

# future.skills

A Handbook about

# THE POWER OF RELATIONSHIPS IN IT-EDUCATION

PRESENTED BY

ÖJAB  
Pressley Ridge Hungary  
Mimohello GmbH



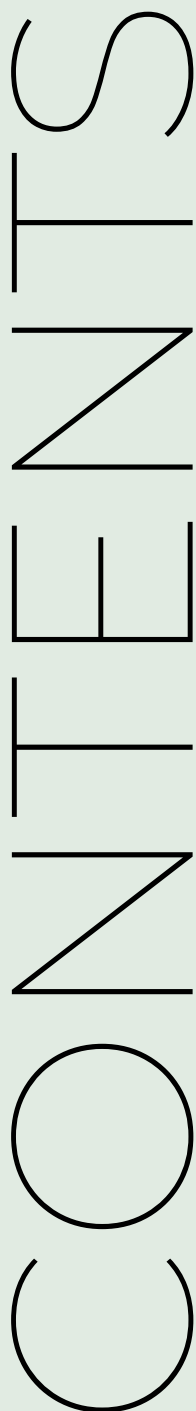
Co-funded by the  
Erasmus+ Programme  
of the European Union



# ACKNOWLEDGEMENT

The project consortium of the 3 partners ÖJAB, Pressley Ridge and Mimohello GmbH would like to thank all the people who participated in the project future.skills and contributed to it. Special thanks go to the Central European University (CEU) for providing us with premises in summer 2022 to conduct a 1-week training program for socially disadvantaged youth, our primary project target group, in Vienna.

The logo for future.skills, featuring the text "future.skills" in a lowercase, sans-serif font. "future." is in green and ".skills" is in pink, all on a dark blue rectangular background.



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# 01. OVERALL OBJECTIVE

The handbook particularly aims to summarize how job orientation can be carried out for young people with a lower educational background or mental or physical disabilities. The FUTURE SKILLS handbook features the structure of a Training Week as an integral tool of practice-oriented job orientation – containing a set of coding skills to be learned and experienced, social skills which are important to meet the requirements of the modern job market, and low-threshold laboratory experiments in order for young people to be aware of their social behaviour in groups and intercultural settings. Experiences and findings of the training week will be incorporated into the handbook and distributed online and in VET centres and youth organizations in both partner countries. Furthermore, one objective of the handbook creation is to spread the tested approaches in the FUTURE SKILLS project to other youth/educational and IT organizations. Moreover, the handbook will be available as a free PDF download via the project partners' websites and on the Erasmus+ platform.

The direct target group of this activity is youth/educational and IT organizations that should be strengthened in their structures and know-how. This project element aims to reach capacity building within the three partner organizations (internally) and several other organizations from the described working areas (externally). Youth/educational organizations such as VET centres and schools gain know-how and experience in how to convey a profound job orientation for young people within this pioneering professional branch, which is in high demand for the future. Particularly, they are equipped with tools to provide profound job orientation for young people with lower educational backgrounds, NEETs, and young persons with mental or physical disabilities.



## 02. FUTURE SKILLS – GENERAL PART



The main entrance of Central European University (CEU) in Vienna in which most of the FUTURE SKILLS camp activities took place

### WHAT IS THE FUTURE SKILLS PROJECT?

FUTURE SKILLS is an Erasmus+ funded project aiming to prepare youngsters with learning difficulties (e.g. NEETs, socially disadvantaged youth, young people with mental or physical disabilities) for the job market of the future. The project provides guidelines on how to motivate young people to undergo vocational training and/or apprenticeship in the IT/coding sector. Furthermore, FUTURE SKILLS aims to enhance cooperation between Austrian and Hungarian youth/educational organisations and IT/coding organisations in order to improve job orientation for young people structurally.

The FUTURE SKILLS handbook aims to summarise how job orientation can be carried out in the field of coding and programming for young people with a lower educational background or mental or physical disabilities, using elements of experiential education (EE) and low-threshold laboratory experiments on young people's social behaviour.

As a basis for this handbook and a main activity of the project, a 1-week coding camp (see flyers in German and Hungarian below) was carried out in Vienna for disadvantaged adolescents. They either came from ethnic minorities (e.g. Roma community in Hungary), had difficult social circumstances, or suffered from psychological or social problems.

The young participants (aged 13-18) learned various coding/simple programming content using the innovative app mimo. This was programmed by our project partner mimohello GmbH and also presented and instructed by mimo employees during the camp. Furthermore, the camp featured several methods of experiential education (EE), mainly carried out by the Hungarian NGO Pressley Ridge, an organisation dedicated to supporting young people from socially disadvantaged backgrounds. Moreover, behavioural observations regarding the young participants were carried out in order to measure how individual and group behaviour changed during the course of the week. An additional integral part of the camp was outdoor activities and excursions (e.g. sports on the Danube island or visiting the House of the Sea in Vienna).

13 young people from Hungary participated in the camp. Originally, it was planned to include Austrian youths in the camp as well but there were difficulties in recruiting them, so there were more Hungarian participants. 6 mentors accompanied the children during the camp. 2-3 children were assigned to each mentor.



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# SOMMER CAMP

mit Coding  
Tätigkeiten

für 15-18 Jährigen

**MÖCHTEST DU ...**

- etwas neues ausprobieren,
- mit ungarischen und österreichischen Jugendlichen kennenlernen,
- dich entdecken,
- und du interessierst dich für Möglichkeiten in einem Branche ...

**DANN MACH MIT, UND...**

- erfahre die Welt von Coding
- entwickle deine eigene Website
- lerne den unbekannten kennen!

**PROJEKT PARTNEREK**  
ÖJAB, Austria  
PRESSLEY RIDGE, Hungary  
MIMO GmbH, Austria

Co-funded by the  
Erasmus+ Programme  
of the European Union

**8-12 AUGUST**  
WIEN,  
ÖSTERREICH

**BEWIRB  
DICH JETZ**



SCANN DIE QR CODE EIN!

The invitation flyers produced before the camp, both in German and Hungarian



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# NYÁRI TÁBOR

programozói  
foglalkozással

15-18 éveseknek

**HA SZERETNÉL...**

- kipróbálni valami újat,
- magyar és osztrák fiatalokkal ismerkedni,
- felfedezni önmagad,
- és érdekel egy új szakma lehetősége...

**AKKOR TARTS VELÜNK BÉCSBE,  
ÉS ...**

- tapasztald meg a programozás világát,
- készíts saját weboldalt,
- ismerkedj az ismeretlennel!

**PROJEKT PARTNEREK**  
ÖJAB, Austria  
PRESSLEY RIDGE, Hungary  
MIMO GmbH, Austria

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Erasmus+ Programme  
of the European Union

**AUGUSZTUS  
8-12**  
BÉCS, AUSZTRIA

**JELENTKEZZ**



SZKENNELD BE A QR KÓDOT  
VAGY ADD LE AZ  
INTÉZMÉNYBEN A  
JELENTKEZÉDEDET!

# FOR WHOM IS IT ADDRESSED? WHO SHOULD READ THIS HANDBOOK AND WHAT SHOULD IT ACCOMPLISH?

The handbook particularly aims to address youth, educational, and IT organisations who are planning to work with a similar target group – young people from socially disadvantaged backgrounds.

An important objective of developing this handbook is to spread the tested approaches in the FUTURE SKILLS project to other youth/educational and IT organisations. In addition, a cross-sectoral approach to non-formal youth and education work will be promoted. The handbook will suggest how pedagogical and scientific elements as well as IT education should be combined and present what added value the combination of several disciplines has for the primary target group (socially disadvantaged youth) and the secondary target group (youth, educational, and IT organisations).

## HOW IS THE HANDBOOK STRUCTURED?

The FUTURE SKILLS handbook summarises how job orientation can be carried out for young people with a lower educational background. It features methods from experiential education (EE), see chapter 2. This will be followed by methods on how to convey a set of basic coding skills that are important to meet the requirements of the

modern job market (see chapter 3). Finally, it will be explained how low-threshold laboratory experiments in order for young people to be aware of their social behaviour in groups and intercultural settings, can support the conduction of such a camp week (see chapter 4).

The FUTURE SKILLS handbook summarises Experiences and findings of the FUTURE SKILLS training week that was conducted in August 2022 in Vienna were incorporated into the handbook.

If a reader wants to know more about the work done as part of FUTURE SKILLS in a particular discipline, they can jump directly to the desired chapter. If the entire methodological approach of the project is of interest, it is worth reading the entire manual.

## FOR MORE INFORMATION

The FUTURE SKILLS project is carried out by 3 organisations from 2 countries:

- Österreichische Jungarbeiterbewegung (ÖJAB) – Austria
- Pressley Ridge – Hungary
- mimohello GmbH – Austria

More information regarding the project can be found on the website of the project coordinator, ÖJAB:

<https://www.ojab.at/en/education/europe-international/european-educational-works/future-skills>

Updates on the project can also be found on the FUTURE SKILLS Facebook page:

<https://www.facebook.com/futureskills-100150192747825>



# 03. METHODOLOGY OF EXPERIENTIAL EDUCATION



HOW TO CONNECT TO THE YOUTH?  
RELATIONSHIPS ARE EVERYTHING!



# HOW TO CONNECT TO THE YOUTH? RELATIONSHIPS ARE EVERYTHING!

A mentorship is nothing more complicated than a relationship. Therefore, it is important to emphasise that the relationship that you have with the youth in your group is everything! You should pay attention to that relationship on an ongoing basis. Check-in with yourself – how are you getting along with Mark this week? How about John? Continual assessment and adjustment will ensure that you are being an active, responsive mentor.

## Nurturing Relationships

A relationship is the most vulnerable at the beginning. Just like an infant or a seeding plant that needs to be fed and cared for and sheltered from external forces, similarly the first times that you meet with your youth group are extremely important. In the early phases, it is the most determinant in the relationships. How much attention and care you put into the group in the early phases will set the tone and character of your relationship in the future. According to previous research, many youths do not change their impression of their relationship with an adult after their first few meetings.

As time progresses and the relationships become established, they need less work from you to grow on their own. Like a plant that has taken root, it will need less and less constant attention to produce fruit!

## Encouragement Matters

Many youths – particularly adolescents – are experiencing a time in their lives where they are unsure of their own capabilities, their own strengths, and their path in life. Although they may not realize it, this period is an incredible opportunity for them; never again in their lives will they be offered so many choices about what to pursue, who to call friends, and how to be seen by others. In a genuine sense, they are choosing what kind of person they will become.

The job of a mentor is closely related to this idea. Being a mentor is a special role, he/she has to guide and be a non-authoritative adult whom the youth looks up to. There will be aspects of your personality that the youth sees as something they want to have in their personality. On the one hand, it feels like a huge responsibility, but on the other, it is simple as it is: encourage them to become the best person they can be. Motivate and encourage them in the strengths that they have as you would be their biggest cheerleader.

## It isn't what you say that matters...

It is important to interpret this sentence correctly. Obviously, you can say something that can insult the student and can harm your relationship with them. But what we meant by that is: there is probably not one “perfect” thing you can say to the student at the right time to seriously improve your relationship. Relationships can be destroyed in a day but must be rebuilt in the long term.

I would evoke a lesson from the Roma Mentor Project (1): A good teacher was talking to another teacher years ago. The first teacher was very concerned about a student in her class. The student was not liked by other students and did not have a good relationship with his parents. The student was always angry, alone, and frustrated. His teacher was asking the other teacher, “I just want to find the right thing to say to this student to let him know that I really care, that I like him, and that I want to help him.” As he listened, the other teacher thought about his own experience working with difficult kids and realized that the good relationships he had built with the very angry, alone kids did not come from saying the right thing at the right time. He told the other teacher this, adding, “There is not one “silver bullet” that can turn a difficult relationship into a positive one. Just consistently being there for the child might matter the most. In that child’s life, you might be the only consistently caring, positive adult who encourages that student and listens to what they are feeling. That is what will let them know that you care and want to help.”

Summarising, it is important to realize that you should not spend your energy worrying about saying the “right” thing to a difficult or troubled child. Instead, you should focus on the other skills you already have or are learning here for building relationships with youth. A quality relationship will come naturally if you can remain positive, consistent, warm, and most importantly, you can listen to youth.

Alliance: it really is the relationship that matters!

As discussed above, the relationship is one of the most important pillars to build with the youth. But it is not the only one. The research found that there is a consistent correlation between the strength of the client-therapist relationship and client outcomes in psychology. That means that if the client and the therapist have a good working relationship, the client is more likely to have a good result from therapy. The opposite is also true: clients and therapists with poor working relationships often do not see good therapeutic results. In psychology, this relationship is called the therapeutic alliance, and theorists say it has three major components:

- 1) Tasks and goals. Do the client and therapist agree on what the tasks and goals of therapy should be?
- 2) Emotional bonds. This is the quality of the emotional, personal relationship that develops between the client and therapist.
- 3) Openness and truthfulness. Do the client and therapist see their relationship as an open and truthful relationship?



Don't get me wrong! Nobody is expecting you to be a therapist! You are not in a therapeutic relationship with these kids. But it is important to realize that there are similarities between the role of the therapist and the role of the mentor.

A therapist is a helping, caring adult who works with someone to help them improve the quality of their life. Although their techniques may be very different, a mentor can fit that same general definition of a helping, caring adult. As such, the idea of alliance can shed some light on the major elements of relationships between mentors and youth. Look back on the above three-part definition of the alliance.

If you are in agreement with the youth about the tasks and goals of the projects you work on together; if you establish good emotional bonds with that youth, and both of you feel that your relationship is open and truthful, do you think the youth will have better outcomes from your mentoring relationship? Probably. The idea of a working alliance may be important to understanding how successful mentor relationships function.

### Promoting Alliance

We know from our own research at Pressley Ridge that there are certain personality characteristics in helping adults that seem to help them in forming strong alliances with youth. Although we do not expect you to change your characteristics to match the role of a mentor, as people who are interested in getting involved to help youth chances are



you have one or more of these characteristics already. Highlighting these attributes may help you recognize what parts of your personality will help build quality relationships with the young people in your mentoring group.

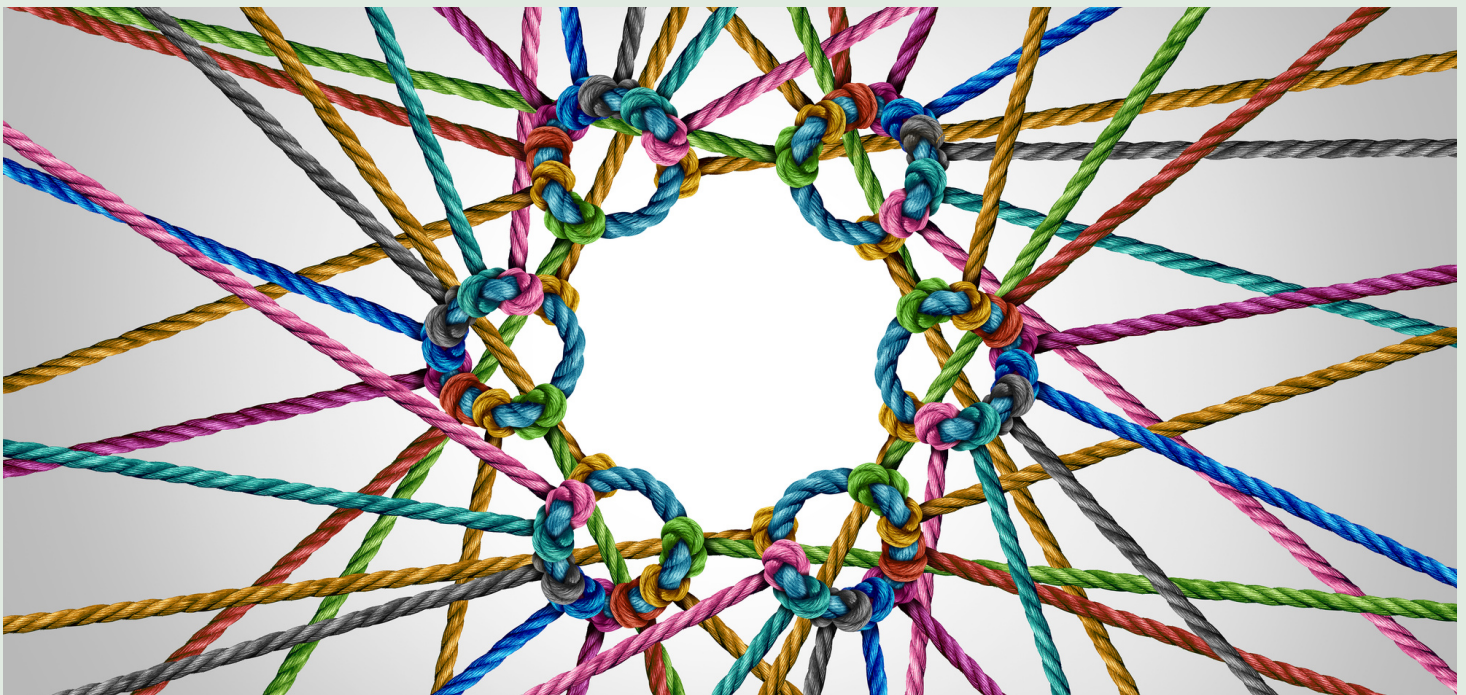
- Flexibility: Open to new ideas and open to rethink and reconsider the old path; allows for change.
- Emotional Stability: No drastic fluctuation of emotions day by day.
- Warmth: Perceived as inviting and friendly somebody that is pleasant to spend time with.
- Motivating: Inspires others to be active and want to participate.
- Tranquil: Does not get too agitated or upset during times of stress.
- Focused on the motivation of others: Places a priority on youth being motivated to participate, learn, and grow.
- Low impression management: Not very concerned with “how they appear” to the youth, but rather more concerned with the substance of the relationship.



Beyond personality characteristics, there are also categories or types of adult behaviours that research says may help build a better alliance with youth. Working to emphasise these types of behaviour in your own work with your group may result in better working relationships with the youth.

- Demonstrating leadership: Showing and teaching leadership to youth.
- Keeping events in perspective: Does not overreact to successes or to failures; tries to see events in the context of the “bigger picture.”
- Holding youth accountable: Youth need constant, predictable adults who have realistic expectations. Holding them accountable for rules and their own commitments helps build productive relationships built on trust.
- Being a team member: Working alongside the youth on projects demonstrates your commitment to your shared tasks and goals.
- Being able to “play”: It’s okay to have fun! Being able to play with youth is essential.
- Knowing the goals of the youth and the program model: Being familiar with their own priorities and the program models shows youth that you are invested in their progress and take your role and the program seriously.

These two lists are by no means complete. There are many personality types among both youth and helping adults that contribute to building relationships, and this short list of alliance-building behaviours cannot cover all the possibilities. Incorporating these attributes and behaviours into what you already know works for you in connecting with young people may help you to have the best mentoring relationships possible.





# HOW TO DEVELOP QUALITY RELATIONSHIPS WITH YOUTH?

## Giving Feedback

Feedback is a general term that we use to describe words that tell someone how their actions make you feel. It is intended to help them improve in the future. It is different than a compliment or criticism (although feedback can certainly take the form of either of those things) in that feedback strives to be neutral, very specific, and above all constructive. It is best delivered as soon as possible to the actual event the feedback refers to.

It is a common phenomenon that adults or teachers get frustrated with students and start to yell at them about how they need to learn to behave. The odds are high that they have already been yelled at by other adults. However, if it would have worked, they would not still be doing it.



An example of constructive feedback would be for those adults to try to give students something non-distracting to play with in their pockets if they feel squirmy. Or to try to talk to students and brainstorm with them about possible options keeping them focused. Let's look at another example from the Roma Mentor Project (1), this time one that reinforces good behaviour. Instead of trying to catch the student doing something wrong, when an adult catches the student doing something right, they should give the youth some positive feedback.

Let's say one of the students in your class shows up for a group on time every week, but has difficulty using respectful language while in a group. When they get to the group on time one week, say something like, "You know what? I have noticed that you are on time for the mentor group every week. I like that in a person; it shows that you can take responsibility for yourself. Not every kid your age is good at that." Do not exaggerate your praise, because youth (like adults) are good at picking up on insincerity. They probably will not believe you if you tell them they are the most punctual person you ever met! Focusing on encouraging the student's strengths may build a positive working relationship, one which will help you later in giving constructive feedback about negative things (like the student's inappropriate language

## Active Listening

If there is one thing that most youth really want, it is to feel that what they have to say matters to people, especially to adults. Youth want to be truly and genuinely understood for what they are actually saying and feeling. Often adults write off a child's opinion or thoughts as just that – "just" a child's ideas or opinions. Although as adults we spend a lot of time hearing the words, ideas, and thoughts of young people... how much time are we actually listening?

One way that we can work to genuinely understand youth – and to show them that genuine understanding is a priority to us – is through active listening. Active listening is listening in a way that allows the speaker the space to develop and communicate a full thought. It is a way of listening to that lets the speaker know that we are listening, and involves the speaker in confirming and clarifying what we hear them saying. There are several components of active listening, including body language, clarification, and confirmation.

First of all, your body language must convey to the speaker that you are interested and attentive. Some of us may be able to listen while focusing on something other than the speaker, such as looking out the window or working on some paperwork. It is good to be able to do two things at the same time, especially at work! However, it can also signal that you are focusing on something else too and do not actively listen to the speaker. Leaning slightly toward the speaker,

maintaining a lot of eye contact, and refraining from distancing movement conveys attention in most cultures. Body language that communicates continuing attention is more important than we might think. Examples include nodding, or saying simple small things like "okay," "go on," "I see," etc.

Try to really hear what the person is trying to say to you. Do not interpret what you think they are saying – actually listen to what they are saying to you. Pay close attention, and if you have any questions about what they are trying to say, or are confused about something, tell them so. Clarification is an important part of active listening. Rather than seeing your question as an interruption, almost all people will appreciate the question as your genuine interest in knowing exactly what they want to say.

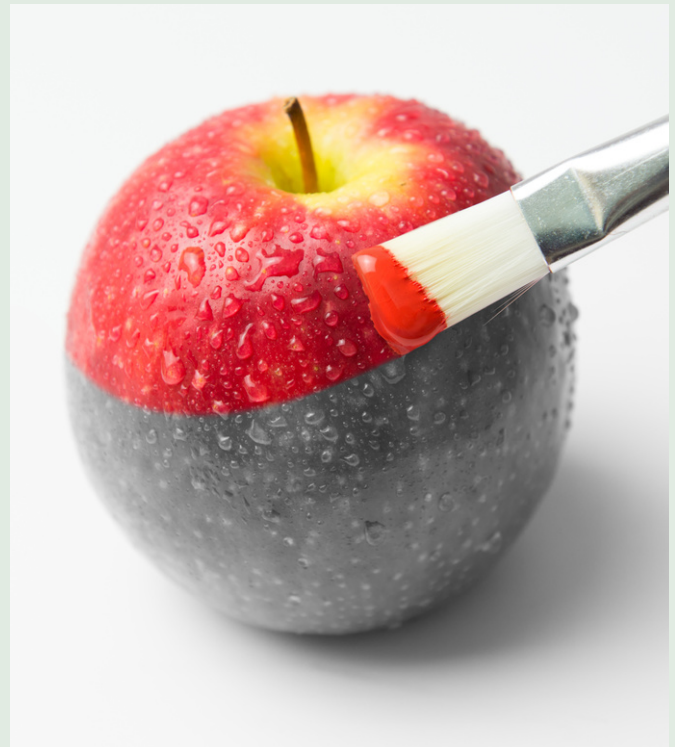
One of the most powerful tools of active listening is confirmation. Confirmation means checking with the speaker periodically to make sure that what you understand from the conversation is what they are trying to say. At appropriate times throughout the conversation, stop the speaker and confirm that everything you have heard is correct. Start at the beginning, and summarize everything that you have heard. You may say something as simple as, "Can you hold on for a moment? I just want to make sure I understand everything you have told me so far. Let me repeat it back to you and you tell me if I got anything wrong, or missed anything, okay?" You will be shocked at how much additional vital information you can get from the speaker using this simple technique.

Particularly when youth are excited or emotional, they often forget to include relevant information in their rush to communicate. Also, it is really important to use the speakers' own words in your summary. If they said that when they lost the football they felt angry, try to use those same words in confirming your understanding, rather than saying something like, "When you lost the football you felt frustrated, right?"

### Consistency

Consistency is incredibly important to youth. Since their own lives are in a state of continual growth, development and change, it helps them if the expectations in the mentoring group are consistent. Although the dynamics of each relationship with the youth in your group will certainly be different, it is vital that the youth can expect to be treated in a manner that is consistent with the treatment the other group members receive. Likewise, in individual settings, it is important that you are consistent over time. This allows youth to expect, gauge, and even predict their reactions to individual situations. If you do develop close relationships with the youth in your group, the predictability that comes with consistency may allow you to influence the decisions they make even when you are not around. When faced with a difficult decision in the community, your consistency is what may allow them to answer the question, "What would my mentor encourage me to do in this situation?" Likewise, when enjoying success outside of their mentor groups,

consistency may help them to say, "I know my mentor would be proud of me for this!"



### Realistic Expectations

We have talked in a few places about creating expectations. You have probably already got some of your own – about your personal goals and aims, about how you will be as a mentor. Hopefully, you and your group will work together to create your own expectations for one another as time goes on. Expectations, like consistency, are a really vital part of any group's functioning. Group members need to know the parameters of behaviour that are closely connected to expectations. As for creating expectations, it is important to keep them realistic, not to expect too much from the kids that they might not be there to fulfil or what you would not be capable to fulfil.

Work to keep your expectations high but manageable. Too easy, and the kids have nothing to rise to. Too hard, and the group will dismiss the expectations as unrealistic and never really make them on their own. Realistic expectations are ones that are in line with what the group is capable of.

It might be the case that the expectations will not be met all the time. Instead of panicking, just evaluate! Evaluation will let you find out why they are not being met. Often, behaviours will have to change to meet expectations, but sometimes unrealistic expectations need to be changed to be more in line with realistic behaviour. The experiential education model, which will be discussed in more detail later, includes stages for evaluation and application. This approach is an indispensable part of your group learning to have realistic expectations.



### Encourage a culture of feedback

Till now we discussed the techniques for giving feedback from the mentors' point of view. However, it is also an important step to encourage a group culture of feedback. This

means that not just giving but also receiving feedback should become a vital part of how your group operates. Encourage your kids to give feedback to one another (including you) when appropriate, both constructive and positive. Creating this culture of feedback among peers takes work. First, you must present how feedback is given by doing it yourself. The kids will look to you for modeling, so be conscious about how you interact with them. Second, start explicitly teaching your group members about what feedback is, how it differs from criticism, and how to give it appropriately. Your group members may want to come up with their own expectations about how feedback is to be given within your group.

Remember, a culture of feedback means that everybody in the group is expected to give and receive it as necessary, and that includes you! Encouraging the kids to give you feedback helps you grow as a leader and mentor, shows the children that you are as much a group member as they are, and helps to build relationships by demonstrating the value you place on their opinion.

Creating a culture of feedback might sound intimidating at first. It could be interpreted as creating opportunities for kids to criticize each other in a potentially hurtful way. Well... they might do it at the beginning. You should pay attention to that because building this culture will certainly take work and determination, but it will payoff tenfold.



A group that can give each other feedback is a group that can help each other to grow. They can monitor and regulate individual behaviours in a systematic, structured, and self-sustaining way. It creates a dynamic between group members that feel open and honest and demonstrates that individual opinions are not just valued but necessary and helpful. Put simply, a group with a culture of feedback is a group that is easier to run and produces better results!

### Accountability – you and the youth

Accountability means holding youth to certain standards and is closely related to the “commitment” element of their full-value contract (see separate handout on full-value contracts). Keeping youth accountable is an important part of building quality relationships with them. If the youth say they will do something, then they should know that you expect them to do it. If they agree to follow certain expectations of the mentor group, then they should be expected to honor that agreement. Of course, there will be a couple of times when they are unable to keep these commitments. There may be good reasons why they are unable to honor their commitments – real life always makes room for exceptions – but part of accountability is being willing to provide these reasons to you and/or the group. There will also be times when the youth cannot follow expectations and do not hold themselves accountable. During these times, it may fall on you or the group (ideally) to hold them accountable by addressing the issue.

Although youth do not always like being held accountable, particularly when it's actually happening – i.e., telling youth that they are not keeping their word, or not meeting program expectations – accountability is a cornerstone of trusting relationships. The youth begin to learn that you will expect them to do what they say they will do (related to the consistency component discussed earlier).

Further, it is essential that you hold yourself accountable to program standards, the expectations of your group, and particularly to what you say that you will do. The youth look to you to model behaviour. A key part of securing the youth's trust is keeping your word. If you say you will do something – do it. If you agree to certain expectations – follow them. Relationships are two-way streets, and you are as accountable to the children in your mentoring group as they are to you.



## Teach and Practice Leadership

As a mentor, you automatically find yourself in a leadership role. Children will look to you for guidance, authority, answers, challenges, and for the values and tone of the group environment. Leadership is something that comes naturally to some people and is more of a challenge for others. However, beyond the leadership role that you will take, your mentoring group will provide an excellent opportunity for teaching youth about leadership. Even more exciting, your group may provide the youth with opportunities for them to practice leadership.

Leadership can have different forms, and good leaders can employ different leadership techniques in different situations. There are many different definitions for leaders, at the core; but in this manner, a leader is somebody who facilitates how the group will make decisions. This can be done in a number of ways. Below, we briefly review four different leadership styles regarding decision-making based on the Roma Mentor Project (1).



- *Directive*: The leader makes the decision unilaterally, and then tells the group. Most useful in situations that require a clear and central leader – e.g., situations where there is a time/safety issue, or in newly formed groups that have yet to agree on their own conditions for leadership.



- *Consultative*: The leader consults the group for ideas, and then draws upon those ideas (as well as their own) to make a decision. Allows the group more ownership and influence on the decision than in the directive style, and gives the leader the benefit of multiple viewpoints. Note, however, that the leader still makes the final decision.
- *Democratic*: The decision is made by a vote, and the majority rules. The leader acts as a participant and casts one vote like everybody else. Allows the group to have more ownership and influence over the decision than in the directive and consultative style. The drawback is that the majority does not always make the best or even the “right” decision – the minority may have a valid argument that gets lost in this style. It can also result in the group forming factions, which is generally counter-productive. The leader may override any group decisions that pose a serious threat to safety or expectations.
- *Consensus*: The decision is made by everybody coming to an agreement. The leader acts as a participant and delegates all decision-making to the group. This style offers the most group ownership and influence of any of the styles. It often requires compromise. The benefit is that everybody is invested in the final decision. It takes the most amount of time of any of these four leadership styles.

It is beneficial to teach these or other leadership styles to your group. First, a group that understands situational leadership is a group that is better equipped to understand how and why decisions are to be made – and will therefore make better decisions (hopefully). Second, the children are learning valuable leadership skills that can benefit them throughout life. Offering them opportunities to practice leadership in the group – in decision-making, during activities and planning, etc. – is also a great opportunity to build quality relationships. Empowering youth as leaders shows that you trust them, and are interested in their own personal growth. They will respond positively to adults who offer them appropriate and sequential opportunities to practice being a leader. And remember, after the youth have an opportunity to practice leadership: evaluate! How did it go? What worked well? What would they do the same next time, and what would they change next time? These are just sample questions, but evaluation will help transfer the learning beyond the immediate activity and beyond your mentoring group itself.

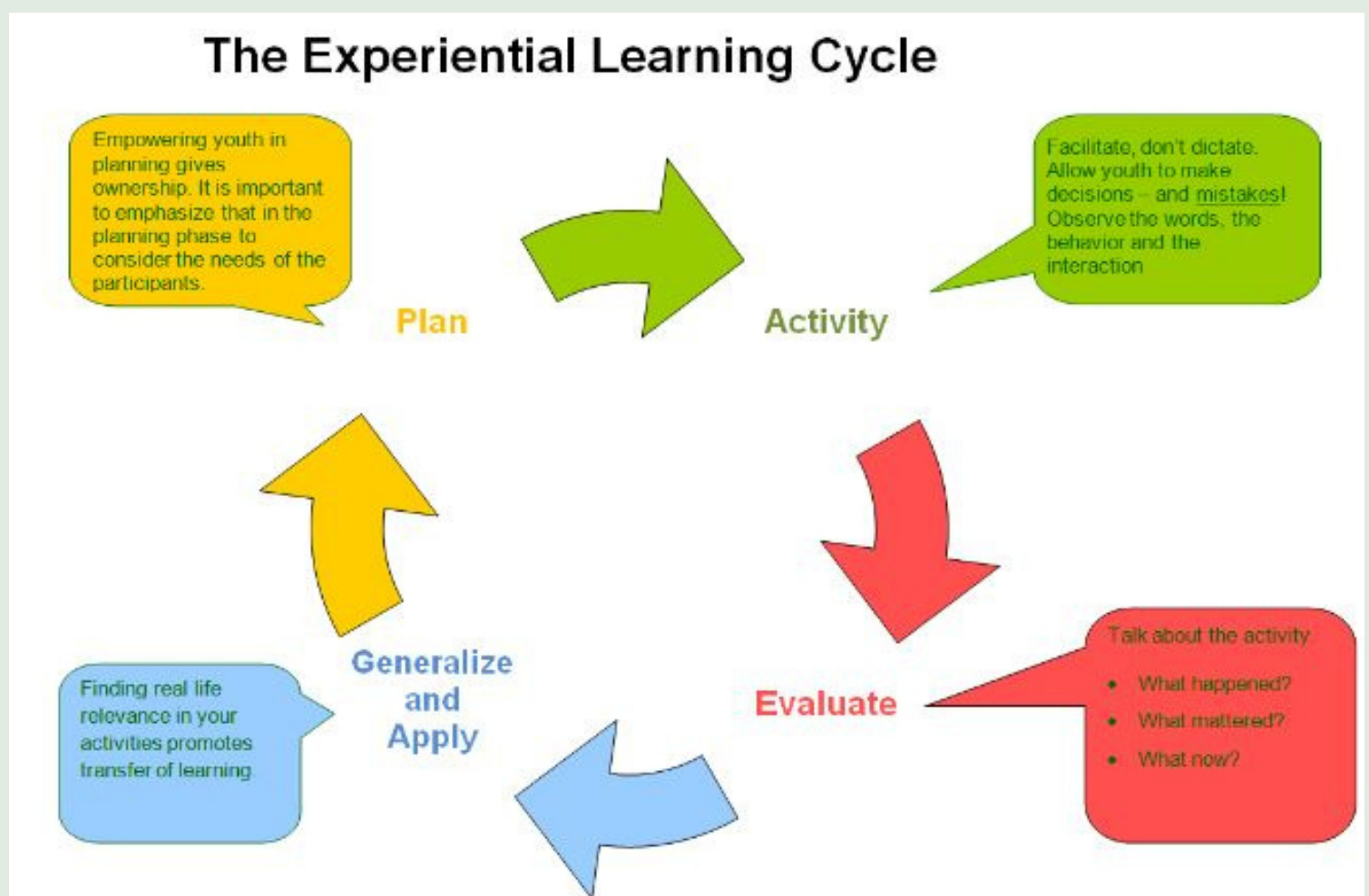
## Situational Leadership Matrix

Leadership style	Role of leader	Group gives input?	Who makes final decision?	Time required	Group ownership
Directive	Commander	No	Leader	Least	Least
Consultative	Politician	Yes	Leader		
Democratic	Facilitator	Yes	Majority		
Consensus	Participant	Yes	Everyone	Most	Most

# EXPERIENTIAL LEARNING CYCLE

Based on the book Teach the unteachable (2) we present below the experiential learning cycle. It presents that we help the youngsters to learn by given situations or even real life situations. It is important to teach them how to evaluate their and others' behaviour and how to give feedback to each other. However, it is also important part to teach them how to generalise and apply it in the next situation.

If it is about a task that has to be planned, over the planning they can apply their experience gained in the last situation. It helps them to make them aware that the best is for the group to plan according to their and others' abilities and needs in the group. After the planning phase, they will behave in one way or another in the given situation. The best way to help them is to allow them to make their own decisions and also to make mistakes. After the decisions have been made it goes back to the step of evaluation.





# STAGES OF GROUP DEVELOPMENT

We work with the so-called Forming–Storming–Norming–Performing–Adjourning Model. This model of group development was first proposed by Bruce Tuckman in 1965, which has become the basis for many widely used similar models of group behaviour. Since then, it has been adapted for use in management theory, business, education, and numerous other settings in which a healthy group process is important to success. Tuckman maintained that all these stages are necessary for teams to grow, meet challenges, find successes, and perform efficiently without unnecessarily sacrificing values.

Although groups will move through these stages sequentially, some groups may not progress through all of them. As time progresses and internal and external conditions change, groups may move back into a previous stage. Leadership styles may be very different at each stage. Suggested leadership approaches are included in each section.



## Stage 1: Forming

In the first stages of coming together, the group is said to be in the forming stage. The team begins to learn about opportunities and challenges and to agree upon goals. They start to tackle the initial tasks before them. In this stage, people are often on their best behaviour, but are often focused only on themselves. Team members may be motivated but are often unaware of group issues. Mature individuals begin to show signs of group behaviour.

Group leaders in this stage should be directive. Not having established their own rules concerning tasks, priorities, and leadership, the group will often flounder without direction from the group leader.

## Stage 2: Storming

Every group will enter the storming stage. In this stage, different ideas and priorities among group members compete for attention and often result in conflict. The team begins to address real group issues such as leadership, time management, and how to function both independently and together.

In some cases, storming can be resolved in a short period of time. In other cases, the team never leaves this stage. The maturity of some team members usually plays a key role in whether the team will ever move out of this stage. “Immature” team members will begin “acting out” to demonstrate how much they know and convince others that their ideas are correct.

Some of the team members will focus on minutiae to evade real issues.

The storming stage is a prerequisite for the growth of the team. It can be contentious, unpleasant, and even painful to members of the team who tend to be conflict-averse. The tolerance of each and every team member and their differences need to be emphasised. Without developing a certain level of tolerance and patience the team will fail. This phase can become destructive to the team and will lower motivation if not managed well and allowed to get out of control.

Although this is a good stage to begin allowing the group more freedom to explore its decisions and priorities, leaders in this stage will still often need to be rather directive in their guidance around appropriate behaviour and decisions.

### Stage 3: Norming

At some point, the group may enter the norming stage. Team members adjust their behaviour to each other as they develop work habits that make teamwork seem more natural and fluid. Team members often work through this stage by agreeing on rules, values, professional behaviour, shared methods, working tools, and even taboos. During this stage, team members begin to trust each other. Motivation increases as the team get more acquainted with the common project. Teams in this phase may lose their

creativity if the norming behaviours become too strong and begin to stifle healthy dissent or conflict.

Supervisors of the team during this stage tend to be more participative than in the earlier stages, moving toward consultative, democratic, and even consensus approaches with regard to decision-making. The team members can be expected to take more responsibility for making decisions and for their professional behaviour.

### Stage 4: Performing

Only some teams will reach the performing stage. These high-performing groups are able to function as a unit as they find ways to get the task done more smoothly and effectively without inappropriate conflict or the need for supervision. Team members have become more interdependent. During stage 4, they are motivated and knowledgeable. The team members are now competent, autonomous, and able to handle the decision-making process without supervision. Dissent is expected and allowed as long as it is channeled through means and methods that are acceptable to the team. In this stage, the group should act relatively autonomously. Group leaders should be participative almost all the time, as a high-performing group can make the most necessary decisions.



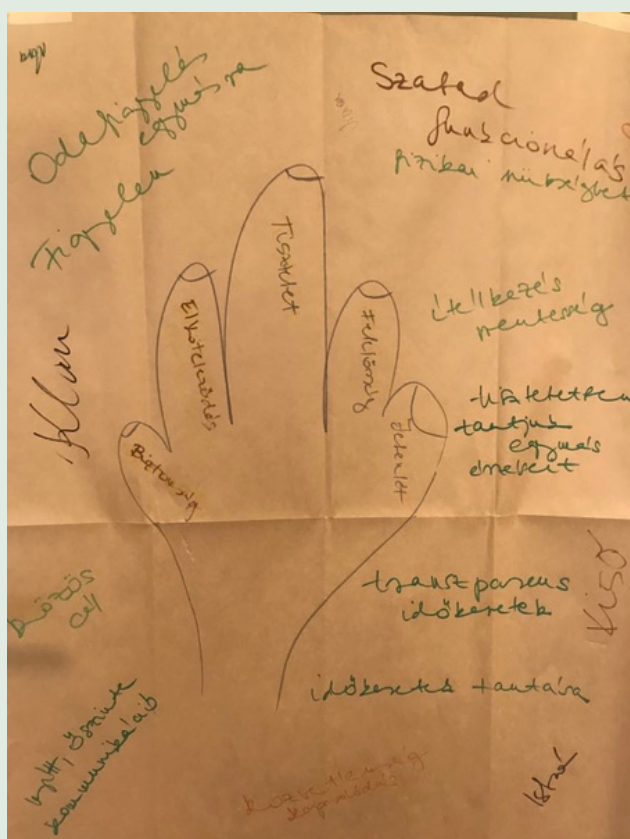
## Stage 5: Adjourning

Some people choose to include a fifth stage in their model of group development: adjourning. This stage occurs when it is time to break up the team. It is acknowledged as a distinct stage in group development because of the unique dynamics that members of a high-performing team may attach to separation.

Team leaders need to be aware that the time leading up to the final meetings of the group may be difficult for a segment of the group members. Talking about the process of transformation and separation is appropriate and often useful to most of the group members. Debriefing and processing during this stage can be a worthwhile opportunity to enhance the transfer of learning to aspects of group members' lives beyond the time spent in the group.

## A FIVE-FINGER FULL VALUE CONTRACT

We want to review some simple expectations that – if followed – will allow you – the readers – to have the best experience possible in your mentor groups. We call this a full-value contract because it will help you get the most you can out of your group. Similar to a contract, we are going to ask you to agree to it before participating – and then we are going to hold you responsible for what you agreed to. Also, you should hold the other group members accountable to the contract, because they are going to agree to it too. Don't worry, there is no catch or trick to this– they are simply guidelines that everybody can follow, guidelines that will guide your group to being the excellent group we know it can be! And the best part about these rules? They are all already in your hand...



### Small Finger: Safety.

The smallest finger is the most vulnerable to injury. It is not as strong or nimble as the other fingers, but without it most of us would have a much harder time using our hands. You might not even realise it, but the other fingers are always careful to protect it. With this in mind, the first finger reminds us that safety must always be on our minds, and we are always going to be working in a way to keep things safe. Safety is not always just physical, although that is very important. Emotional safety is as important to all of us as our physical safety – we want to strive to create an environment where every group member feels comfortable and safe. What does safety mean to you?



### Ring Finger: Commitment

The second finger is where people from many cultures traditionally wear their wedding rings. The ring is worn as a symbol of commitment to a partner, and commitment is what we want to emphasise here in our contract. By joining this group, you are making a commitment to the other group members. You are making a commitment to being the best group member you can be at all times, even the difficult times. You are also making a commitment to yourself to participate in something that holds the potential to help you grow. What does commitment mean to you?

### Middle Finger: Respect

In many cultures, raising your middle finger at someone is a serious sign of disrespect. This third finger reminds us how important respect is to a group. To get the most out of this experience, you need to respect the other group members, even if their ideas, personalities, bodies, families, and/or cultures are different from yours. You need to respect yourself, keeping your body healthy and your mind focused on the activities. Further important is to respect your own intelligence and ideas – if you have got an idea you think could help the group, please share it. Respect for your group leaders is also important, they are giving their time to help you grow into the best adult you can be. What does respect mean to you?

### Pointer (index) finger: Responsibility

The fourth finger is the finger that many people around the world use to point at something or someone. Take your finger and point it at yourself.

That person you are pointing to right now – you – is the one who is most responsible for your actions. Sounds simple, doesn't it? When you are in your mentor groups, you need to be responsible for yourself. This means you are accountable to the group for what you say and do. Now take your finger and point it at someone else, like you are blaming them for something that happened. Look at your hand...how many fingers are pointing back at you right now? If you are like most people, you probably still have three fingers pointed back at yourself. This is often the case when people are blaming others...most of their focus should be on the role that they themselves had in the issue, not others. If everybody is responsible first and foremost for themselves, the group receives the benefits. What does responsibility mean to you?

### Thumb: Positive Attitude

For us, the thumb goes up...and that means it's okay to have fun! We believe in fun so much that we are making it one of our rules, right next to things like safety and respect. We want you to bring a positive attitude to the group every time you come. If you are having trouble being positive, try letting one of your group members cheer you up. Remember, there is enough fun to be had in your mentor groups to improve any negative feelings. Even if you are currently having a challenging time in the group, a positive attitude is often what helps people push through hard times and enjoy success after taking the challenges.

# SOME EXAMPLES OF EXPERIENTIAL EDUCATION GAMES



Pass the Knot by Tom Smith

*Required Equipment:* Web loop.

*Projected Length of Time:* 10 minutes.

*Description:*

The group connects up to the web circle and is then given the simple task of passing the knot in the circle around their circle of connection as fast as possible. This often includes setting time goals and attempting to meet or beat them.

*Variations:*

With the group sitting on the floor, everybody connects to the circle with one foot. Then, without using hands, the task is to pass the knot around the circle.

*Processing Points:*

Which strategy should we follow? Was the time setting realistic? Was it too much or too little? How is it with expectations? Is it better to have a higher or a lower level? When do we have more fun? Is it about fun for everyone?

Trust Circle From The Book on Raccoon Circles, by Jim Cain & Tom Smith

*Required Equipment:* Web loop.

*Projected Length of Time:* 10-15 minutes.

*Description:*

Standing in a circle, all members of the group hold onto the web loop with both hands. By moving the feet slightly to the center of the circle and leaning back, a circle of trust (trust in the webbing, self-trust, trust in others) is formed. This is when each individual discovers, in both mind and body, the joy and the safety of the basic connection to the circle. This is when trust is felt, appreciated, and practised. Instructions can be to close your eyes, come to the center, breathe deeply, and sense the connection, support, and security of the circle.

*Suggested Processing Points:*

- Was it hard to trust the group?
- Why?
- Why Not?
- Was it easier or harder than you thought it would be?
- How did it feel?



Above, you see the raccoon circle

Moonball From Teamwork and Teamplay, by Jim Cain & Barry Jolliff

*Required Equipment:* One 30 cm inflatable ball.

*Projected Length of Time:* 20 minutes or more.

*Directions:*

A classic activity popularized by Karl Rohnke in several activity books. It can be used as an initial icebreaker, an energizer between sessions, or a focused problem-solving initiative. The objective for this activity is for the group to hit the ball aloft as many times as possible (or to a predetermined goal) before the ball touches the ground. 3 simple rules:

- Each hit equals one point.
- You may hit it with any body part.
- No player may hit the ball twice in succession.

The task and rules are easy to understand so a new group, or one that has never participated in experience-based training, can easily begin. The play itself is engrossing, the individual task – hitting an inflated beach ball up – is doable by even the most non-athletic participants, and the center of attention is the ball rather than the players ... Despite its non-threatening nature, the activity can provide the basis for intense team development in the areas of goal setting, individual roles, and work processes.

*Variations:*

- Two points for kicks.
- The team scores one point when everyone on the team has touched the ball before it hits the ground. With a large group, a score of one is excellent, and a score of two is world-class!

- What does the ball symbolise? It could symbolise the group, memories of the group

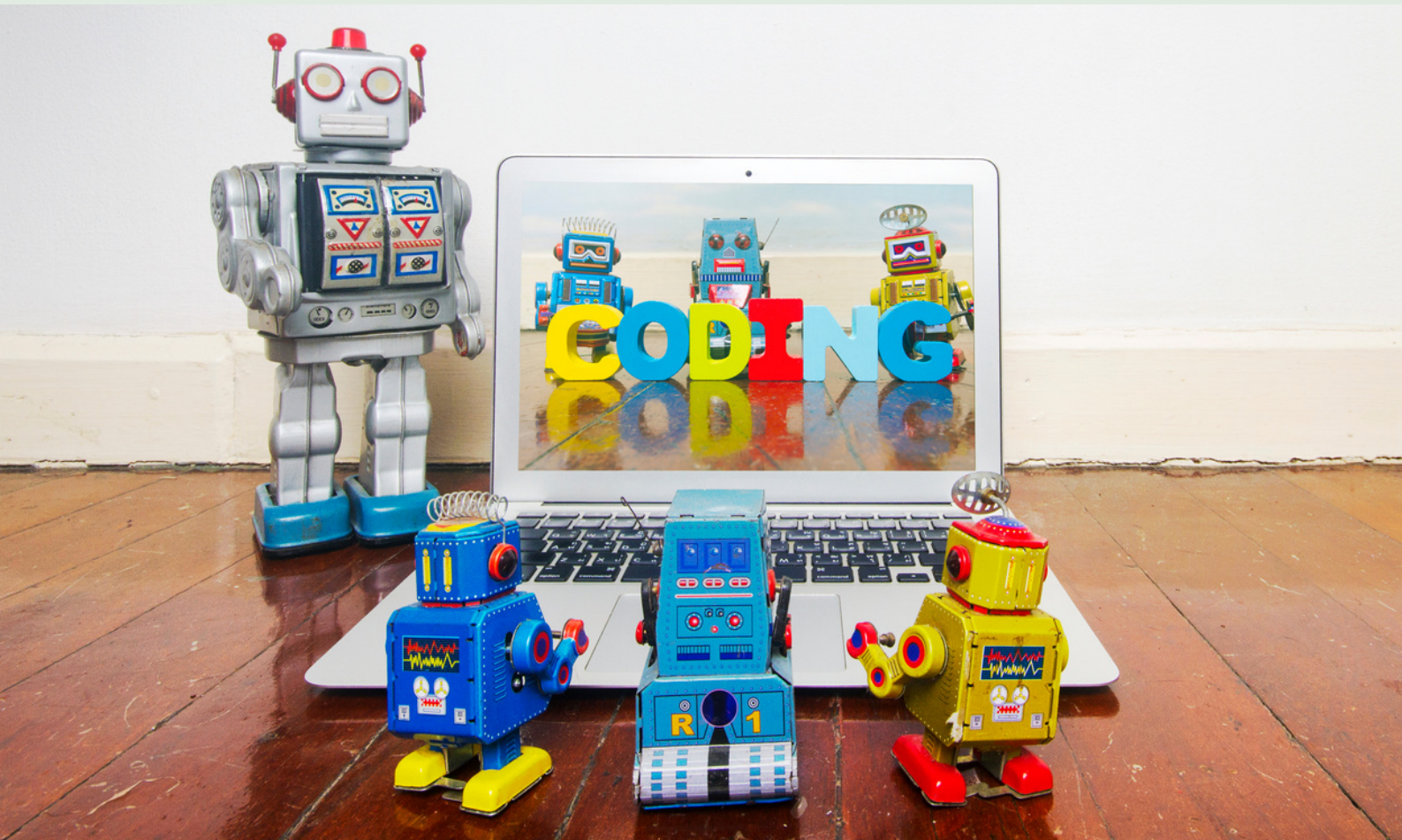
*Processing Points:*

Which strategy should we follow? Why did it not work out? How should we set our aimed score? Is the goal setting realistic? Was it too much or too little? How is it with expectations? Is it better to have a higher or a lower level? When do we have more fun? Is it about fun for everyone?





# 04. DEVELOPING CODING SKILLS



MIMO AND ITS SERVICES

## Mimo

Mimo is a platform to learn how to code and work toward a job as a developer. The platform is developed by the company Mimohello GmbH (Mimo) – an Austrian entity with its business address in Vienna, Austria.

The company was founded in 2016, and the first version of its platform was launched in the same year. Mimo offers access to its platform for free for everyone interested in learning to code via an iOS application, an Android application, or their website <https://getmimo.com>. The mobile applications can be downloaded for free via the iOS App Store (iOS) or the Google Play Store (Android), while the website can be accessed by any modern browser on a desktop or laptop device with sufficient screen resolution. Mobile browsers are not supported since the company offers mobile apps for mobile devices. Tablets are supported both by mobile applications as well as by the web portal.

Mimo is now used by a million people on a monthly basis to learn to code.

## Offering

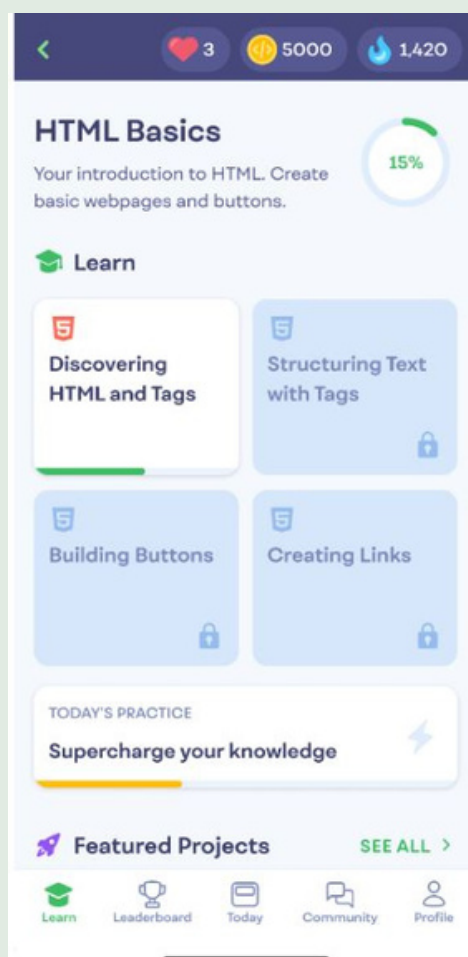
The self-paced part of the Mimo offer consists of interactive courses and career paths for the following subjects as of October 2022:

- Web Development (Career Path)
- Python (Course)
- SQL (Course)

One can go through the self-paced courses at their own pace and continue at any given time at their convenience. Mimo offers for all three options a path that is novice-friendly, and starts at the very beginning without the need for any prerequisites.

On the other hand, Mimo offers an instructor-led course that requires a participating student to spend around 20 hours per week on the course for six months. Those were not used in the future.skills Erasmus+ program. We'll continue looking at the parts that were used during the project.

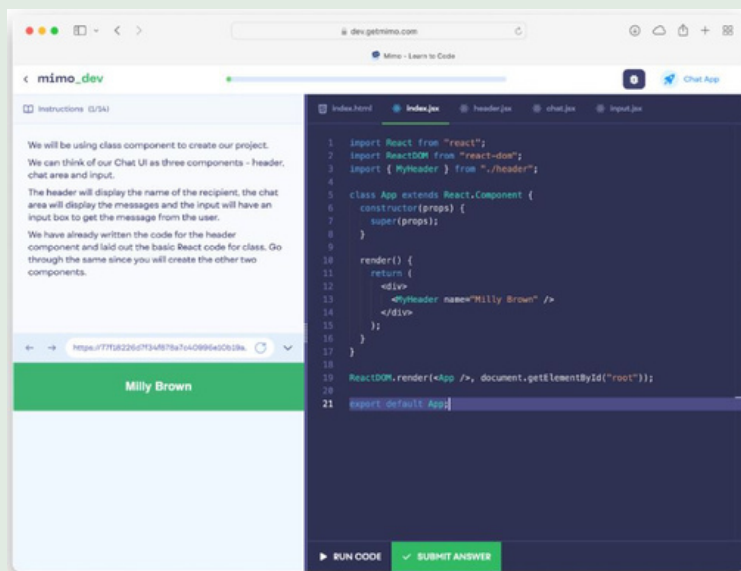
The self-paced courses and career path consist of a list of ordered sections that group different topics together and provide a structure that can be used to navigate through the whole course. Every section contains multiple skills that group important concepts together. A skill then consists of multiple chapters where one chapter can be completed in around 3 minutes. A chapter includes multiple interactive bite-sized exercises where one has to actively interact with the program to progress.



Here you can see a section (HTML Basics) in the Web Development career path with four different skills: (Discovering HTML and Tags, Structuring Text with Tags, Building Buttons, and Creating Links) in Mimo's iOS application

## Learning methodology

The exercises themselves are all interactive and expect user input to progress. Mimo prioritizes proven learning methods and fun in its content. Learners have a great time with the product and learn using the latest wisdom and research from learning science. Mimo uses a level system to motivate learners to continue (gamification) but also to differentiate between different types of learning and increasing difficulty. Each level builds upon the last, taking the learners from concept introduction to concept mastery.



Here you can see an exercise on the web platform.

## Level 1: Concept Introduction

At this level, Mimo introduces the concept through interactive exercises. Instructions are explicit, with little to no wrong options in the code snippet bank. The platform encourages a deeper understanding of the concept with questions that ensure the user extracts the main takeaways from the initial information. Next, the program helps the learner understand how to apply the concept by constructing multiple different examples based on real scenarios.

Decades of evidence-based research in cognitive and learning science have removed much of the guesswork and unreliable intuition that can occur during teaching. Instead, Mimo relies on proven methods to guarantee improvements to learner outcomes and assure a high level of course quality. During a learner's first contact with a concept in level 1, the platform focuses on two proven strategies to promote effective and engaging learning:

- Elaborative interrogation – Probing questions that encourage the user to think about why and how a concept is applied. This process is proven to improve information retention and conceptualization (3), (4).
- Concrete examples to help illustrate abstract ideas – By applying the concept to multiple real-life examples, Mimo helps learners understand and remember information better. Humans are better able to remember concrete information than abstract concepts (5), (6), (8).



### Level 2: Concept Review: Recognition

At this level, the learners review a concept with a focus on the principle of recognition. Recognition exercises contain explicit cues in their instruction. Cues help guide the learner to recognize the concept, reconstruct it from memory, and apply it. Here, Instructions are less explicit and wrong options are included in the code snippet bank to increase difficulty. In level 2, a step toward practical application and grasp of a concept is taken by helping the learner construct small programs. At the outset, a scenario is posed, and learners focus on taking the concept from beginning to completion to solve that scenario.

Learners remember information more precisely when it's retrieved from memory multiple times. Retrieving information is substantially more effective for learning outcomes than rereading material (7). When reviewing a concept at level 2 (also known as retrieval practice), we include a new strategy in tandem with elaborative interrogation and concrete examples to promote effective and engaging learning

- Retrieval practice: Recognition – By exposing learners to a concept in different contexts and ensuring they retrieve it from memory, Mimo takes a step toward long-lasting learning. By including explicit cues, the platform helps foster learner confidence and encourages a further step toward mastery.

### Level 3: Concept Review: Recall

At this level, the learners review the concept again based on the principle of recall. In these exercises, Mimo gives the learner defined instructions but does not include explicit cues to help recognize the concept.

The learner must actively retrieve the concept from memory and apply it. In exercises that contain the code snippet bank, the platform increases the presence of wrong options.

To increase the chances of successful retention and understanding, the learner should be able to bring a concept to mind without too much instructional help or cues. When reviewing a concept again at level 3, Mimo employs a harder form of retrieval practice

- Retrieval practice: Recall – By encouraging the learner to recall a concept from memory without cues, we can be confident that a concept is understood and long-term retention is further enhanced.

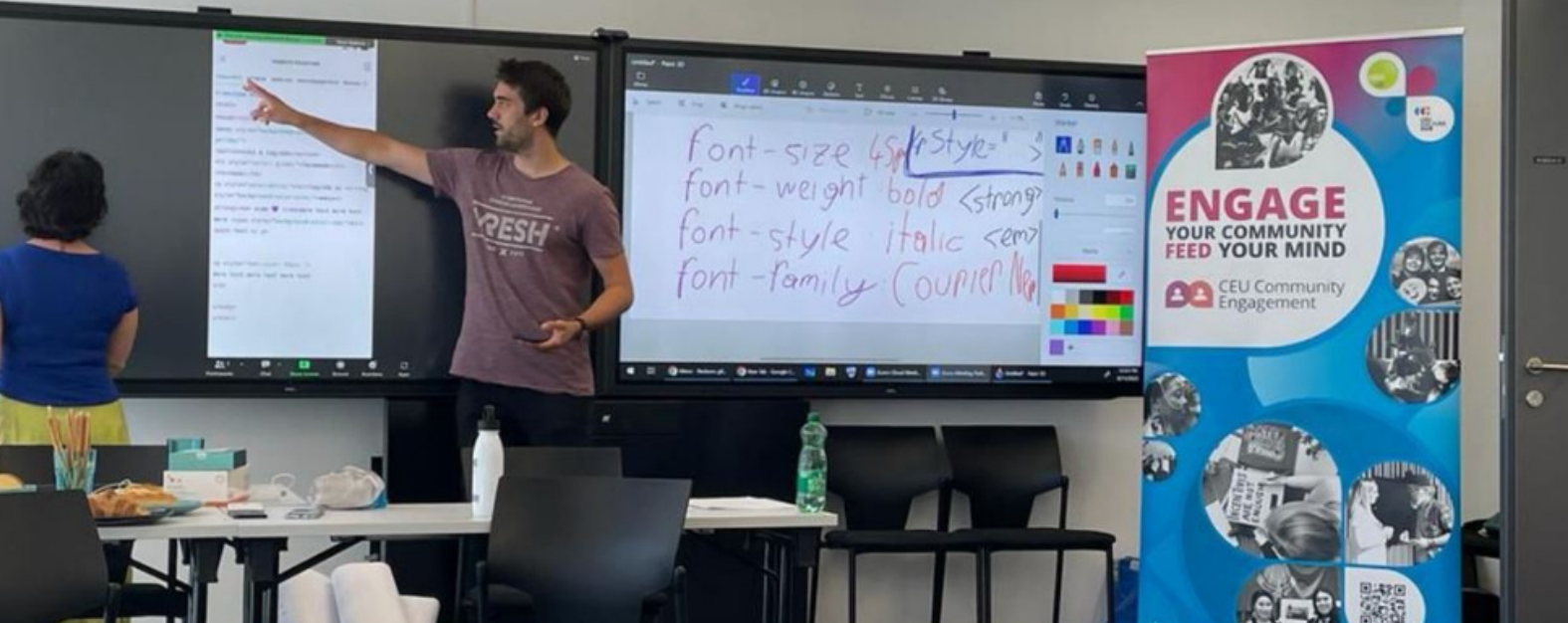
### Level 4: Concept Mastery: Unaided Reproduction

At the final level, the platform removes defined instructions as far as possible and encourages unaided reproduction of a concept. These exercises encourage the learner to use the concept to create something from scratch.

### Playgrounds

Mimo offers an editor to create and run your own code. Those editors provide a beginner-friendly way to start creating your first website, too. In addition, there is a glossary that gives access to a knowledge base of the concepts needed to start getting creative.





Above, you see the debriefing of a chapter.

# PROJECT SETUP

In the future.skills Erasmus+ project, we used Mimo's mobile application to go through the first skills in the Web Development career path. We covered the introduction to HTML and the most important tags to start creating a website.

For every skill and chapter, we went through, we took the same approach: the participants went through the interactive

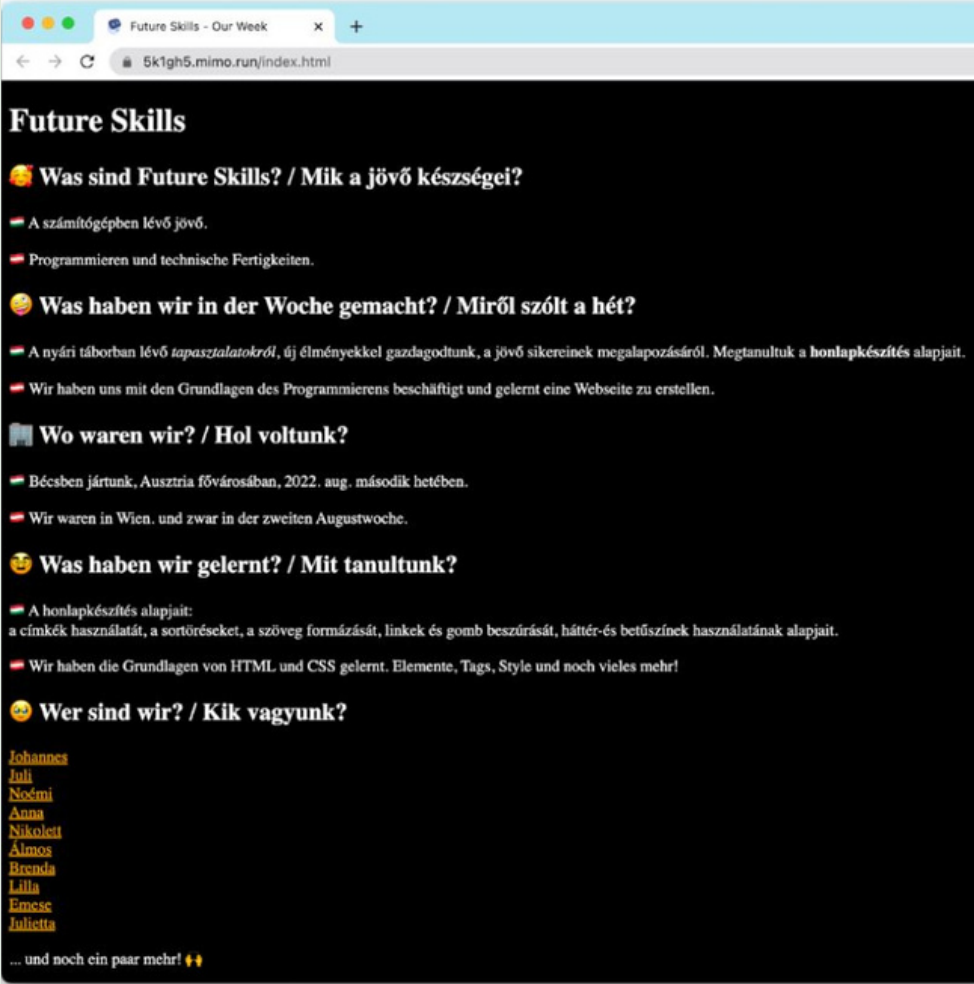
bite-sized lessons on their own first.

Then we discussed in a group setting what we just learned and how we might want to apply it when working on our own website, and we then applied the newly learned concepts in a playground file in the Mimo app. Lastly, the learners started applying the learned concepts individually on their own websites.

On the right, you see the final result from the workshops: a website that sums up what we learned throughout the week and links to the participants' individual websites.

# RESULTS

The participants learned the basics of web development (website creation with the most important HTML tags and styling with basic CSS rules). During the project, every participant worked on their own website and we worked on one group website, too. In the end, we combined the group website with all the individual websites.



## EXPERIENCE FROM THE PROJECT

We learned that Mimo is a great tool to teach kids and teenagers the basics of coding. However, we also saw that some of the participants needed additional help understanding the concepts and benefitted heavily from the group session afterward going through the bite-sized exercises themselves. Mimo offers multiple chapters to deepen one's understanding of a given topic, but we didn't have the time during the sessions to let everyone dive deeper into the sections they had trouble understanding at first.

The group setup was a nice way to exchange ideas and help each other, but on the other hand, it was a bit counterproductive for the way Mimo structures its learning content since learners can and should revisit topics they have trouble understanding which we couldn't do.

## LESSON

Mimo can be used to teach the basics of coding to kids and young teenagers. However, the setup should be changed slightly to get the most out of the program. Instead of going through the program at the same pace, the participants should make use of the adaptability and flexibility of the program and work at their own pace.

## POTENTIAL FUTURE SETUP

The biggest benefit Mimo provides was neglected in the setup: adaptability to one's skills and understanding of a given concept.

A proposed alternative would be to meet up on a weekly basis, give the participants homework to look at certain skills in their own time, and do as many sessions as they want or need to fully understand a given concept.

In the weekly meetups the group can then discuss the concepts that were learned and work on a website together.

Below you can see a participant using the app.





# 05. BEHAVIOURAL OBSERVATIONS AND EFFECTS



## INTRODUCTION TO SOCIAL OBSERVATIONS

It was important to observe what impact we achieved within this one week on the youngsters' behaviour. We wanted to have a closer insight into some of the individual and social characteristics of the group members. Additionally, we also wanted to get an objective overview of their development.

In order to observe a change in their behaviour, we ran with the participants an experiment on Monday (the first day) and on Friday afternoon (before the last possibility to spend their rewards). Additionally, over the week all 5 pedagogues observed the group members and their development in different aspects.

The aim of this part was, on the one hand, to learn about the participants and, on the other hand, about their individual preferences. According to previous studies, besides social background (9), some individual and social characteristics are crucial not just in the school performance but also in the long run success (10).

As we described above, to achieve some long-run effects, it is important to work with the children in the long term. Therefore, it is also crucial to know some hidden individual characteristics about them, in order to know which aspects have to be supported to help the young ones to gain perspectives.



## The aim of the skill shop and the personalised aims

As mentioned in chapter 2, we wanted to teach the group to give and receive feedback and to reflect upon and evaluate their own behaviour. Therefore, besides the experiential educational games, we also introduced a so-called "SkillShop". In the SkillShop the youngsters could spend their Skill Points in order to buy different products (e.g. USB sticks, snacks, football, henna, t-shirts, sunglasses ...etc.). Additionally, they could buy some services as well (challenging the teachers in football, table tennis, getting a head massage ...etc.). The SkillShop took place everyday afternoon (except for the first day to be able to collect some Skill Points).

There were several possibilities to collect Skill Points. Everyone in the camp (also mentors) had a personal aim over the week. On the first day Monday, we discussed together in the group their own personal struggles or aims that they would like to work on over the week. We helped them to find their own aim that is not too hard to complete but it means a challenge for them and serves their personality in order to fulfil their own expectations. In order to learn the culture of feedback we reflected together on their aims and achievements two times a day. In a circle, we discussed one by one with the whole group how they feel and whether they succeeded in completing their aim or not. The youngster reflected in front of everyone and with the feedback of the

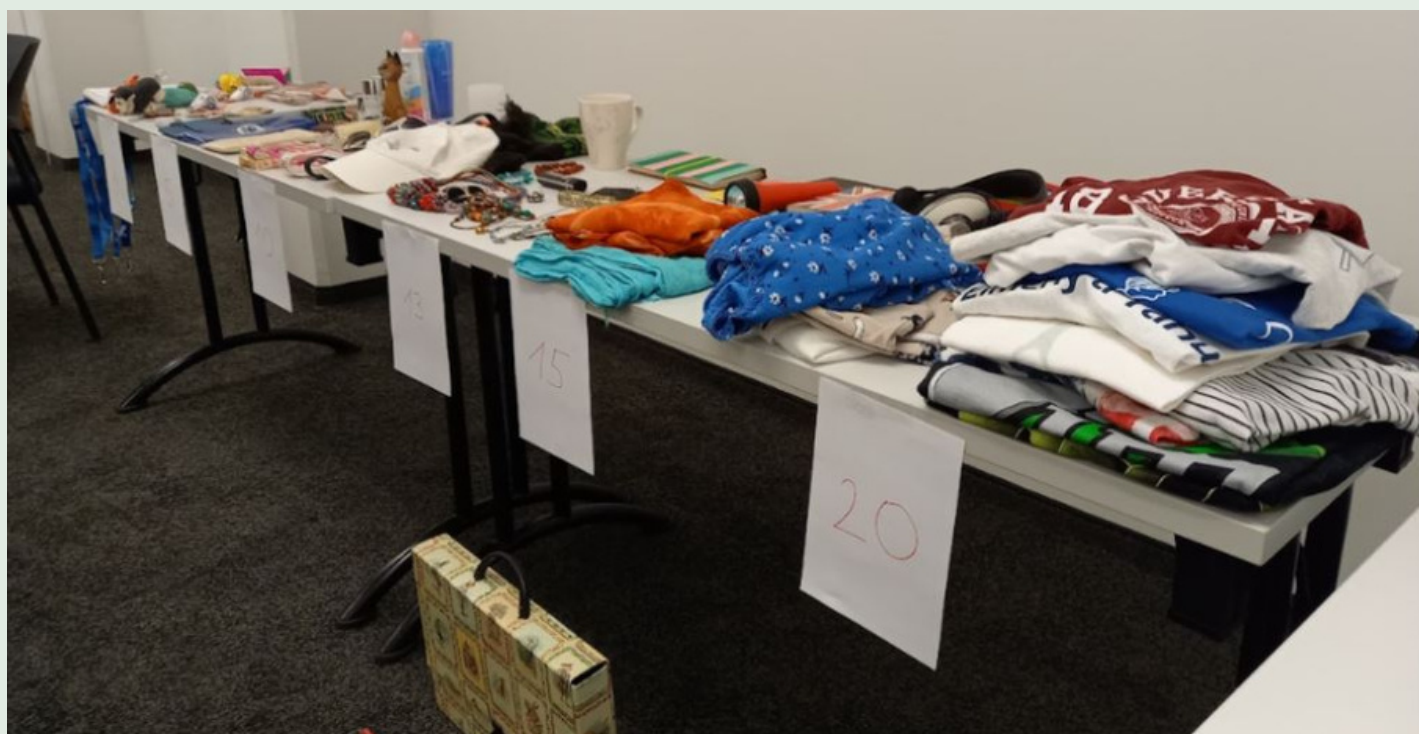


group the young ones could decide whether they succeeded in completing their aim or not (it was only possible to get a full point or 0 points for the personal aim). The personal aim was something that the participants wanted to work on.. For example, more shy participants had to talk/connect with others over the day 2-4 times. Or those who struggled in school with English/German had to learn several phrases or had to talk to some foreign teachers a couple of times. The purpose of the personal aims was to reflect on their weaknesses and it also served them to receive and give positive feedback that they can work on it and can get a reward if they overcome their weaknesses. Or to reflect on which mistake they made and how they can avoid it again.

Additionally, they could collect extra points for good behaviour (e.g. helping teachers to carry pieces of equipments) or deduction for deviating behaviour (e.g. smoking without teachers' permission).

The rules were discussed according to the EE method. They were developed together with the children, giving the feeling and the impression that the children are also involved in responsibilities and decisions.

Last but not least, the youth could also collect Skill Points over the behavioural Experiment they played on Monday and Friday. Social sciences laboratory experiments serve as a tool to measure individual behaviour in a social context. Experiments differ from surveys in that they are monetarily incentivized. That means that the decisions of the participants have an effect on their and in some cases on others' payment. Instead of money, we paid the participants "Skill Points" that they could spend in the "SkillShop".



Above, you can see some of the available products of the "SkillShop" where the young participants could buy goods with their collected points

# A SMALL EXPERIMENT – QUANTITATIVE OBSERVATIONS & FINDINGS

We programmed 4 small games in order to measure some hidden characteristics of the young ones. We let them play for 40 minutes with the games in which they had to choose between options that had an impact on their Skill Points at the end.

## The Games

**Patience:** We wanted to know how patient they are. How much are they willing to wait for Skill Points. We designed an experiment, where they had to make 5 decisions between an amount of Skill Points they get on Monday or another amount they can get on Friday.

**Social preference:** We wanted to see to what extent the participants are willing to share their Skill Points. Each player had the chance to split up 50 Skill Points between themselves and a randomly chosen player in the group. After their decision, they were randomly matched with each other. Every participant gets the points he/she kept and additionally they get the points that another player shared with him/her. The game was anonymous, which means the participant did not experience the end of the game with whom they shared their points.

**Risk aversion:** According to studies, students who are more risk-averse have better performance in schools. We wanted to know, to what extent are the participants willing to risk a secure amount of Skill Point for an insecure amount. They had to choose six times between a fixed amount of Skill Points (which they will get 100%) and an insecure amount which they can only get if they win a bet in a coin toss (meaning that they can get this amount with 50% probability).

**Effort:** Since the participants came from different social backgrounds (some of them did not even have a smart phone and some of them had their own laptop) we wanted to see how they perform in an effort game and how it changes over the week. They had 90 seconds to pull each slide exactly to the value of 50 (in the middle). They had the possibility to try and understand how to move the slide in the middle before the 90 seconds started.



## Findings in quantitative observations

**Patience:** Just like the members of the group, so are the results regarding the patience quite heterogeneous. We can observe that youth with minority backgrounds are more likely to be impatient, which correlates with the findings of recent research (Horn et al. 2020). This game was not repeated on Friday, since we could not choose a later date for the payment in Skill Points. Therefore we cannot serve with any comparison.

**Social preferences** diminished over time

On the first day even though the group members did not know each other well, more than  $\frac{2}{3}$  of them shared half or more of their own points (on average they gave 23 points out of 50), showing a higher level of altruism than what we can find in the literature (11). The high level of altruism decreased after 5 days, however, they were still altruistic since they kept 32 points for themselves and gave 18 on average to the others. This means that they still gave more than  $\frac{1}{3}$  of their own points. However, we expected a change in a higher level of altruism at the end of the camp. We can explain this phenomenon with the following ideas:

- The level of altruism was higher than expected, but it correlates with the finding of studies (12) that suggests that people with disadvantaged backgrounds are more generous than the average.
- At the beginning of the camp, the youth did not know what to expect in the SkillShop. Hence their attitude toward SkillShop changed over time. That could also have an effect on their changed behaviour.

- Some of them earned and saved more points over the days than others. Hence the heterogeneity in their earned points might also have an impact on the different behaviour. Additionally, over the days they could exchange information about their current points.
- Some of them were not interested in the SkillShop, therefore they were also less incentivized.

**Risk aversion** increased over time

Recent studies show that kids with the insecure social background are more likely to take risks (13). We observed that on the last day, the willingness to take risks decreased (aversion increased). We can interpret it as an impact of the experiential educational games and EE tools we used over the week; the ongoing evaluations and reflection on the personal aims that taught them to think one step further. But it is also important here to mention that the attitude toward the SkillShop changed over the week. So it might be the case that the youngsters were more likely to risk fewer Skill Points because they knew that it is worth for. But even if it is the case it is clear that their interest to save money for some (for them valuable) goods motivates them to risk less.





## **Effort** increased over time

We can see that there is a high level of heterogeneity between the children based on how many points they collected over the last task. That can be interpreted that some of the young ones had a (dis)advantage on the first day because they (do not) have a PC at home, so they are (not) used to working on computers. This standard deviation decreased over the 5 days. That can be interpreted also in many ways:

- Over the 5 days of PC and smart phone usage also youngsters who did not use computers as much as others had the chance to get used to these norms.
- But it can also be that playing it once gave them more experience, therefore they were more talented the second time.
- But we can also not neglect the argument that most of the youth wanted to collect more points compared to the beginning, because they knew what to find in the SkillShop.
- We can also find comments that said that they wanted to beat themselves. However, we have to emphasize that it was more typical for the ones coming from a not socially disadvantaged background. Additionally, they collected a lot of points at the beginning.

In general speaking, the comparison of the experiments showed some tendencies; however, it also highlighted some incompleteness. On the one hand, it is important to emphasize that the incentives have changed over the week. The SkillShop is a good substitute for money, but also for the camp participants it took some time to believe that they can really buy items that we sold. We observed that they moved more freely after Wednesday in the SkillShop. It also took for them some time to get the idea to save for some bigger products but then we did not have enough time left from the week. Through these realisations the incentives changed and the observations became less controlled. However, this learning process of the youth (saving money for bigger products) also takes more time than a week.

Additionally, the development of the personalized aim took at least 2-3 days, meaning that at the beginning some of the youth were faced with too big expectations and some of them with too little, therefore it also made the point distributions for the personalised aim not even between the children. However, here it is important to emphasize that this was a perfect real-life example as well because not everyone is realizing their weaknesses as fast as others.





## OBSERVING GROUP AND INDIVIDUAL BEHAVIOUR – QUANTIFIED QUALITATIVE OBSERVATIONS & FINDINGS

The mentors were asked to evaluate different aspects of behaviour of the individuals and how it developed over the week. We made 6 categories that had to be discussed between the mentors and at the end, all 6 categories had to be rated by all of the mentors between 1 and 5. We evaluate these two times, at the beginning and the end. We focused on the following 6 categories:

- openness toward the group
- openness toward mentors
- connecting with the group and other youngsters
- connecting with the mentors
- connecting with foreign mentors
- honesty

All in all, we propose that the quantitative data collection was good but the time we had was too little to make significant statements. Additionally, for significance, it was a too small sample size. However, it was a great pilot to learn the boundaries of a one-week camp with quantitative experiments. That way after evaluating these we can adapt them better to our plan so that we can act more conscious next time (just like in the learning cycle). However, it could be a great tool in the longer run. There are already schools in Hungary where Pressley Ridge introduced its' point method. According to qualitative observations, it might be worth trying to conduct some quantitative analysis.



## Findings in qualitative observations

It is important to emphasize that we compared the children and their abilities according to their own character and what they could have achieved over the 5 days and not to each other. Therefore, we are not going to analyse here our findings on the average but in general or we will mention individual cases.

Overall the perceptions of the mentors were quite similar. There were only 1-2 cases as the perception of two mentors differed, in the quantified version it differed in 2 cases out of 5. Therefore, we took the average of the evaluation of the mentors to make sure of the objectiveness of the observation.

After the discussion and the summarized discussion, we can say that the highest level of development we achieved was in the categories of how the group members **opened up in the group** and **in front of the mentors**. Also, young participants with depression, who were very reserved at the beginning, become more courageous in the group by the end of the week and could express their voice and personality in front of the group and in front of us, the mentors. There were also some youngsters who were “too open” at the beginning, compensating for their fears and personal issues and we determined that the level of compensation decreased and these young ones could step back to leave others also to prevail in the group.

We also realized that the youngsters could **emotionally connect** not just to the group but also to each other on the individual level. Some of them came with friends or their siblings, and all of them left with some friends. They were also able to connect to the mentors and shared with them their emotional struggles or some painful information about the past.

The most difficulty we faced was how the youngsters can **connect to the Austrian mentors**. Most of them did not understand a word in English or in German therefore communication was challenging. However, with the openness of the Austrian mentors, they were also able to teach them words in Hungarian in order to connect more with them and practice or extend their language knowledge. Even though there were some shy personalities in the group, by the end most of them dared to communicate with the foreign mentors.





We also realised that some of the youngsters had a problem with honesty. We do not mean here that it is not normal at this age to have secrets, but there is a difference between secrets and secrets. We made some deals with the youngsters, therefore it was important that they do not lie about those to us, or to what extent are they honest about themselves. Since most of the youngsters were honest from the beginning on average the change was not as high as in other cases. However, there were individual cases, who are used to lying at home and not used to being accepted and cannot develop trust towards adults. These young ones made a huge step, to be honest, one of them made a coming out about their sexuality and some of them started to tell us secrets, what they lied about and by the end of the week, she only had smaller unimportant lies. However, to break these habits in the long run it is important to work with these children in the long term.

Based on the quantitative and qualitative observations we could achieve some changes in the youngsters' behaviour. On the one hand, quantitative observations need further corrections in order to make significant statements. On the other hand, qualitative observations showed a change in all of the youngsters' behaviour. We made them open up to their group mates and also to adults and most importantly they experienced how it feels like to behave as a teenager. About the more long-term effects, we report you to believe in the next section.

## EFFECTS IN THE LONG RUN



In October we organized a reunion for the youth and mentors in Budapest. We spent a whole afternoon together and played some experiential educational games. Of course, in the beginning, they were shy (again), because 2 months in teenage time can be perceived as forever. Some of them also commented that they have an impression that now the whole group feels like many strangers, even though they perceived the group in the camp as a great community. But by the time and the first games, they were more open again and had great chats with each other and with us. Additionally, we also evaluated the camp together in two months' time.

We got a lot of positive feedback from the youngsters. Some of them decided to participate in national competitions for example in finance, mathematics, or Hungarian grammar. Some of them decided to learn diligently English or German as a language in school to use it to connect with different cultures.

There was also a participant who almost dropped out of school before the camp. Based on his description the camp made him realize that it is important to have graduated to work legally as a great car mechanic, therefore he started to learn more intensively than before and he also mentioned that he changed some of his friends because he realized that the surrounding has a great influence on him. There was also a case of a girl who experienced for the first in her life what it means to behave according to her age. This experience motivated her shortly after the camp to take time for her hobbies (like drawing), however, after a month she realized that it is different at home. She was not able to adapt their behaviour in the camp to the situation at home, because of the circumstances and her parents do not allow it to her. So she got back to her emotional state as before the camp. However, the aim of Pressley Ridge Hungary is to deal with children in the long run, therefore we stood in connection with these children, and in any new projects we plan to give them a chance to be a part again of this experience.

By the end of the meeting, everyone had to give feedback to each other. In that particular game, we realized how deep connections have been made that are still current. Additionally, many teenagers gave thankful feedback to their mentors. In general, we can say that everyone in the camp perceived the camp as a huge experience that not necessarily prepared them for being web page developers, but to extend their point of view, their possibilities, and their perception of the world.

All in all, we made some changes over 5 days. In some cases it is visible, in some cases it only turns out after a month or two and in some cases further work is necessary.





## 06. CONCLUSION



## MAIN FINDINGS AND RESULTS



The FUTURE SKILLS handbook provides multidisciplinary approaches for the work with socially disadvantaged young people.

Chapter 2 focused on the practices used in experiential education (EE) and provided an overview of the methodology behind it. The experiential education methodology was used as the pedagogical framework for the FUTURE SKILLS summer camp. Developing positive relationships with young people was experienced to be the centrepiece of fruitful work, learning, and teaching. Some of the practices described in this chapter were successfully implemented during the FUTURE SKILLS summer camp. They were a decisive basis to work with young people and convey digital skills in a second step. Without trust and good relationships, professional skills can not be conveyed. Developing good relationships with the young participants can be reached through a variety of tools – such as providing feedback, active listening, acting consistently, having realistic expectations, as well as teaching and practicing leadership. The Experiential Learning Cycle (Plan – Activity – Evaluation – Generalize and Apply) is a pedagogical tool to increase students' learning curves while empowering them simultaneously. Further important in order to achieve positive learning results is to develop a group out of the individuals, which is explained in more detail through the so-called Forming–Storming–Norming–Performing–Adjourning Model by Tuckman.

Chapter 3 described the coding part of the FUTURE SKILLS project. It was carried out by the Austrian IT start-up Mimo which teaches coding to young people using elements of gamification. The general approach of the Mimo learning method is to motivate young learners on a continuing basis. The exercises themselves are all interactive and expect user input to progress. Each level builds upon the last, taking the learners from concept introduction to concept mastery. The learning methodology is built on different levels: Level 1: Concept Introduction; Level 2: Concept Review: Recognition; Level 3: Concept Review: Recall; Level 4: Concept Mastery: Unaided Reproduction. In the FUTURE SKILLS project, Mimo's mobile application was used to go through the first skills in the Web Development career path. We covered the introduction to HTML and the most important tags to start creating a website. During the project, every participant worked on their own website and we worked on one group website, too. In the end, we combined the group website with all the individual websites. One of the weak points of using the Mimo app during the camp was the lack of time. Learners should have time to revisit the coding content. Therefore, working over a longer period of time with the young participants would be a more adequate way to generate even better results. Besides the pedagogical framework and the coding lessons, behavioural observations were conducted during the FUTURE SKILLS summer camp and summarized in Chapter 4. It was important to observe what impact we achieved within this one week in the participants' behaviour.

We wanted to learn some of the individual and social characteristics of the participants. In order to observe a change in their behaviour, we ran with the participants two experiments (one rather at the beginning and one rather at the end of the camp). Additionally, over the week all 5 pedagogues observed the children and their development. In social sciences laboratory experiments serve as a tool to measure behaviour of individuals in a social context. Experiments differ from surveys in that they are monetarily incentivized. That means that the decisions of the participants have an effect on their and in some cases on others' payment. Instead of money, we paid the participants Skill Points that they could spend in the SkillShop. Several different products for the SkillShop e.g. USB sticks, snacks, football, henna, t-shirts, and sunglasses, were collected. Additionally, they could buy some services as well (challenging the teachers in football, table tennis, getting a head massage ...etc). The SkillShop took place everyday afternoon (except for Monday). Furthermore, games were played in order to evaluate the development of young participants' patience, social preferences, risk aversion and effort. Based on qualitative observations, an improvement in the behaviour of the young participants was observed. On the basis of the games played, it was possible to evaluate the following:

## LESSON

The FUTURE SKILLS piloting project can be regarded as a success. We observed that the combination of different disciplines (experiential education, coding, and behavioural experiments) resulted in learning gains on different bases for young people. Interested promoters, educational institutions, and project consortia can therefore be advised to adopt a similar multidisciplinary approach when working with young people and to borrow approaches presented in this handbook.

A key finding was that a significantly longer period of cooperation with young people is necessary to generate longer-lasting effects. This statement is valid for all three areas described above – experiential education, coding, and behavioural experiments.

In a similar partner composition, a follow-up project is conceivable in which a longer-lasting work with the young people (e.g. over half a school year or a whole school year) is aimed.

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