom would you tell about it?</p> <p>Draw a picture of how the change will look and put it in a visible place. It will remind yourself of your end goal and help retain you motivation.</p>
<b>Source</b>	Own source



### 2.2.2. Activity no 2

<b>Title of activity</b>	<b>Discover your learning habits</b>
<b>What will you learn?</b>	You will map your learning habits and the ways that you learn. You will set up a new strategy for efficient learning.
<b>How much time do you need?</b>	60 minutes
<b>Required materials</b>	pens paper
<b>How to do this exercise?</b>	<p>Answer the following questions:</p> <ol style="list-style-type: none"><li>1. What do you enjoy learning?</li><li>2. What is easy to learn for you?</li><li>3. What is difficult to learn for you?</li><li>4. How do you learn?</li><li>5. How much time do you devote to learning new things?</li><li>6. What helps you to remember new information?</li><li>7. When was the last time that you learned anything? What was it?</li><li>8. Do you know your learning style?</li><li>9. How would you describe it?</li></ol> <p>Which resources make remembering easier for you? (books, videos, listening, physical/motoric activity...)</p> <p>How can you improve your concentration during your learning? What should you avoid?</p> <p>Summarise your findings from the previous exercise into at least 8 conditions that must be met for you to learn easily. Use the mind mapping technique by drawing you own mind map on the paper – a guide for creating a mind map and working with it can be found in Czech language at: <a href="http://www.havrlikova.cz/mapovani/">http://www.havrlikova.cz/mapovani/</a> and <a href="http://www.havrlikova.cz/myslenkove-mapy/">http://www.havrlikova.cz/myslenkove-mapy/</a></p> <p>In English at: <a href="https://imindmap.com/how-to-mind-map/">https://imindmap.com/how-to-mind-map/</a> and <a href="http://www.mindmapinspiration.com/drawing-a-mind-map-from-start-to-finish/">http://www.mindmapinspiration.com/drawing-a-mind-map-from-start-to-finish/</a> .</p> <p>List 6 factors that can threaten your focus and which you will try to avoid while learning.</p>
<b>Source</b>	Own source



### 2.2.3 Activity no 3



#### Title of activity

#### Building of habits

#### What will you learn?

You will go through the process of creating a habit and try its effective implementation. You will learn how to create efficient habits. You will increase your self-confidence.

#### How much time do you need?

120 minutes for setting up a habit  
+ 30 days for implementation

#### Required materials

Table of habits  
Pen  
Attachment no 1  
Attachment no 2

#### How to do this exercise?

We often want to change something. On a training course, we may commit to "learning 5 foreign vocabulary a day, starting to organise our time better", etc. But in real life this will not happen very often. We usually start with changing our habits under pressured circumstances or even never start at all. Unconsciously our motivation begins to shrink, our self-confidence and will begin to shrink also because we promise something we do not obey and in the end the old habit persists.

Usually, creating a new habit and replacing the old one takes 21 to 30 days (depending on the difficulty of the habit). You can discover a bad habit yourself or you can learn about it via feedback. Anyway, do not forget to identify what is triggering the bad habit and how it manifests.

Let's try it.

1. Choose one thing you have been postponing for a long time and which you want to start doing (taking a cold shower in the morning, walking 5km per day etc.). Or choose an unwanted habit (eating too late) which you want to change. If you have multiple habits to change, choose the change that you will enjoy or benefit from the most.

2. Create a commitment and write it down.

3. Close your eyes and imagine your new habit. Make a plan which will help you to implement the new habit (what will you do / what will you change, how will you change it and why will you change it).

4. Write down as many reasons as to why you want to implement the new habit (what this habit will bring to you and what you can lose if you do not implement it). Then on the scale below mark the strength of your motivation and determination. (Scale is in the attachment no1). Set a reward for achieving partial goals.

5. Repeat the new habit daily as planned.

6. Table of habits is in the attachment no2 with examples. Note every day whether you have succeeded in fulfilling your habit.

7. Don't give up and reward yourself for each step that will help you implement your habit (reward yourself for every day during the first week,

then after the end of each week and finally prepare a “biggest celebration” after 21 - 30 days).

8. Focus on the habit, remind yourself of it regularly and think positively about it.

After the time needed to learn your new habit answer the following questions:

- Has the habit been successfully set up?
- What helped you in doing so?
- What has complicated the implementation of the habit?
- What lessons did you learn from this experience?

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<b>Source</b>	Own source
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## 2.2.4. Activity no 4

<b>Title of activity</b>	<b>Motivational quotes</b>
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<b>What will you learn?</b>	You will realize what motivates you and gives you the motivation to complete the action.
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<b>How much time do you need?</b>	120 minutes
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<b>Required materials</b>	paper books, magazines, newspapers internet attachment no3
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<b>How to do this exercise?</b>	<p>Search for some quotes or famous sayings that can give you the courage to keep the new habits, to step out from the comfort zone and to motivate you. Put these quotes into the six prepared boxes. Boxes for your motivational quotes are in the attachment no3</p> <p>The following examples can inspire you:</p> <p>“If you believe you are right, or you believe you are wrong, you’re right. Whenever you are certain about it, you will support it. Remember that.” Tony Robbins</p> <p>“Champions aren't made in gyms. Champions are made from something they have deep inside them – a desire, a dream, a vision. They have to have last-minute stamina, they have to be a little faster, they have to have the skill and the will. But the will must be stronger than the skill.” Muhammad Ali</p>
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Answer the following questions:

- Why did you choose these specific quotes?
- What particular thing about them motivates you?
- What does this selection tell about you?
- Can you use them in your previous exercises? How?

Select the quote you like best and place it in a visible place. Rewrite it and hang it on the fridge, put it in your wallet, on the cell phone, etc. How can it help you?

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**Source**

Own source

## 2.3. Additional material to read and sources for self-education

### Books:

Alchymista, Paulo Coelho, 2005  
The Alchemist, Paulo Coelho, 1995  
Konec prokrastinace, Petr Ludvík, 2013  
The end of procrastination, Petr Ludwig, 2015  
Naděje bez hranic, Lea Paulínová, 2007  
Velká kniha technik učení, tréninku paměti a koncentrace, kolektiv autorů, 2009  
Das grosse Buch der Lerntechniken: Konzentration steigern, Gedächtnis trainieren, Lernstrategien anwenden, Prüfungen bestehen Gebundenes Buch – 22. August 2005  
Learning: The Ultimate Learning Guide - How To Become Successful In Any Subject With Amazing Brain Training Techniques!, Anthony Myers, 2016  
Pohádka o ztracené krajině, Radvan Babouh, 2018  
Flow: O štěstí a smyslu života, Mihaly Csikszentmihalyi, 2015  
Flow: The Psychology of Optimal Experience (Harper Perennial Modern Classics), Mihaly Csikszentmihalyi, 2008  
Práce jako duchovní úkol, Anselm Grün & Friedrich Assländer, 2011  
Spirituell arbeiten. Dem Beruf neuen Sinn geben, Anselm Grün & Friedrich Assländer, 2010  
Vlastní cestou, Ján Košturiak, 2016  
Peníze nebo život? Tomáš Hajzler, 2013  
The Element, Ken Robinson, 2009  
Ve svém živlu, Ken Robinson & Lou Aronica, 2017

### Internet articles

- 10 top aplikací pro osobní rozvoj:  
<https://www.studentmag.cz/top-10-aplikaci-pro-osobni-rozvoj-poznejte-lepsi-ja/>
- Toužíte po úspěchu? 5 kroků, jak na to (díl č. 2), Zdenka Tomaidisová,  
<https://chcizmenu.blogspot.com/2013/01/touzite-po-uspechu-tak-si-ho-vytvorte.html>
- 9 bodů, které Vám pomohou opustit komfortní zónu,  
<https://svetuspesnych.cz/9-bodu-ktere-vam-pomohou-opustit-komfortni-zonu/>
- Proč je někdo svině a někdo hrdina,  
<https://www.growjob.com/clanky-personal/proc-je-nekdo-svine-a-nekdo-hrdina/>
- Multiple Intelligences Self-Assessment,  
<https://www.edutopia.org/multiple-intelligences-assessment>
- Teorie rozmanitých inteligencí,  
<https://www.jazykovy-koutek.cz/?p=6241>
- Every day hero,  
<https://procrastination.com/blog/11/everyday-hero-adela>
- The state of flow,  
<https://procrastination.com/blog/12/the-state-of-flow-otto>



- Why personal development is critical to success,  
<https://www.success.com/rohn-why-personal-development-is-critical-to-success/>
- 18 tricks to make new habits stick,  
<https://www.lifehack.org/articles/featured/18-tricks-to-make-new-habits-stick.html>
- Personal development,  
<https://www.skillsyouneed.com/ps/personal-development.html>

### Thematic websites

Psychologie, <https://psychologie.cz/>

Mít vše hotovo, <http://www.mitvsehotovo.cz/>

Tomáš Hajzler, <https://www.tomashajzler.com/>

Mindtools, <https://www.mindtools.com/>

Life hacker, <https://lifehacker.com>

Austin Kleon, <https://austinkleon.com/>

## 3. HOW TO RECOGNIZE ONE'S OWN NEEDS AND PREDISPOSITIONS FOR LEARNING?

### 3.1 a bit of theory...

An individual's **personality** includes thoughts, cognitions, feelings, emotional patterns and behaviors that cause us to do and say things in particular ways. Our personality is our identity. It is the sum of our characteristics, both inherent and acquired. So, we are all, in some ways, unique. Knowing ourselves means turning inward. Being aware of our strengths, good points, qualities, and skills ultimately helps us build a sense of self-esteem and self-confidence. On the other hand, being aware of our weaknesses will help us recognise them and help us improve. The better we know ourselves the better our decisions can be. When we know ourselves well, we also have the opportunity to change ourselves. This change can make us more aware and more competent. Actually, it helps us to set goals, and leads us to self develop.

**Self-development, or personal development** is the most important factor that can influence one's personality and it is a lifelong process. Maslow (1970) suggests that all people have an in-built need for personal development which occurs through a process called **self-actualisation**. **Maslow's hierarchy** is most often displayed as a pyramid. The lowest levels of the pyramid are the most basic needs (i.e. food, shelter, etc) while the most complex needs are at the top of the pyramid (intellectual needs, fulfilling potential, achieving targets). The key for **self-actualisation** is self-awareness because it involves knowing ourselves and our personality, and accepting ourselves in spite of our imperfection. It includes all aspects of us such as our thoughts, emotions, likes, dislikes, strengths, weaknesses, fears, fantasies, ambitions, values, priorities, goals, desires, needs, etc. To get to have complete picture about ourselves we need to concentrate on two aspects: **a) how we perceive ourselves and b) how others perceive us**. Both of these views combined give a person a complete picture about ones self. There are a lot of ways, techniques, and tools to achieve it, for example you can use **SWOT Analysis** or **Johari window model** (you can find them at the activities).

What about your **learning needs** (such as literacy, numeracy, knowledge, skills, problem solving...)? A learning and development need is the knowledge, skill or behavior that you need to acquire in order to carry out the duties, the tasks of your role. How to recognize them? How you can be able to identify them, to recognize your current level of knowledge and skills, and the level of knowledge and skills required to a task or a set of tasks? **Identifying learning needs** will help you develop strategies and techniques, maintain your competence and improve your practice. The majority of adults look at what training courses are available generally and deciding which of those would be most interesting and suitable for them. They don't try and identify first their development need or learning need and then to work out ways of meeting that need, which may or may not be a training course.



A personal development plan will be very helpful in this situation. And that is because a **personal development plan** allows you to identify your development needs and plan what learning activity you will want to do.

According to Warwick University there are 3 stages to identifying your needs:

1. **Identify what skills, knowledge and behaviors are “required” for you to do your job well.**
2. **Look at the skills, knowledge and behaviors you actually have now.**
3. **Compare ‘actual’ with ‘required’ to identify the gaps.**  
**These are your development needs.**

Another example of a personal development plan is the **SMART Action Plan** that aims to make your goals and targets measurable so that you can better manage your personal achievements, **SMART** stands for

- **Specific** (Who, what, where, why?)
- **Measurable** (you need to quantify or qualify at what stage your goal will be achieved)
- **Achievable** (goals must be possible to reach, what will you do to achieve your goal?)
- **Relevant** (your goal must be relating to an overall objective)
- **Time-bound** (by when will you aim to reach your goal?) (Blanchard K, 1985)

**“Learning to learn is your most important capability since it provides the gateway to everything else you want to develop. How you learn is a key, if not the key life skill”** (Peter Honey). In the context of self-knowledge and the identification of learning needs, would help you to understand your learning style. **The learning styles** were developed by Peter Honey and Alan Mumford, based upon the work of Kolb, and they identified four distinct learning styles or preferences: **Activist, Theorist, Pragmatist and Reflector**. To understand your particular learning style Honey and Mumford have developed a Learning Style Questionnaire with 80 questions. Using this tool you will get information about yourself and your learning needs.

Your brain is a wonderful instrument, full of potential for **self-directed learning**. Thanks to the neuroplasticity its conscious functions can all be improved, does not need to decline. Self-learning is the new form of learning that is equipping people with skills that are relevant to their daily activities. Knowles describes self-directed learning as "a process in which individuals take the initiative without the help of others in diagnosing their learning needs, formulating goals, identifying human and material resources, and evaluating learning outcomes". Knowles identifies three reasons for self-directed learning as follows:

1. Individuals who take the initiative in learning learn more things and learn better, than people who sit at the feet of teachers possibly waiting to be taught.
2. Self-directed learning is more in tune with our natural processes of psychological development.
3. Many of the new developments in education put a heavy responsibility on the learners to take a good deal of initiative in their own learning.

You may also find it helpful to talk with a colleague, adult teacher, career counselor, advising instructor or someone external to your organization that knows you and your work and can help

you obtain an objective view on any learning and development needs you identify. Successful independent study requires certain responsibilities or roles of both students and trainers or advising people according the Center for Teaching Excellence Waterloo University. For example:

### **Students' roles**

- Self-assess your readiness to learn
- Define your learning goals and develop a learning contract
- Monitor your learning process
- Take initiative for all stages of the learning process — be self-motivated
- Re-evaluate and alter goals as required during your unit of study
- Consult with your advising instructor as required

### **Advising instructors' roles**

- Build a co-operative learning environment
- Help to motivate and direct the students' learning experience
- Facilitate students' initiatives for learning
- Be available for consultations as appropriate during the learning process
- Serve as an advisor rather than a formal instructor



## 3.2 INDEPENDENT TASKS – QUESTIONNAIRES AND EXERCISES



### 3.2.1. Activity no 1

Title of activity **Johari window**

What will you learn?

- To acquire self-awareness
- To get to know your personality better.
- To understand yourself better by investigating how you would describe yourself and comparing and contrasting that to how others would describe you.
- To enlarge the open self quadrant with the intent to establish a fruitful relationship with yourself as well with the others

How much time do you need?

45'-60' minutes

Required materials

Johari worksheet (attachment 4)

How to do this exercise?

1. Take the Johari window worksheet and review the list of adjectives.
2. Select 5 or 6 adjectives that you would use to best describe your own personality. You can temporarily copy and paste these into the **Hidden Self cell**.
3. Print out at least 3 copies of the Adjective List and give a copy to people with whom you work (either in formal employment, in volunteer settings, or classmates) that you can trust to give honest yet supportive feedback. Ask each person to select 5 or 6 adjectives that they believe best describe your personality.  
NOTE: Make sure they do not see the adjectives you chose for yourself.
4. When you receive the lists of adjectives from those you asked for Feedback, copy and paste them into the **Blind Self cell**.
5. Review the adjectives in both the **Blind Self and Hidden Self cells**. Move any adjectives that appear in both of those cells into the **Open Self cell**.
6. Any adjectives that are not present in any cell can be moved from the adjective list into the **Unknown Self cell**.

	Known to Self	Not Known to Self
Known to Others	(Open Self)	(Blind Self)
Not Known to Others	(Hidden Self)	(Unknown Self)



<b>Source</b>	<p>This worksheet and activity is based on:</p> <p>Luft, J., &amp; Ingram, H. (1955). The Johari Window: A graphic model for interpersonal relations. Los Angeles: University of California Western Training Lab., Luft, J. (1970). Group processes: An introduction to group dynamics (2nd ed.). Palo Alto, CA: National Press Group.</p> <p><a href="https://docs.google.com/document/d/1Hj-RiUiTYz2pnkKQwkiHFO3vrqEVIde_9WA83TECVig/edit#heading=h.2rpmfidby8v6">https://docs.google.com/document/d/1Hj-RiUiTYz2pnkKQwkiHFO3vrqEVIde_9WA83TECVig/edit#heading=h.2rpmfidby8v6</a></p>
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<b>Other info</b>	<p>Create a draft professional résumé referring to the dimensions of self description. Discuss with your classmates.</p> <p>How would you describe yourself in terms of the dimensions of self as shown? Discuss your thoughts with a classmate.</p> <p>In what kind of job could you express yourself? Are you pursuing that job or do you plan to find such a job? Discuss your answer with a classmate.</p>
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### 3.2.2. Activity no 2

<b>Title of activity</b>	<b>Personal development and learning plan</b>
<b>What will you learn?</b>	<p>A personal growth plan connects all areas of your life. A personal growth plan is a guideline for life: your goals, how you intend to achieve them, skills you need to master and habits that you want to achieve. It should cover areas such as career, education, relationships, and self improvement. You gain a <b>better sense of control of your life</b> and influence the decisions you make in your day-to-day life. "A personal development plan is an action plan that gets you from where you are right now to where you want to be in the future. This can incorporate learning hard skills (like project management skills) as well as soft skills (like active listening)."</p> <p>Goal setting is a powerful process for thinking about your ideal future, and for motivating yourself to turn your vision of the future into reality.</p>
<b>How much time do you need?</b>	45'-60' minutes
<b>Required materials</b>	Personal Development Plan worksheet (attachment 5)
<b>How to do this exercise?</b>	<p>Steps of creating a personal development and learning plan</p> <p>1. Draft Your Learning Vision</p> <p>Take the first step: Reflect on yourself to define what you want to learn about. Think about where you want to be in the future and what you want to accomplish. Write down everything that is important to you, including your passions and what makes you happy. This will help you define what you should learn to get to where you want to be. We call that your <b>"Learning Vision."</b></p>



Do:

- Write it down so it sticks with you!
- Be true to yourself to make sure your vision will make you the best version of yourself.
- Consider multiple areas of your life. Work is not the only place we learn!

Don't:

- Limit yourself based on your current abilities and skills. Think of things that will force you out of your comfort zone.
- Write down things you think people will want you to do. This is not a "what will make other people happy exercise," it is a "what will make YOU happy" exercise.

Do you have your vision? Great! Let's figure out what your learning journey should look like.

## 2. Develop Your Learning Blueprint

Once you are able to establish a vision of where you want to go, it is time to start researching how to get there. Study people who are living your learning vision, so you can create your own blueprint.

Developing your blueprint is easy...

## 3. Establish what "End" you have in mind to achieve your learning vision:

- If you have trouble doing this, take a minute to close your eyes and imagine yourself in that new life. It could be on a beach, teaching a class, mentoring someone, anything really.

## 4. Find a person – or more – who mirrors the type of person you want to become:

- This could be someone you really admire or someone with a combination of traits that you think are ideal.

## 5. Do some research on how they got to where they are:

- If famous, you can probably find information on the internet. If not famous, you may be able to talk to them directly. They would be honored to know that someone looks up to them.

## 6. Once you know the end and the beginning, figure out the important milestones in between:

- Did the person go through a struggle?
- Did the person get a certain type of degree?
- Did the person make certain relationships to succeed?

Anything that serves as a stepping stone to reaching that vision should be part of your "Learning Blueprint." This blueprint should be detailed enough that it outlines what topics you need to learn and the skills necessary.

## 7. Set Measurable Goals

*"What gets measured gets managed."* -Peter Drucker

To make sure you accomplish your vision, you must draft measurable

goals. Here's how:

- Be specific, yet simple – enough for a kid to read and understand your goals.
- Ensure they're measurable – with realistic metrics.
- Make them time-specific – so you have deadlines to meet.
- Keep them handy – somewhere you and others can see it.
- After setting goals, it is important to find resources to make your personalized learning plan a success.

#### 8. Find Your Resources

Resources can come in many different forms, such as books, videos, podcasts, people, webinars, and more. Before deciding what resources you will use, answer these questions:

- What style of learning fits you best?
- Who in your community or network can help?
- What types of resources can help fulfill your plan?

Take full advantage of all learning avenues: the library, online resources, and people you interact with every day. People in your network will most likely be happy to share expertise and resources. Just ask! Some of these people may have content of their own that you can consume or have tips on where to go to get you to where you want to go.

#### 9. Learn Like Your Life Depends On It!

In order to accomplish your goals, you will need to set aside time to learn. Most of us are ,or at least claim to be, very busy. There is always time to learn:

- Schedule dedicated time each day or certain times during the week to consistently learn.
- Use time management tools such as your calendar or phone reminders to make time for learning. After it's a habit, get creative with times and resources to aid your learning.

For the final step, reflect on your experience and make changes as you need to.

#### 10. Stay On Top Of Your Learning Plan

Keeping track of what you learn and reflecting on it is one of the most powerful parts of your personalized learning experience.

Life is variable and things change, it's okay to re-evaluate your goals and plan. This reflection time gives you the opportunity to pivot to achieve the success you are looking for.

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#### Source

<https://centricconsulting.com/blog/6-steps-personal-learning-plan/>





### 3.2.3. Activity no 3

<b>Title of activity</b>	<b>SWOT analysis</b>
<b>What will you learn?</b>	<p>It can help you uncover opportunities that you would not otherwise have spotted.</p> <p>By understanding your weaknesses, you can manage and eliminate threats that might otherwise hurt your ability to move forward.</p> <p>You are most likely to succeed in life if you use your talents to their fullest extent.</p> <p>Similarly, you'll suffer fewer problems if you know what your weaknesses are, and if you manage these weaknesses so that they don't matter in the work you do.</p>
<b>How much time do you need?</b>	45'-60' minutes
<b>Required materials</b>	SWOT analysis worksheet (attachment no 6)
<b>How to do this exercise?</b>	<ul style="list-style-type: none"><li>• <b>Determine the objective.</b> Decide on a learning need, a key project or strategy to analyze and place it at the top of the page.</li><li>• <b>Create a grid.</b> Draw a large square and then divide it into four smaller squares.</li><li>• <b>Label each box.</b> Write the word "Strengths" inside the top left box, "Weaknesses" inside the top right box, "Opportunities" within the bottom left box, and "Threats" inside the bottom right box. These are titles, so they should be distinguished from the rest of the text using either colour or font size.</li><li>• <b>Add strengths and weaknesses.</b> Add factors that affect the project to the applicable boxes. Components of a SWOT analysis may be qualitative and anecdotal as well as quantitative and empirical in nature. Factors are typically listed in a bullet form.</li><li>• <b>Draw conclusions.</b> Analyze the finished SWOT diagram. Be sure to note if the positive outcomes outweigh the negative. If they do, it may be a good decision to carry out the objective. If they do not, adjustments may need to be made, or else the plan should simply be abandoned.</li></ul>
<b>Source</b>	<a href="https://www.smartdraw.com/swot-analysis/">https://www.smartdraw.com/swot-analysis/</a>

### 3.3. Additional material to read and sources for self-education

#### Books

Honey, P. and Mumford, A. (1986a) The Manual of Learning Styles, Peter Honey  
Asso Luft, J., & Ingram, H. (1955). The Johari Window: A graphic model for interpersonal relations. Los Angeles: University of California Western Training Lab., Luft, J. (1970). Group processes: An introduction to group dynamics (2nd ed.). Palo Alto, CA: National Press Group.  
Blanchard, K. (1985). Leadership and the one-minute manager. New York, NY: HarperCollins.  
Maslow, A. (1970) Motivation and personality, , New York, Harper & Row

#### Internet articles

K. B. Lawlor, M.J. Hornyak, Smart goals: How the application of smart goals can contribute to the achievement of student learning outcomes,  
<https://journals.tdl.org/absel/index.php/absel/article/viewFile/90/86>  
Babatunde O. Adenuga, Self-directed learning readiness and learning style preferences of adult learners,  
<https://lib.dr.iastate.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=10260&context=rtd>  
J. Rosewell, Learning styles,  
[https://www.open.edu/openlearn/ocw/pluginfile.php/629607/mod\\_resource/content/1/t175\\_4\\_3.pdf](https://www.open.edu/openlearn/ocw/pluginfile.php/629607/mod_resource/content/1/t175_4_3.pdf)  
L. Nurlaela, M. Samani, I.G.P. Asto, S.C. Wibawa, The effect of thematic learning model, learning style, and reading ability on the students' learning outcomes,  
<http://iopscience.iop.org/article/10.1088/1757-899X/296/1/012039/pdf>

#### Thematic websites

Centre For Teaching Excellence: <https://uwaterloo.ca/centre-for-teaching-excellence/>  
Warwick Learning and Development Centre:  
<https://warwick.ac.uk/services/ldc/personal/plan/identify/>  
Funderstanding: <https://www.funderstanding.com/educators/thematic-instruction/>



## 4. HOW TO ORGANISE LEARNING SO THAT IT BRINGS BETTER RESULTS?

### 4.1. A bit of theory...

Every learner is different, each human's mind works in a different way and responds to things differently. Under this logic it is important that these learning methods are therefore tailored for each individual rather than a distribution of a one-size-fits-all policy. Learning methods that do not suit the learner will not maximize the amount of knowledge retained during work. There are multiple learning methods and not every learner will know what studying and revision methods are the most suitable and effective for them. But there are a few basic commonalities between all these techniques, and one of the most vital traits is organisation.

Organisation is key to any learner's success; it develops a level of work ethic required in almost all professional fields, it offers a certain reliability which employers seek and it aids the reduction of stress as all aspects of life seem more manageable.

The organisation of work is seemingly a basic idea that can be implemented with very little hassle into work processes of the learner. Whilst this is true to an extent, there are many avenues one can take in order to achieve an organisational level that will see remarkable improvements in the participant's results with regards to learning.

The organisation of time is possibly the most obvious, but perhaps the most beneficial way to improve the learner's learning process. In a society that has so many distractions, and in lives that have an abundance of various commitments, it is a necessity to structure your day well and strictly adhere to these chosen alterations. As aforementioned, this structure must be tailored to the educational and personal needs of the learner. Whether it be sharing your educational focus with parenting a child, or accommodating a brief concentration span due to a potential diagnosis of Attention Deficit and Hyperactivity Disorder – it is still vitally important to maintain structure if at all possible. The learner themselves should create a schedule that they can realistically abide by, but will offer them ample time to focus upon work as well as including personal time – a rewarding rest as respite for the hard work they will have put in.

Establishing a reward may seem like a not particularly worthwhile use of a learner's time, however this is a misinformed view. Having an understanding of what drives you to work and how you can use a reward to fuel and improve your own performance is an often overlooked but extremely useful tool for any learner to have. The release of endorphins when one is happy has plenty of neurological repercussions that can greatly enhance anyone's learning ability. Studies have shown that when learners are happy their productivity increases by 12% and analysts have found that students who classify themselves as happy get overwhelmingly better grades than those who consider themselves unhappy, so the stimulation and release of endorphins most definitely enhances performance. If learners can harness this simple technique in order to

maximize their learning ability, then it will be time well spent.

The creation of a learning environment that will instill a strong work ethic, a relaxed body and mind and an area of high concentration should be a priority for any learner that seeks to maximize their learning ability. A learning environment is the physical space where you work, not all adult learners will have the luxury of an isolated room within a house in which you can sit and work with no distractions. Each learner's circumstance is different to the next, so once again, the emphasis is on the learner taking the initiative and developing their own understanding as to what they require and how they can access these requirements. Distractions themselves do take a toll on the brain's functionality. Every mental distraction and every shift in focus eats away at glucose levels and your metabolic rate, when these add up you simply cannot perform like your brain can when it is fresh. A London study discovered that constantly being connected to a mobile device, and the mental fatigue that imparts on your brain has the equivalent effect of losing a night's sleep. So by conjuring a physical and mental environment that promotes a singularity of thought definitively betters your ability to maximize learning.





## 4.2. INDEPENDENT TASKS – QUESTIONNAIRES AND EXERCISES



### 4.2.1. Activity no 1

<b>Title of activity</b>	<b>Creating a Timetable</b>
<b>What will you learn?</b>	<p>Why it is crucial to organise your time when attempting to learn new skills/knowledge</p> <p>How to divide your learning and personal time to maximise your ability to understand new information</p> <p>To understand the problems that occur when you do not balance your time effectively.</p>
<b>How much time do you need?</b>	45 minutes
<b>Required materials</b>	Paper & writing utensil OR Computer/Laptop
<b>How to do this exercise?</b>	<p>Creating a timetable is a simple activity but requires knowledge of your favoured learning techniques, your mental capacity to absorb information and your daily demands – whether it be family commitments, a working day etc.</p> <p>This exercise will only take 45 minutes, but you will need to sit in a quiet space and create a timetable corresponding to one week. You will break down your day and incorporate every facet of a healthy lifestyle within the schedule; three meals a day (and time to cook them if necessary), time with your loved ones, time at work if applicable, running errands etc. Sticking to the prospective timetable will be difficult, that is the next step to this task, but that is a decision that is ultimately down to you. A streamlined routine is always preferred by the brain as it limits the wasting of energy due to distractions.</p> <p>The key to this exercise is to schedule between 1-2 hours of work per day, the idea is to promote quality not quantity. The level of quality you experience is dependent on your self-will and the following two exercises for this module. Two hours of pure, highly focused learning is far more useful than a distracted five hours of work. You will have a clearer idea of what will work for you, but if there are doubts or queries as to what may be appropriate your leader should support you next time you contact him/her.</p>
<b>Source</b>	Own work



### 4.2.2. Activity no 2

Title of activity	Establishing a Reward Scheme
<b>What will you learn?</b>	<p>Why rewards are an important facet of learning.</p> <p>The neurological process that occur after you experience a deserved reward.</p> <p>What type of reward can benefit your overall learning repertoire?</p>
<b>How much time do you need?</b>	45 minutes
<b>Required materials</b>	N/A
<b>How to do this exercise?</b>	<p>A reward scheme is an activity that demands some independence from you and requires a level of personal knowledge from you as a participant. You must know what makes you happy, whether it be dancing, chocolate, spending time with your friends etc. These positive emotions translate directly into your work, and several studies have shown that there is a positive correlation between the appearance of endorphins (and dopamine) and grades achieved.</p> <p>Discoveries made in this exercise should be factored in to you timetables devised in the previous activity. If they adhere to the structure you constructed in your schedules you will see the benefits of the reward scheme.</p> <p>You should be encouraged to engage in healthier rewards/choices. For example, running and other forms of exercise are proven to release an abundance of positive emotions that flood the brain much more effectively than eating chocolate. In every sense, this is a better lifestyle choice. This should not discount the role food can play in the reward scheme but you should be aware of which techniques achieve what.</p> <p>A simple, insertion of reward time in the timetable at the end (depending on which reward technique is selected) will suffice for this activity, but you are expected to research different techniques prior to establish their reward scheme using the links below.</p>
<b>Source</b>	<p><a href="https://www.growthengineering.co.uk/endorphins-feel-good-learn-better/">https://www.growthengineering.co.uk/endorphins-feel-good-learn-better/</a></p> <p><a href="http://generationtextonline.com/2017/08/16/how-endorphins-can-play-a-vital-role-in-successful-academic-achievement/">http://generationtextonline.com/2017/08/16/how-endorphins-can-play-a-vital-role-in-successful-academic-achievement/</a></p> <p><a href="https://www.medicalnewstoday.com/articles/320839.php">https://www.medicalnewstoday.com/articles/320839.php</a></p>





### 4.2.3. Activity no 3

<b>Title of activity</b>	<b>Creating an Effective Learning Environment</b>
<b>What will you learn?</b>	<p>How a learning environment can positively or negatively affect your ability to absorb new information.</p> <p>How to boost your concentration via your learning environment.</p>
<b>How much time do you need?</b>	1+ hour(s)
<b>Required materials</b>	<p>Paper &amp; writing utensil</p> <p>OR</p> <p>Computer/Laptop</p> <p>Music playing device</p>
<b>How to do this exercise?</b>	<p>Creating a learning environment comprises of many different factors that, when in harmony, allow you to truly maximize their learning capabilities. These factors include, but are not limited to: setting and music. These will be the two factors focused heavily upon in this exercise.</p> <p>The aim of this activity is for you to construct a learning environment that you can use for your studies and which will aid your overall performance by complimenting your learning style. The learning environment is supposed to streamline your learning, reduce distractions and relax you. To replicate these conditions is key.</p> <p>Setting: Ideally, you will have a comfortable, isolated room within your own house which you can alter in order to fit your learning needs. The room should be quiet, should have few or no distractions, should have minimal mess, a neutral temperature and should be well lit but not have harsh, bright lighting. However I am aware this is not always possible, some have little living space, accommodation issues, families that prioritise space, etc. However, you should identify a space, perhaps a public library or somewhere similar that you could work in and your teachers should also support you in this search for a suitable area.</p> <p>Music: an aspect to learning that is often dismissed is the role of music. Quiet, subtle and relaxing music can greatly influence learning performance. In fact, classical music has been shown to temporarily raise your IQ according to the Mozart Effect, Campbell (1997). This activity is more about trial and error about finding what music aids the participant's learning best. Suggested music such as elevator music, smooth jazz, Mozart concertos and productive music playlists should be trialed by the adult learner and they should independently choose what suits their needs.</p>
<b>Source</b>	N/A

## 4.3. Additional material to read and sources for self-education

### Books

The Mozart Effect: Don Campbell (1997)

'Habits of a Happy Brain: Retrain Your Brain to Boost Your Serotonin, Dopamine, Oxytocin & Endorphin Levels': Loretta Graziano Breuning, PHD (2015)

Internet articles

J.S. Jenkins, The Mozart effect,

[http://scholar.google.co.uk/scholar\\_url?url=https://www.ncbi.nlm.nih.gov/pmc/articles/pmc1281386/&hl=en&sa=X&scisig=AAGBfm0JBQCDZjgMP9xro\\_Fc0sDSVq0Ehg&nossl=1&oi=scholar](http://scholar.google.co.uk/scholar_url?url=https://www.ncbi.nlm.nih.gov/pmc/articles/pmc1281386/&hl=en&sa=X&scisig=AAGBfm0JBQCDZjgMP9xro_Fc0sDSVq0Ehg&nossl=1&oi=scholar)

R.A. Wise, Dopamine, learning and motivation,

<https://www.nature.com/articles/nrn1406?cacheBust=1508275714506>

R.C. Kennedy, Applying Principles of Adult Learning: The Key to More Effective Training Programs,

[https://heinonline.org/HOL/Page?handle=hein.journals/fbileb72&div=26&g\\_sent=1&casa\\_token=](https://heinonline.org/HOL/Page?handle=hein.journals/fbileb72&div=26&g_sent=1&casa_token=)

### Thematic websites

Growth Engineering!: <https://www.growthengineering.co.uk/endorphins-feel-good-learn-better/>

Generationtextonline: <http://generationtextonline.com/2017/08/16/how-endorphins-can-play-a-vital-role-in-successful-academic-achievement/>

Medicalnewstoday: <https://www.medicalnewstoday.com/articles/320839.php>



## 5. HOW TO LEARN EFFICIENTLY – HOW TO CHOOSE WORK METHODS AND TECHNIQUES?

### 5.1 a bit of theory...

The knowledge of studying more effectively – studying smarter – can be acquired as an ability to better maintain the material to be studied. These routines include approaching study and material with the right frame of mind: right framework, minimizing distractions, setting a pragmatic schedule, and using memory games, among others. If you wish for a better outcome when learning, you are in need of effective study habits. The key to successful learning isn't swotting or studying longer, but studying smarter. You can start learning smarter with these powerful learning routines and skills.

#### ROUTINES

##### 1. How you approach studying materials

improve your study mindset:

- Ensure that you are thinking positively when you study, and remind yourself of your skills and abilities.
- Ensure that you stay away from negative thoughts.
- Stop yourself from absolute thinking: "I always ruin things," the more objective view is much better: "I didn't manage so well that time, what can I do to become better?"
- Ensure that you are not comparing yourself to others. Your skills and abilities are unique to you

##### 2. The environment where you study is crucial

- Choose a quiet and calm area: a library, a quiet coffee house, a calm park or your own room
- Don't study in a place that really isn't conducive to concentrating - a place with a lot of disturbances is a poor study area.

##### 3. Sketch out and rephrase your notes

- interpret your notes and outline them in your own words. This can even be done using diagrams if necessary and other learning tools. This will help you remember the notes
- Use as many senses as possible when studying. This way, information will be retained easier.

##### 4. Make a schedule you can adhere to

- Study in short sections every day (30-60 minutes) rather than doing learning marathons.
- Divide study time into sections that make sense and work for you.

## 5. Take breaks (and rewards)

- Don't consider studying as a chore. Find rewards to help strengthen your motivation to work.
- Distributed practice: Find a reward that is small but real, if you have reached your learning goal then you can have it.

## 6. Use memory games (mnemonic devices).

- Mnemonic devices are helpful because you use more of your brain to remember visual and active images than you do to remember just a list of items. Using more of your brain means better memory.

## SKILLS

Below are three proven study skills to be able to remember the information much more easily.

### Powerful Study Skill 1: Use Total and Part Learning

Break up the material:

*Total strategy with Extra Learning for Parts.* With this approach, you first employ the Total strategy to get a good scope of the material. In other words, read straight through everything attentively once or twice. Then you separate the more difficult sections for extra study and reinforcement.

*Total-Part-total strategy.* First go straight through all the material a couple of times rapidly. Then split up the material into logical parts that you study one by one. At the end, go back and survey everything from the beginning to end. This method is especially effective for long and difficult material.

### Powerful Study Skill 2: Decrease Interference

Interference appears when information you have learned previously interferes with (gets in the way of) new material that is similar. And for this reason you can forget what you have learnt.

Minimize interference:

- *Overlearn the Material.* The better you know the material, the less likely that interference will appear.
- *Make It Relevant.* Another way to reduce interference is to make the information more Relevant. Remember what you are learning, the material needs to make sense rather than just be learnt.
- *Keep at minimum the level of Intervening activity.* Interference grows as the amount of activity between study time and the time to recall the material expands. A lot of intervening mental activity leads to a greater chance of interference.



### Powerful Study Skill 3: Divide your material

To best remember information, it would be better to study your chapter in four 1-hour sessions than in a long 4-hour session. This method is better than cramming:

- *Limits of Attention.* there is a boundary to how long you can concentrate on a given set of material. If you try to learn too much at the same time, your ability to concentrate on the material will be weaker. Lack of concentration and attention causes poor remembering of the material.
- *Stabilization During Breaks.* your brain strengthens memories during breaks. When you try to cram everything instantly and there are no breaks, less consolidation of memories occurs.
- *Varying circumstances/emotional states.* Memory is supported by environmental context. Namely, the room you study in, the type of pen or pencil you use when studying, or even your mood can connect what you learned to what you can recall.



## 5.2. INDEPENDENT TASKS – QUESTIONNAIRES AND EXERCISES



### 5.2.1. Activity no 1

<b>Title of activity</b>	<b>Memory games</b>
<b>What will you learn?</b>	Memory games exercise the brain, making it more sharp and alert. If you play memory games for at least thirty minutes every day, your concentration and focusing ability will improve.
<b>How much time do you need?</b>	20-30 minutes
<b>Required materials</b>	Working in groups, no materials needed
<b>How to do this exercise?</b>	<p><b>Story Telling Memory Game</b></p> <p>Players sit in a circle and one person begins a story using any sentence that they wish. The players take turns repeating the sentences and adding a new one. If someone misses a word, they are out. The participant able to tell the story without a mistake is the winner.</p> <p><b>Mismatch Memory Game</b></p> <p>A team memory game, one team leaves the room and the other team changes things in the room to make mismatches – the placement of furniture, lamps, rugs, etc. When the second team returns to the room, they find the mismatches and get a point for each. Then the second team takes a turn finding the mismatches. The team with the highest score wins the game.</p> <p><b>The Category Game</b></p> <p>Participants are required to list words that fit into a particular category. For example:</p> <ul style="list-style-type: none"><li>• List all of the colours that you know in one minute.</li><li>• List all of the words that you know that mean small (tiny, little, petite, miniature, nano, micro, elfin).</li><li>• List all of the breeds of dog that you know.</li><li>• List all of the words that you know that mean red (scarlet, auburn, crimson, brick, lipstick, cherry).</li></ul> <p>For an extra challenge, have players clip paperclips together while saying the words in the chosen category.</p>
<b>Source</b>	Own resources



### 5.2.2. Activity no 2



**Title of activity**      **Crossword puzzle**

**What will you learn?**      Crosswords are a classic brain trainer, accessing not only verbal language but your memory from many dimensions of knowledge. Best of all, there are many ways you can do a crossword, both online and off.

**How much time do you need?**      20 minutes

**Required materials**      Paper, pencil

**How to do this exercise?**      Choose words that you find difficult to remember and arrange them in a usual crossword style. By looking at the order of the words and the way in which they are laid out, your brain will remember them. This is also known as photographic memory. The letter in red is the original letter with the other words filled in around these.

studying

chunking

whole

reward

read

meaningful

skill

mnemonic

**Source**      Own resources



### 5.2.3. Activity no 3

Title of activity	Short essay
What will you learn?	The description of the material being acquired through key notions.
How much time do you need?	20 minutes
Required materials	Paper, pen
How to do this exercise?	You are required to answer the following question using between 15 and 20 sentences. Describe at least 4 habits, skills or methods that are enhancing the effectiveness of your learning ability.
Source	Own resources



## 5.3. Additional material to read and sources for self-education

### BOOKS:

Kenneth L. Higbee: Your Memory : How It Works and How to Improve It. 2001.

Kevin Horsley: Unlimited Memory: How to Use Advanced Learning Strategies to Learn Faster, Remember More and be More Productive. 2016.

Benedict Carey: How We Learn: The Surprising Truth About When, Where, and Why It Happens. 2015.

### ARTICLES:

S. Oxenham, The Lesson You Never Got Taught in School: How to Learn!,

<https://bigthink.com/neurobonkers/assessing-the-evidence-for-the-one-thing-you-never-get-taught-in-school-how-to-learn> 2018.09.04

Successful study strategies for non-traditional adult learners,

<https://www.ccis.edu/offices/academicresources/writingcenter/studyskills/transitionadultlearners.aspx> 2018.09.04

Ten Study Methods That Work, <http://www.csc.edu/learningcenter/study/studymethods.csc> 2018.09.04

<http://www.back2college.com/top10studytips.htm> 2019.09.04.

### WEBSITES:

Educationcorner: <https://www.educationcorner.com/>

BACK2COLLEGE: <http://www.back2college.com/>

Study Guides and Strategies Website: <http://www.studygs.net/>

Howtostudy: <https://www.howtostudy.org/>

## 6. HOW TO USE ONE'S OWN EXPERIENCE AND SKILLS IN LEARNING?

### 6.1. a bit of theory...

In previous chapters you have learnt that although younger people learn faster, older people will have more knowledge accumulated throughout their lifetimes and they also have the skill to be able to combine new information with what they already know. The easiest way to explain this is to say that the greatest advantage of adulthood or even maturity over youth is **EXPERIENCE**. Wide experience, accumulated throughout a lifetime is sometimes described as **wisdom** (usually associated with mature people) – which is the ability of applying the acquired information, thoughts, observations, and competences to solve completely new problems. From the point of view of neuroscience, the fundamental role of experience in adult education can be easily explained.

You already know the basic mechanism of memorising information (learning). You know that each **stimulus** that gets to one's brain, leaves a **memory trace** in its structure, for example: a stimulus in a form of a consumed tomato leaves a memory trace of its taste and colour. If the information is not important, such a trace does not last long (a few seconds, maybe a few minutes at most). If the stimulus is repeated however (because we often eat tomatoes), it is preserved and stored in the **long-term memory**. Similar stimuli activate similar neural networks. If such similar stimuli reach the brain often (because we regularly eat tomatoes in many different forms –raw, in salads, as a soup, sauce, ketchup, etc.), in our mind a well-developed and preserved network is created, responsible for a whole set of similar things / events (in our case this network is activated every time we eat tomatoes or dishes that contain them). In such a way **experiences** are filed and ordered in our brains.

**WISDOM** – the ability to apply acquired information to solve problems



*Similar types of experiences(stimuli) create an experience pattern*

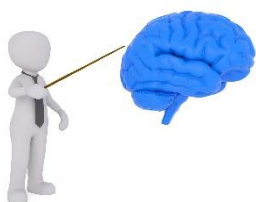


**Memories (stimuli)**

**Experiencepattern**

What is the power and potential power of collecting experiences in such a way? It helps us easily generalise acquired information. For example: when seeing a tomato, we can immediately, automatically (without much reasoning and analysing) describe the characteristic features of this vegetable– its shape, colour, approximate weight, structure. Thanks to the ability of generalizing information, on the basis of one experience we can formulate opinions about other, similar objects, events, or phenomena.

A more advanced thinking process refers to a different use of acquired experience. If we form in our brains a fixed, complex pattern, we can predict the future based on it, also in situations that are new to us. In our example: if we have eaten enough tomatoes in our lives, in many different forms, then referring to our 'tomato experience' we can foresee if adding tomatoes to a dish that we are cooking for the first time will improve or spoil its taste and how it will change its consistency and colour.

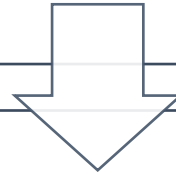


**So let's think:** the more experience a person collects and the more varied this experience is – the more patterns s/he keeps in her/his mind and the more numerous are situations, in which such a person can act automatically, basing their action solely on the information s/he has already acquired.

Do you remember from your time at school trying to cram as many facts / data / formulas as possible, not being able to understand them at all? Have you noticed that adults do not do that? To memorize some information, you need to understand it or know its application. That is because adults, while learning, do not create completely new information structures in their brains. They try to link new information with what they already know and refer to a situation/experience that they have already experienced. That is why a special model of learning has been prepared for adults. In this model experience is the central point of the whole learning process. What does it rely on in practice? **Experience-based learning** has the following structure.

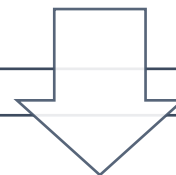
### Get to know the problem in practice

Watch a film, read an interview on the given topic  
Ask somebody to show you how to do it  
Check if you know how to apply it in the real world (make an experiment)  
Get to know the description of the situation which illustrates a given problem



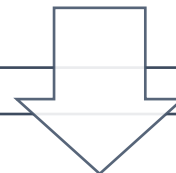
### Think your experience over

Consider: what is the most important in the phenomenon/ thing/ process that you just learnt about?  
What do you think about this topic?  
Ask others about their opinions – discuss with them  
Does the new problem seem important / interesting / useful to you – why?



### Collect information on the given topic

Search for necessary data in books and on the Internet  
Make notes, put the information about a given topic in order, for example: on a computer disc  
Talk to somebody who really knows the topic  
Pay attention to the smaller details, try to understand exactly the meaning of the given topic



### Use the new experience in action

Do it yourself! Perform a task / experiment / action once again –on your own  
Try to apply new knowledge or skills in a practical way – think of how it can help you in your everyday life  
Try other ways of doing this task / activity, check if you can change and improve what you have already learnt

If this way of learning still seems complicated to you, try to apply the model in a simple example: assume that you want to learn how to fill in a tax return form. It requires filling in complicated documents and so far you haven't dared to do it on your own. So you sit down with a pen in your hand and with the long form at the ready and ... you understand nothing. Let's try to approach the problem in a different way and apply experience-based learning.

*Example!*



**Get to know  
the problem  
in practice**

Check the form over and see if there is a part of the form that you are able to fill in. Read the document and decide which parts do not cause problems (name and surname should be straightforward, address as well). By starting to complete the form in this manner, it will soon become clear which parts of the form are a complete mystery to you. Now it is a good idea to see how others cope with the challenge– search for films and tutorials about it on the Internet (it is enough to enter the following in the search engine: how to fill in a tax return?). When watching the film, refer to your form but do not fill it in at the same time. Just try to grasp the most important information, see which elements are emphasised in the tutorial.

**Think your  
experience over**

You know what to pay attention to. Browse the document once again and think: what additional documents do you need for the tax return? Where are they? Which information about your income will be important when filling in the form? If you are still seriously in doubt whether you can cope with this task, talk to somebody who has already filled in this form on his/her own. Ask about most frequent mistakes. What to pay attention to?

**Collect  
information on  
the given topic**

By now you have probably collected a lot of information on how to start filling in the tax return. It is a good time now to collect as much detailed information as possible that can be helpful for calculating the tax. Now read the instructions attached to the form. Because you already know some basic terms and you've heard different opinions, you will understand the official language used in the document better. Make a list of the most important issues that you need to concentrate on. Highlight the data that you must present in your tax return. If there is any excerpt that you still do not understand, ask a question on an internet forum or search for the explanation on the Tax Office webpage.

**Use the new  
experience in  
action**





Now you know everything that is necessary to fill in your tax return. So ready your pen and start! You shouldn't expect to complete the form perfectly straight away – if you are unsure of anything, watch the tutorial again, have a look into the instructions, or enter your question that you are stuck with in a web browser. The important thing is that you do it yourself. You use what you have already learnt earlier. And the best thing– the first tax return filled in on your own is another experience that in the future will help you cope with other official documents. You might even support your friends in their own struggle with the tax office!

Whether consciously or not, most adults learn in the above way – trying to refer new information and skills to knowledge that they have already acquired, using as much experience as possible for learning. However, the differences between adults means that different people feel comfortable at different stages of the presented process. There are people who like to act,



experiment, work practically – these are ACTIVISTS. There are people who prefer to first observe and think various things over and form an opinion on a given topic before they move on to the practical stage – these are OBSERVERS. Others like to gather information, go into details, look for knowledge and answers in books – these are THEORETICIANS. Finally, there are people who try new things right away and apply them in real life, they are PRACTICIANS. It is important to determine what type of “student” you are. This way you can match the best learning and working methods to your preferences and needs.

Read about the characteristics of each type of experience-based learner below. Think about which description matches you best? Consider: do the learning methods attributed to this type of person match your preferences?

 <p><b>ACTIVISTS</b></p> <ul style="list-style-type: none"> <li>• They like new experience and problems that they need to solve. They treat tasks as challenges.</li> <li>• They learn actively, applying simulations, exercises, games and discussions. They like analysing cases, roleplaying. They learn from games and while playing.</li> </ul>	 <p><b>OBSERVERS</b></p> <ul style="list-style-type: none"> <li>• They learn in an organised way, analysing what they see. They need time to think the problem over and solve it. They do not like taking decisions under pressure.</li> <li>• They learn by using creative methods. They like techniques supporting analytical thinking– SWOT analysis, Ishikawa, case studies.</li> </ul>	 <p><b>THEORETICIANS</b></p> <ul style="list-style-type: none"> <li>• They like explaining links and relations. When learning they prefer organized and clear content. They like asking questions, analysing causes of events.</li> <li>• They are happy to learn by solving tests and answering close-ended questions. They are not bored when learning from books or looking for information on the Internet. They like expressing their opinions.</li> </ul>	 <p><b>PRACTICIANS</b></p> <ul style="list-style-type: none"> <li>• They learn by practical application of theoretical tasks, they like trying, practising and getting feedback from an expert.</li> <li>• In learning they use practical methods and exercises. They like projects, experiments and simulations. They want to apply the content they learnt at work or in their everyday life.</li> </ul>
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Getting to know which methods and techniques of learning correspond to our needs and abilities can make it easier to carry out any tasks related to getting new information and acquiring new skills. Such knowledge is also useful in everyday situations when we have to learn how to use new computer programmes, assemble an IKEA chair or make a fashionable but very complicated plait for our daughter. However, the mechanisms described at the beginning of this chapter connected with the way the brain collects and organises experience make it possible to formulate general rules that may make your learning easier:



**You memorize best the experiences that are important to you**

When learning, try to specify how specific knowledge/skills can help you (In your career? Developing your interests? Coping with everyday problems? Taking care of a child?)

**You learn most effectively by acting and working**

You learn more effectively when you experience a given situation and not only observe it or listen about it (it is easier to learn swimming by doing it than by simply watching others swim, right?)

**Theoretical knowledge is not an experience, it is a set of information. Experience means applying the knowledge in practice**

If you want your brain to memorize theoretical information, try to find an example for it, a situation where the knowledge is used in real life (a cheese cake recipe is theoretical information – it is hard to remember in detail but when you prepare the cheese cake a few times for your family, you will perfectly remember all the ingredients).

**Brain most readily stores experience connected with personal life or work**

While learning, try to think right away how you will apply such knowledge/skills in your everyday home and professional work. Try to relate the information to you.

**Brain works more effectively on organizing and storing experience when we feel positive, pleasant emotions**

Stress blocks a brain's work. Do not try to learn when you are nervous, do not learn out of fear from evaluation or criticism. Find a safe place to learn. Listen to silent music, if that helps you. Think about something nice that you will treat yourself to once the course is completed. Think about the satisfaction that you will feel when collecting the certificate. Think about the joy of extending your knowledge and skills!

## 6.2. INDEPENDENT TASKS – QUESTIONNAIRES AND EXERCISES



### 6.2.1. Activity no 1

Title of activity	Your experience-based learning style (attachment no 7)
<b>What will you learn?</b>	Upon completion of this exercise, you will have learnt: <ul style="list-style-type: none"><li>• To recognize your own style of learning using experience</li><li>• To use the knowledge about your learning style to organise education</li><li>• To choose learning methods and tools matching your own preferences in learning</li></ul>
<b>How much time do you need?</b>	You need about 20 minutes to complete the exercise.
<b>Required materials</b>	<ul style="list-style-type: none"><li>• A questionnaire with questions (Appendix 1)</li><li>• A table with results (Appendix 1)</li><li>• A pen</li></ul>
<b>How to do this exercise?</b>	<p>We presented in our materials descriptions of various styles of learning based on experience. Knowing your own style, you can not only plan your learning better, but also find appropriate methods and tools. That is why we have a suggestion for you:</p> <ol style="list-style-type: none"><li>1. Fill in the questionnaire in Appendix 1. Read the statements and think if you can refer to them on a personal level. Mark with a plus (+) the ones that you consider as describing your habits and preferences. Mark with a minus (-) the ones that you do not identify with.</li><li>2. Remember that there are no bad or good answers. The purpose is to describe your features as a learner. Be honest!</li><li>3. Put the scores in the table with results and sum up all of the points. This way you will get to know your learning style.</li><li>4. Read from the given materials the description of your predominant learning style.</li><li>5. Think:<ul style="list-style-type: none"><li>• In what way the acquired knowledge can help you in independent learning?</li><li>• Which learning methods will be best for you?</li><li>• How you can change your learning habits knowing what style you prefer?</li></ul></li></ol> <p>Remember that there are no better or worse learning styles. The important thing is to know your needs and requirements and to be able to choose the most effective way to memorize information and develop skills that is best and most efficient for you. Don't be afraid to experiment! By using different learning style, not only the ones you know from school, you will easily find what is enjoyable for you in this work, what you are interested in and what helps you develop your knowledge.</p>
<b>Source</b>	Didactic materials for trainers: "Effective teaching" prepared within the project From Practice to Profession (Przez Praktykę do zawodu)



<b>Other info</b>	On the Internet, you can find various tests and questionnaires researching experience-based learning styles according to D. Kolb. It is worth doing your own research to learn about your own abilities and needs in self-education.
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## 6.2.2. Activity no 2



<b>Title of activity</b>	<b>Experience under your belt(attachment no 8)</b>
<b>What will you learn?</b>	Thanks to this exercise you will learn: <ul style="list-style-type: none"> <li>• To analyse acquired personal and professional experience</li> <li>• To involve acquired experience in the process of independent learning</li> </ul>
<b>How much time do you need?</b>	You need about 30 minutes to complete the exercise.
<b>Required materials</b>	<ul style="list-style-type: none"> <li>• Worksheet – Appendix2</li> <li>• Pen / pencil</li> </ul>
<b>How to do this exercise?</b>	<p>We are sometimes unaware of the huge potential of our previous experiences, even seemingly insignificant ones, that we accumulate throughout our lifetimes. After learning about the basic information surrounding how our brain functions and how we learn, you know that the experience and skills of an adult are the framework around which new information and competences are built in our minds. The link between skills acquired by you and their application in learning new things may not be obvious. For example, your skill of taking interesting photographs can lead directly to your development in the profession of a photographer. But the same skill can also be used for learning how to use computer programs for graphic editing, for active participation and forming relationships via social networks or for involvement in projects involving the so-called citizen science (research run by scientific units in cooperation with the citizens, for example documenting the life of animals in a specific environment by ordinary citizens). Thus, we encourage you to analyse your own experience and the skills connected with it – the skills you already have. This way you will become aware of the potential that you already have in your mind. In this way you will understand which of the acquired experience can help you best in developing your interests and skills that you want to learn most now.</p> <ol style="list-style-type: none"> <li>1. Read about some skills on the worksheet (appendix 2). Circle the ones that you have. Think how you can use them in learning something new.</li> <li>2. In the second table write down the skills and experience that you have but that you did not find in the worksheet. Also for them think of an application in the development of your passions and interests.</li> </ol>

3. Read once again the list of your experiences and skills. Have you realised how much you already know and can do? Think how many more things you can still learn. And start doing it😊

<b>Source</b>	Own study
<b>Other info</b>	On the Internet you can find a lot of tests that can help you define your advantages and diagnose your competences that are worth developing. If you think that it will help you, get to know the potential you and motivate you to develop your interests – look for such tests and do them.



### 6.2.3. Activity no 3

<b>Title of activity</b>	Learn using the Richard Feynman's method
<b>What will you learn?</b>	Thanks to this exercise you will learn: <ul style="list-style-type: none"> <li>• To apply Feynman's method in your learning</li> <li>• To understand better the information you want to memorise</li> </ul>
<b>How much time do you need?</b>	You need about 45-60 minutes to complete the exercise.
<b>Required materials</b>	<ul style="list-style-type: none"> <li>• Paper</li> <li>• Pens/ pencils</li> </ul>
<b>How to do this exercise?</b>	<p>Richard Feynman was one of the most outstanding physicists in history, a Nobel prize winner, a fantastic university teacher. In private he was a real science celebrity, high society member, mass-media favourite. Among his numerous achievements is a simple but very efficient method of learning. It is based on triggering the acquired information and experience to deeply understand the new topic. Check if you can apply it in your own work!</p> <p><b>1. Explain it to a child</b></p> <p>Select the topic that you want to get to know and memorise. It can be a complex mathematical, economic or historical problem or even a simple issue: English words describing weather. Take a clean sheet of paper and write down the topic that you are going to tackle on top of it. Next, describe in a simple way what you know about the topic. Imagine that you are talking to an eight-year old – don't use difficult words, don't make complicated presentations. Point out all of the facts, associations, memories that come to your mind in connection with the given topic. Write down the words, definitions, formulas, examples of application that you are familiar with. What for? When describing a given idea step by step, from the beginning to the end, using the simplest possible language, we force our mind to trigger off the acquired experience and knowledge, and in this way we will begin to comprehend the issue on a deeper level. This way we find basic relations, associations, memories, that we can start building our knowledge on.</p>



## 2. Review your knowledge

When recalling information you have on a given topic and trying to present it in a simple form, you become aware of the deficiencies of your own knowledge: what you do not know, what you cannot understand, what you cannot explain. Mark these doubts in your notes. Highlight unclear elements. Note down questions that you want to find answers to. Now you know exactly what to look for in books, newspapers, the Internet.

## 3. Collect the information you need

Resolve your doubts, answer bothering questions using the handbook, available books and the Internet. This way you will fill in the gaps in your knowledge. At this stage try to take notes. Use the method that you like most – write down important facts, words, formulas, or make a mind map. Record your notes if this is the most user-friendly way for you. Remember to keep it simple. Do not rewrite words or sentences that you do not understand. Use your own words that you know and understand.

## 4. Tell us what you have learnt

The last step is to make a new whole of the story. Connect what you have known before with new information. Say it once again, as if your listener was an eight-year old child. Use your own words, give some practical examples from your everyday life or work. Explain phenomena the way that you understand them. If during your story you realise that there is something unclear, it means that you need to work on this bit a little more. If your narrative is fluent, you have probably mastered the topic!

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### Source

Own work based on:

E. Grim, *Metoda Feynmana, czyli noblisty sposób na naukę wszystkiego* (Feynman's method, or Nobel Prize winner, a way to learn everything), <https://igimag.pl/2017/11/metoda-feynmana-czyli-noblisty-sposob-na-nauke-wszystkiego/>

D. Machalica, *Ucz się szybciej stosując technikę Feynmana* (Learn faster using the Feynman technique), <http://zorganizowani.com/szybka-nauka/technika-technika-feynmana-szybka-nauka/>

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### Other info

Just like before, we would like to encourage you to search in books and on the Internet for other methods of experience-based learning. Remember that there is no universal technique ideal for every learner. Check out various ideas for efficient learning to find the one that best suit your needs and talents. Good luck!

### 6.3. Additional material to read and sources for self-education

Experience-based learning is for adults the basic, “most brain friendly” way to acquire new information and develop skills. That is why in bookshops or on the Internet one can find a lot of information about this topic. We would like to encourage you to further read and extend your knowledge connected with using experience for self-learning and developing interests. That is why below you will find a list of books, Internet articles and webpages on the discussed topics.

#### **Books:**

Elkhonon Goldberg. The Wisdom Paradox: How Your Mind Can Grow Stronger As Your Brain Grows Older, NY: Penguin, 2005. UK edition: Free Press, Simon & Schuster, 2005.

Gerald Huther. Was wir sind und was wir sein könnten: Ein neurobiologischer Mutmacher. Gebundenes Buch 2011.

Kolb, D. A. (2014). Experiential learning: Experience as the source of learning and development, Wydawnictwo FT press.

#### **Internet articles:**

McLeod S. (2017). Kolb's Learning Styles and Experiential Learning Cycle, <https://www.simplypsychology.org/learning-kolb.html>

Rumson R. (2016). David Kolb's Learning Styles, <http://resources.eln.io/david-kolb-learning-styles/>

#### **Internet services and webpages:**

[www.c4lpt.co.uk/blog](http://www.c4lpt.co.uk/blog) - a blog by Jane Hart on on-the-job learning

<https://thelearningprofessor.wordpress.com> - a blog by John Field, an academic teacher interested in adult education

<https://www.learningandwork.org.uk/category/blog/> - a blog of the Learning and work Institute

<http://www.edulider.pl/edukacja> - a webpage on lifelong education

<http://neuropsychologia.org/> - a popular science website on neuro sciences



# ATTACHMENTS



## Attachment 1 - Scale of motivation and determination

1	2	3	4	5	6	7	8	9	10
lowest motivation									highest motivation





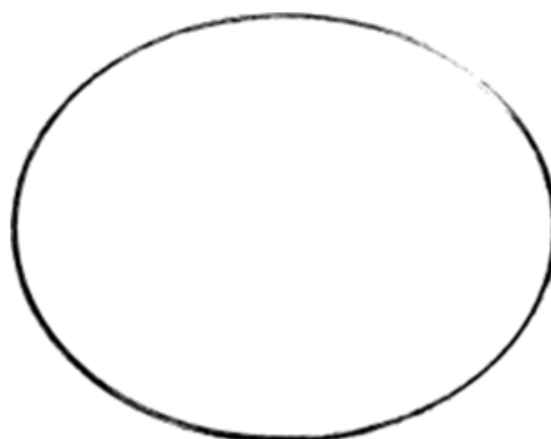
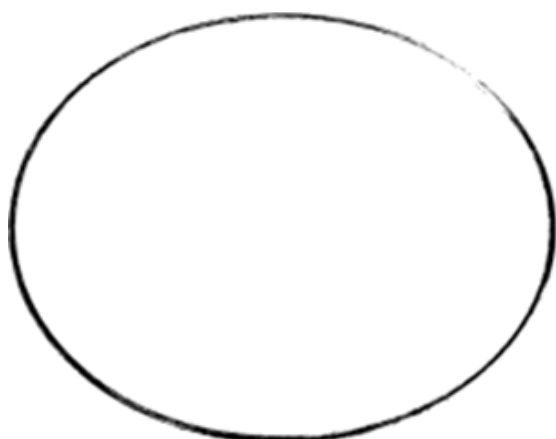
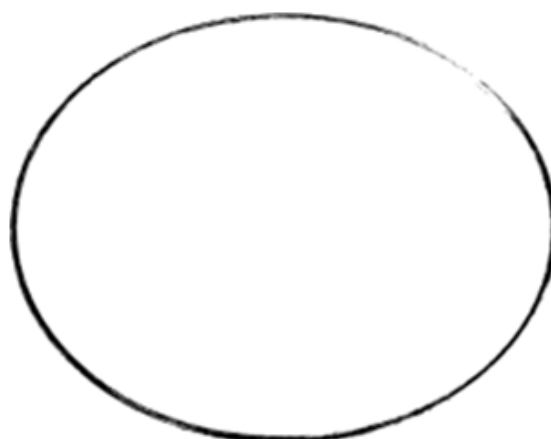
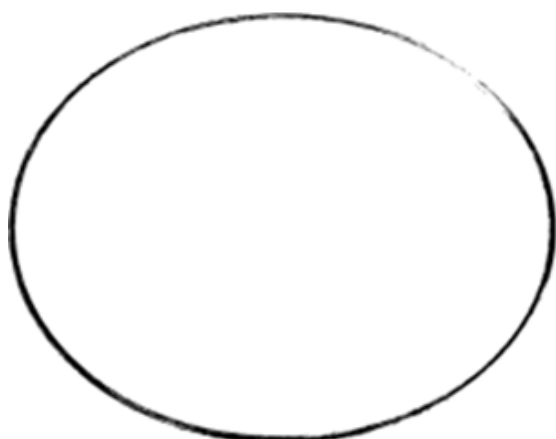
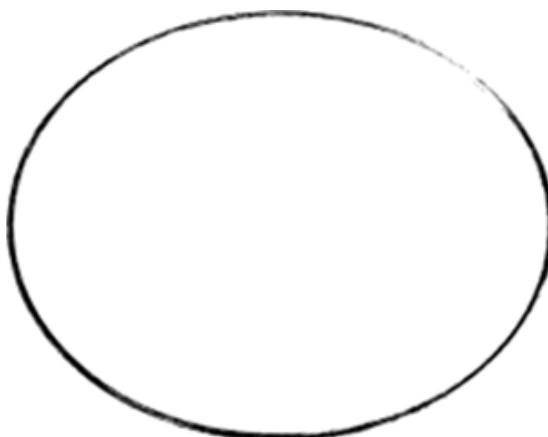
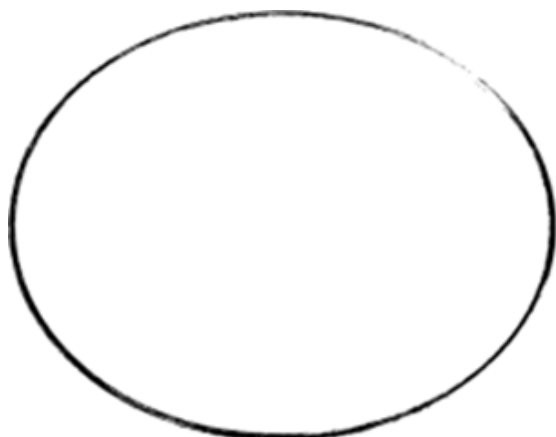
## Attachment 2 - Table of habits

DAY	Habit fulfilled	Habit not fulfilled	REASON	REWARD
1. EXAMPLE	✓			YES
9. EXAMPLE		✗		NO
1.				
2.				
3.				
4.				
5.				
6.				
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18.				
19.				
20.				
21.				





### Attachment 3 - My motivation quotes





## Attachment 4 JOHARI Window Worksheet

	Known to Self	Not Known to Self
Known to Others	<ul style="list-style-type: none"> <li>• (Open Self)</li> </ul>	<ul style="list-style-type: none"> <li>• (Blind Self)</li> </ul>
Not Known to Others	<ul style="list-style-type: none"> <li>• (Hidden Self)</li> </ul>	<ul style="list-style-type: none"> <li>• (Unknown Self)</li> </ul>

### List of Adjectives

Able	Accepting	Adaptable	Bold	Brave	Calm	Caring
Cheerful	Clever	Complex	Confident	Dependable	Dignified	Energetic
Extroverted	Friendly	Giving	Happy	Helpful	Idealistic	Independent
Ingenious	Intelligent	Introverted	Kind	Knowledgeable	Logical	Loving
Mature	Modest	Nervous	Observant	Organized	Patient	Powerful
Proud	Quiet	Reflective	Relaxed	Religious	Responsive	Searching
Self-assertive	Self-conscious	Sensible	Sentimental	Shy	Silly	Smart
Spontaneous	Sympathetic	Tense	Trustworthy	Warm	Wise	Witty





## Attachment 5 PERSONAL DEVELOPMENT PLAN

Name: \_\_\_\_\_

Skill, Knowledge or Behaviour identified as development need	How will the development need be met? e.g. coaching	By when?	Actual completion date?	What did I learn?	How will I put this learning into practice in my workplace?

### SMART ACTION PLAN

**S-** Be **Specific** about what you want to achieve, do not be ambiguous, communicate clearly.

**M-** Ensure your result is **Measurable**. Have a clearly defined outcome and ensure this is measureable (KPIs).

**A-** Make sure it is **Appropriate**. Is it an Achievable outcome?

**R-** Check that its **Realistic**, it must be possible taking account of time, ability and finances.

**T-** Make sure it is **Time** restricted. Set yourself an achievable time frame, set deadlines and milestones to check your progress



## Attachment 6 SWOT ANALYSIS

STRENGTHS	WEAKNESS
OPPORTUNITIES	THREATS

**For Strengths**, you should ask:

- What do you do exceptionally well?
- What advantages do you have?

**For Weaknesses**, ask:

- What could you do better?
- Where are you vulnerable?

**For Opportunities:**

- What opportunities do you know about but have not yet addressed?
- Are there emerging trends on which you can capitalize?

**For Threats:**

- Are weaknesses likely to make you vulnerable?
- What external roadblocks exist that block your progress?





## Attachment 7 Your experience-based learning style

**Instruction:** Read the statements in the table below. Think if they refer to you. If you agree with a statement, mark it with “+”, if you don’t mark it with “-”.

1.	I have a deeply rooted conviction as to what is good and what is bad, and I always stick to it.	
2.	When doing something, I often forget about prudence, I throw myself into action.	
3.	I usually solve problems systematically, step by step, there is no place for improvisation.	
4.	In my opinion formal procedures and situations make it impossible for people to act in compliance with their lifestyle.	
5.	I have a reputation of a person who likes to call things by their name.	
6.	I often see that acting intuitively is just as effective as a well-thought action.	
7.	I like to devote myself to tasks that give me enough time to study all details.	
8.	I often ask people about the reasons for their actions.	
9.	It is most important for me whether a given idea works in practice.	
10.	I search actively for new experience.	
11.	When I hear about a new idea, I immediately think how to put it in practice.	
12.	I like self-discipline, for example being on a diet, doing sports regularly, sticking to a daily schedule.	
13.	I am proud of high quality of my work.	
14.	I get on better with people with logical and analytical minds; I do not get on very well with spontaneous people, thinking in a less organised way.	
15.	I deeply analyse all accessible information and avoid drawing premature conclusions.	
16.	I make up my mind very carefully and I always take into consideration alternatives.	
17.	I am drawn more to new and unconventional ideas than to practical ones.	
18.	I don't like leaving things unfinished. I like when all the elements make a coherent whole.	
19.	I agree with the procedures set out top-down if I find them applicable to the set goals.	
20.	I like to see the connection between my actions and some general idea.	
21.	In a discussion I like to get to the point as quickly as possible.	
22.	My relationships with my co-workers are rather formal and infrequent.	
23.	I can positively use challenges consisting of dealing with new and unusual	

	matters.	
24.	I like people who are spontaneous and easy-going.	
25.	I carefully analyse all details before I draw final conclusions.	
26.	It is not easy for me to come up with crazy, spontaneous ideas.	
27.	I am not a fan of wasting time on beating about the bush.	
28.	I am careful with drawing conclusions.	
29.	I like having as many sources of information as possible – the more data to think over, the better.	
30.	People who do not pay attention to things usually annoy me.	
31.	I listen to other people's opinions before I express my own.	
32.	I am open when it comes to my feelings.	
33.	In discussion I like to have a close look at strategies and manoeuvres applied by other interlocutors.	
34.	I prefer to react in a spontaneous and elastic way and do not try to plan all the details in advance.	
35.	I like applying various techniques of decision making.	
36.	I do not feel comfortable when I have to work in a hurry to meet a deadline.	
37.	I often evaluate other people's ideas on the basis of their practical qualities.	
38.	I do not feel at ease in the company of calm and reflective people.	
39.	I often feel irritated by hot-headed people.	
40.	For me it is the most important to enjoy the moment, not to think about the past or the future.	
41.	I value more decisions based on deep analysis of all the information than the ones based on intuition.	
42.	I am a perfectionist.	
43.	In a discussion I usually come up with many spontaneous and not well-thought-over ideas, to heat up the debate.	
44.	During meetings, I usually come up with realistic and practical ideas.	
45.	I have an opinion that rules are to break them.	
46.	I like to have a look at the situation from some distance and consider all the points of view.	
47.	Often, when I listen to others, I notice inconsistency and weakness in their argumentation.	
48.	Generally, I speak more than listen.	
49.	I often see better and more practical ways of carrying out various tasks than other people.	



50.	In my opinion, a written report should be short, concise and hit home.	
51.	I think that logical and common-sense thinking should always be a priority.	
52.	Instead of talking to people about weather, I prefer discussing specific things.	
53.	I like people who have their both feet on the ground.	
54.	In a discussion I become impatient when there are digressions and anecdotes.	
55.	When I write a report, I usually make several rough drafts first, before I prepare the final version.	
56.	I like trying new things in practice and checking how they work.	
57.	I like working out solutions by logical thinking.	
58.	I like to talk a lot.	
59.	In discussions I often turn out to be the only realist who asks everybody to stick to the key point and not introduce unnecessary issues.	
60.	I like thinking over numerous variants before I decide on one of them.	
61.	In discussions with others I often become the only objective person, with a non-emotional approach to the matter.	
62.	In discussion I usually become an observer.	
63.	I like to see how a given action translates into a wider, long-term perspective.	
64.	When I don't succeed in something, I easily treat it as "one more experience".	
65.	I usually reject crazy and spontaneous ideas as inconsiderate and unrealistic.	
66.	I think that it is better to think now than later regret your choice.	
67.	In general, I listen more than I speak.	
68.	I often treat people who cannot take logical approach to a case in a harsh way.	
69.	I think that most often the end justifies the means.	
70.	I do not have any remorse that I hurt somebody if I achieve my goal.	
71.	I often feel limited when acting within plans and strategic objectives.	
72.	I am usually the life and soul of the party.	
73.	I do everything that promotes the completion of the task I was entrusted with.	
74.	I quickly grow weary of systematic and meticulous work.	
75.	I like analysing basic assumptions and rules.	
76.	I am always interested in other people's opinion.	
77.	I like meetings that take place according to the established agenda and schedule.	
78.	I stay away from subjective and ambiguous topics.	
79.	I like drama and tension caused by crisis situations.	
80.	I am often considered to be a calm person, insensitive to the feelings of others.	



Now you need to put the results in the table. The answer with a plus ("+") is 1 point. The answer with a minus "-" is 0 points. Put the number of points at the number of each statement and sum them up in each column. The highest score will show your preferred learning style.

2		7		1		5	
4		13		3		9	
6		15		8		11	
10		16		12		19	
17		25		14		21	
23		28		18		27	
24		29		20		35	
32		31		22		37	
34		33		26		44	
38		36		30		49	
40		39		42		50	
43		41		47		53	
45		46		51		54	
48		52		57		56	
58		55		61		59	
64		60		63		65	
71		62		68		69	
72		66		75		70	
74		67		77		73	
79		76		78		80	
TOTAL							
	ACTIVITST	OBSERVER	THEORETICIAN	PRACTICIAN			

In the theoretical part of the materials you will find the characteristics of each type of experience-based learning. Read them and think if your learning preferences correspond to the description.





## Attachment 8 Experience under your belt

Circle the skills in the table that you have. Next to the circled skills write down your ideas – how you can use the competences in developing your interests and passions.

Skills / abilities / experience	The idea for their application in everyday life, learning and work
I can analyse facts and events	
I do needle-work (embroidery, crocheting, sewing, etc.)	
I am sporty	
I can read maps and I have a good sense of direction	
I have well-developed communication skills	
I am good at constructing, block building, making models	
I make up new solutions, I have original ideas	
I have a good memory, I memorise a lot of information	
I have a photographic memory – I remember everything I can see	
I can take care of other people	
I can take care of animals	
I can take care of plants	
I know mechanics, I fix simple appliances on my own	
I know about construction work – I do some renovations on my own	
I am good at cooking and I have a good taste	
I know the rules of first aid	
I am good at drawing / painting / carving	
I can sing very well, I have a good ear for music	

I quickly solve problems and tasks	
I can count very well	
I quickly search for information on the Internet	
I am bilingual	
I can take good photos	
Computer has no secrets for me	
I am good at managing my finances	
I organise my work well	

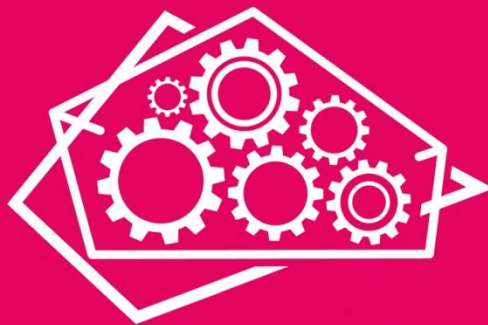
Fill in the “experience under your belt” with other skills / abilities that you have and can use for developing passions and for learning new competences.

Skills / abilities / experience	The idea for their application in everyday life, learning and work









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