



# Topics:



- Traditional teaching vs Educational Coaching?



- What is Educational Coaching?



- The importance of STEM and Sustainability Coaching?



- Basic Coaching TOOLS





Traditional

vs

Coaching



# TEACHER



## Traditional method

- Teacher-centered (active)
- Expository method
- Focused on knowledge transmission
- Gives instructions / explanations / answers / corrects mistakes
- Closed-ended questions to verify knowledge
- Focused on evaluation (Tests / grading) to assess academic performance
- Extrinsic motivation (grades, rules)
- Hierarchical teacher-student relationship
- Passive student participation
- Limited student autonomy
- Classroom management rigid structure
- Teacher-guided Integration of AI and SDGs



# TEACHER



# as a COACH

- student-centered
- facilitate learning
- develop autonomy and collaborative skills
- promote reflection through strong questions
- use active and participatory learning strategies
- flexible and adaptable
- continuous assessment and formative feedback
- errors seen as learning opportunities
- intrinsic motivation (purpose, autonomy)
- explore solutions with guidance
- develop critical thinking through open questions
- learning partnership
- critical and creative skills to solve real problems  
integrating AI and SDGs



# What is Educational Coaching?

Student centred approach to guide and facilitate by helping sts set goals, solve problems and take ownership of their learning.



- help sts to THINK and DECIDE;
- promote autonomy;
- promote confidence;
- help sts develop essential skills for their success (academic, personal, social,...).



# WHY COACHING IN STEM AND SUSTAINABILITY?

## Common student difficulties:

- "I'm not good at Maths."
- "STEM isn't for girls."
- Fear of making mistakes
- "I'm not able to solve or do this"

- Increases autonomy
- Increases self-confidence
- Combats (eco-)anxiety
- Promotes self-awareness
- Increases motivation
- Improves student academic performance
- Improves emotional management  
(develops resilience, reduces anxiety, ...)
- Combats stereotypes



**INTEGRAL  
DEVELOPMENT**

**COACHING**

## Traditional teacher:

- *“This project is wrong, do it this way.”*



## Coach:

- *“What do you think isn't working?”*
- *“Why did you think it is not working?”*
- *“What other solution could you try?”*



# Coaching in STEM

Promoting learning and sustainability among students

Coaching in STEM is crucial for:

**overcoming stereotypes**

increasing students' confidence,

enabling them to face real challenges and make a difference in the world.



# Basic Coaching Tools



## ACTIVE LISTENING

- listening without interrupting,
- not judging,
- not correcting immediately/systematically.

### Example:

- Student: ***"I don't know where to start the project."***
- Coach: ***"What do you already know about the problem?" or "What interests you most about this topic?"***



# Basic Coaching Tools

## POWERFUL QUESTIONS

- Good questions open up thinking.
- Give ready-made examples:
- **Avoid closed questions (yes/no).**

### Example:

- “What is most important to you in this project?”
- “What options do you have?”
- “What would happen if you tried another approach?”
- “What do you need to move forward?”

How to Ask  
Powerful  
Questions



# Basic Coaching Tools

## SETTING SIMPLE OBJECTIVES

- What do we want to do?
- For whom?
- With what impact?

**Example related to SDGs:**

**“Create an idea to reduce water waste at school.”**



# Practical exercise

Coaching Role-play

stepping into the roles of students and teachers

In pairs: **1 student / 1 teacher-coach**

**“I’m bad at science... I can’t do this project”**

**Student role: Ana, 15, loves arts and languages but believes she is “terrible at science.”**

**The Erasmus project involves AI and sustainability, and she feels completely lost.**

**Situation: She avoids participating, says others are smarter, and wants to do only simple tasks like posters.**

**The “teacher” / COACH:**

**cannot give solutions**

**can only:**

**listen / ask questions / encourage**

**Objective: to experience coaching in practice.**



# Practical exercise

**“I’m bad at science... I can’t do this project”**

**Help the student reframe limiting beliefs**

**Identify her strengths (creativity, communication)**

**Guide her to find a meaningful role in the project**

**Coaching focus:**

**Growth mindset**

**Strength-based questioning**

**Confidence building**

**Possible coaching prompts teachers can practise:**

**“What part of the project feels interesting to you?”**

**“Where have you succeeded in something you thought was difficult?”**

**“How could your creativity help explain scientific ideas?”**



# Practical exercise

Coaching Role-play  
stepping into the roles of students and teachers

In pairs: 1 student / 1 teacher-coach

**“Nobody listens to my ideas” (Gender equality angle)**

Student role: Sara, 14. Feels ignored by boys in the group. Stops contributing even though she has good ideas about sustainability solutions.

The “teacher” / COACH:

cannot give solutions

can only:

listen / ask questions / encourage

Objective: to experience coaching in practice.



# Practical exercise

**“Nobody listens to my ideas” (Gender equality angle)**

**Coaching prompts:**

**“When do you feel your voice is strongest?”**

**“What would help you feel more confident sharing ideas?”**

**“How could you present your idea so others listen?”**

**COACH**

**Support empowerment without speaking for the student**

**Encourage assertiveness and inclusion**

**Develop communication strategies**

**Coaching focus:**

**Emotional validation**

**Voice and agency**

**Inclusive teamwork**



# Goals achieved!!

## Understanding Educational Coaching

Be aware:

promote autonomy, confidence and academic and human development skills

## Using Basic Coaching Tools

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Active listening

Powerful questions

Simple goals

**TO FEEL COMFORTABLE COACHING STUDENTS**



O que explicar

O coaching pode ser:

10–15 minutos por sessão

individual ou em pequenos grupos

Usado para:

projetos ODS

motivação

orientação de ideias

Especial foco:

raparigas

alunos com menos oportunidades

Mensagem-chave:

“Não precisamos de mais tempo, precisamos de outra abordagem.”

- OBJETIVOS ALCANÇADOS
- saber o que é coaching educativo
- saber usar:
  - escuta ativa
  - perguntas poderosas
  - definição simples de objetivos
  - sentir-se confiantes para aplicar coaching com alunos
- perceber como o coaching apoia projetos de sustentabilidade



pedir ideias simples para cada um dos ODs  
a pares - uma ideia por ODs - folha com as Ods

role play improvisado ex aluna não sabe o que fazer; aluno acha que é muito difícil, aluno não acha que o tema é para meninas