

## **Peyton's 4-Steps-Approach, by Jory Pauwels**

**An efficient effective 4-step didactical approach in teaching clinical skills.**

# Ask yourself:

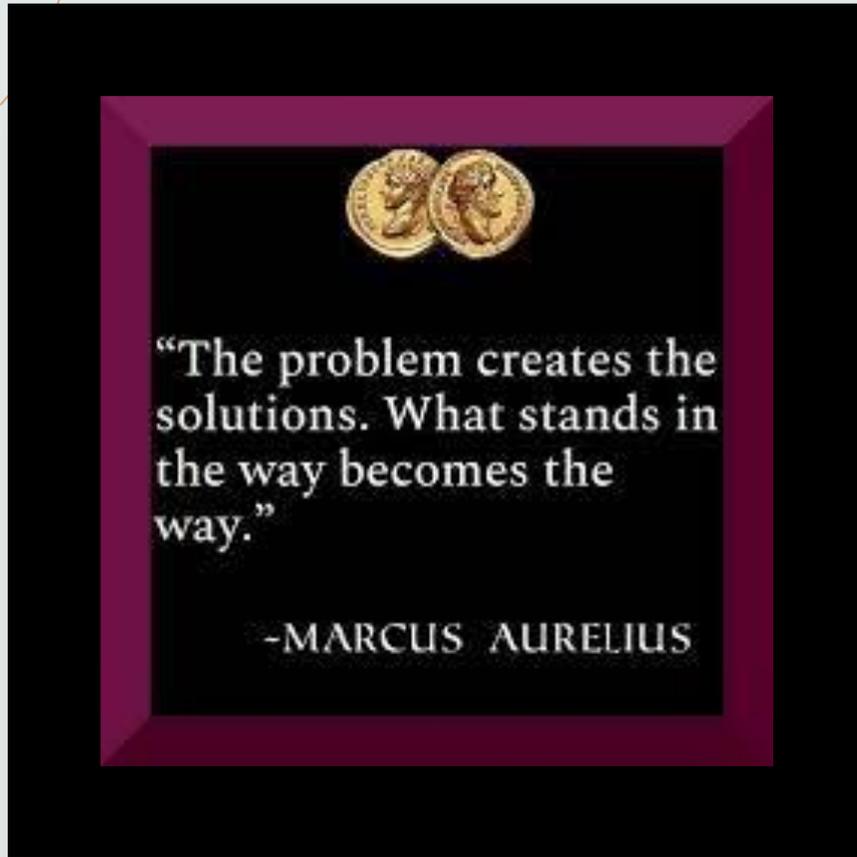
- + Are you VARKing up the right tree! (Fleming & Baume, 2006)
- + Which SWOT Strategies do you use in class?
- + Which different learning styles (Honey-Mumford Model) do you know and use?
- + Do you put your teaching to the test?
- + What is your role as teacher? (MacDougall J, Drummond MJ. The development of medical teachers: an enquiry into the learning histories of 10 experienced medical teachers. Med Educ. 2005 Dec;39(12):1213-20)



visual \* aural \* read/write \* kinesthetic  
**VARK**<sup>®</sup>  
a guide to learning preferences

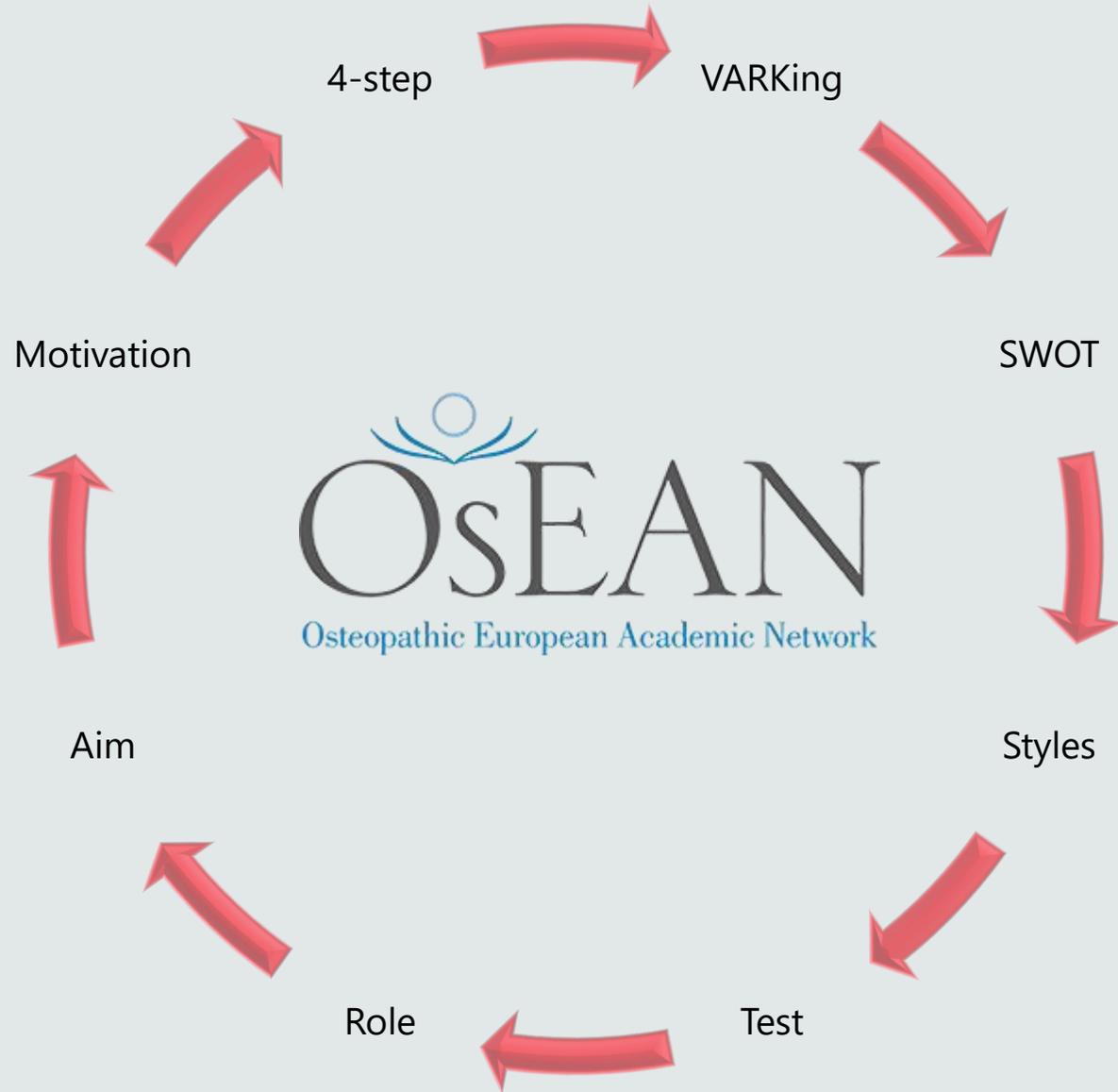
<https://vark-learn.com/the-vark-questionnaire/>

# Problem outline & solution



- +Diverse types of learners
- +Different learning styles
- +Teaching to the test
- +Role of the teacher

# Overview



# Types of diverse learners (Fleming & Baume, 2006)



- + Students' preferred learning modes should be **matched** with appropriate learning strategies.
- + Cave: potentially **combination** of all three sensory modalities
- + <https://teach.com/what/teachers-know/learning-styles/>

# Visual

- + Visual learners prefer the use of images, maps, and **graphic** organizers to access and understand new information.



# Auditory

- + Auditory learners best understand new content through **listening and speaking** in situations such as lectures and group discussions.
- + Aural learners use **repetition** as a study technique and benefit from the use of mnemonic devices.



# Read & Write

- + Students with a strong reading/writing preference learn best through **words**. These students may present themselves as copious note takers or avid readers and are able to translate abstract concepts into words and essays.

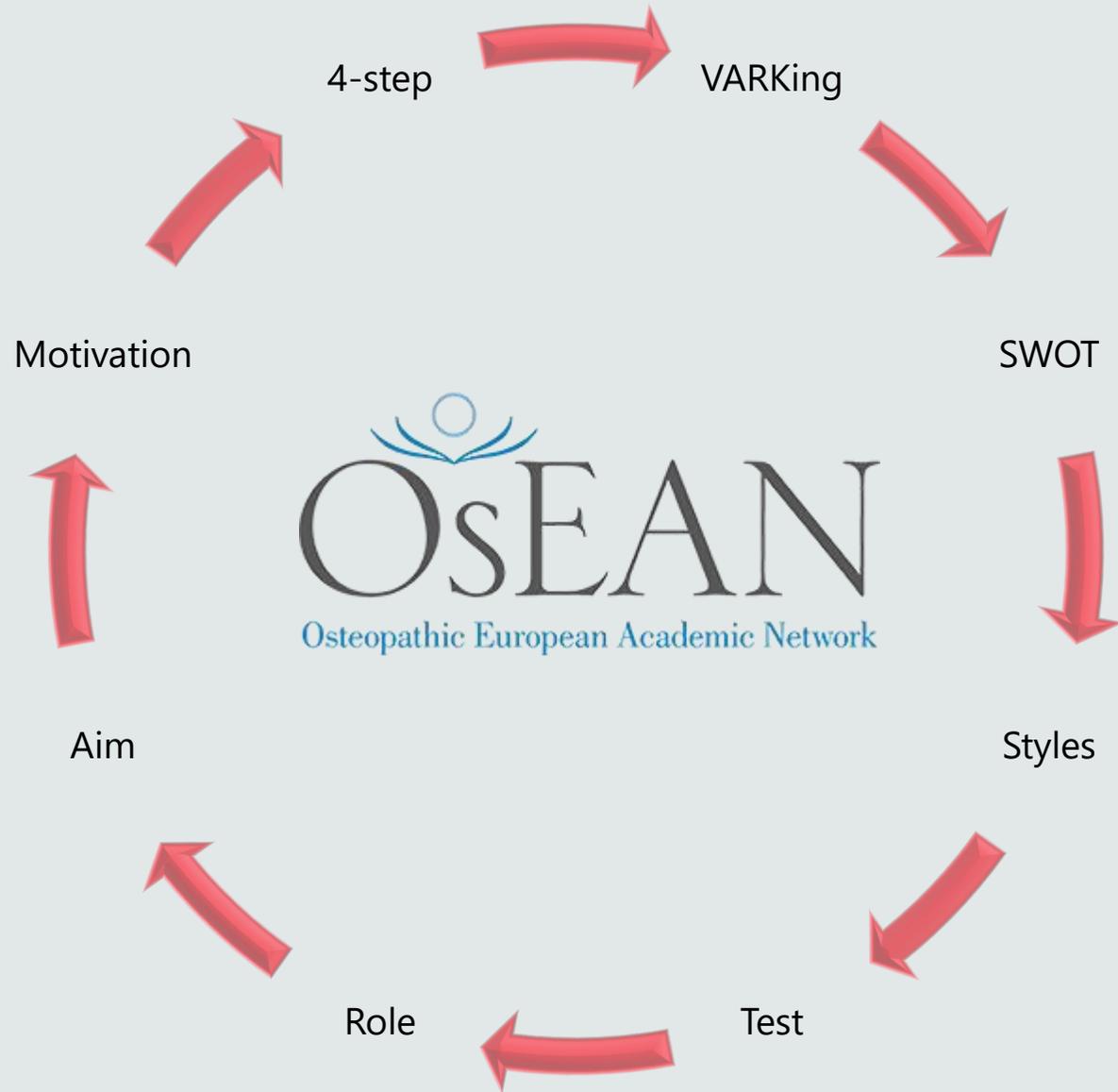


# Kinesthetic

- + Students who are kinesthetic learners best understand information through **tactile** representations of information.
- + These students are **hands-on** learners and learn best through figuring things out by hand (i.e. understanding how a clock works by putting one together).



# Overview



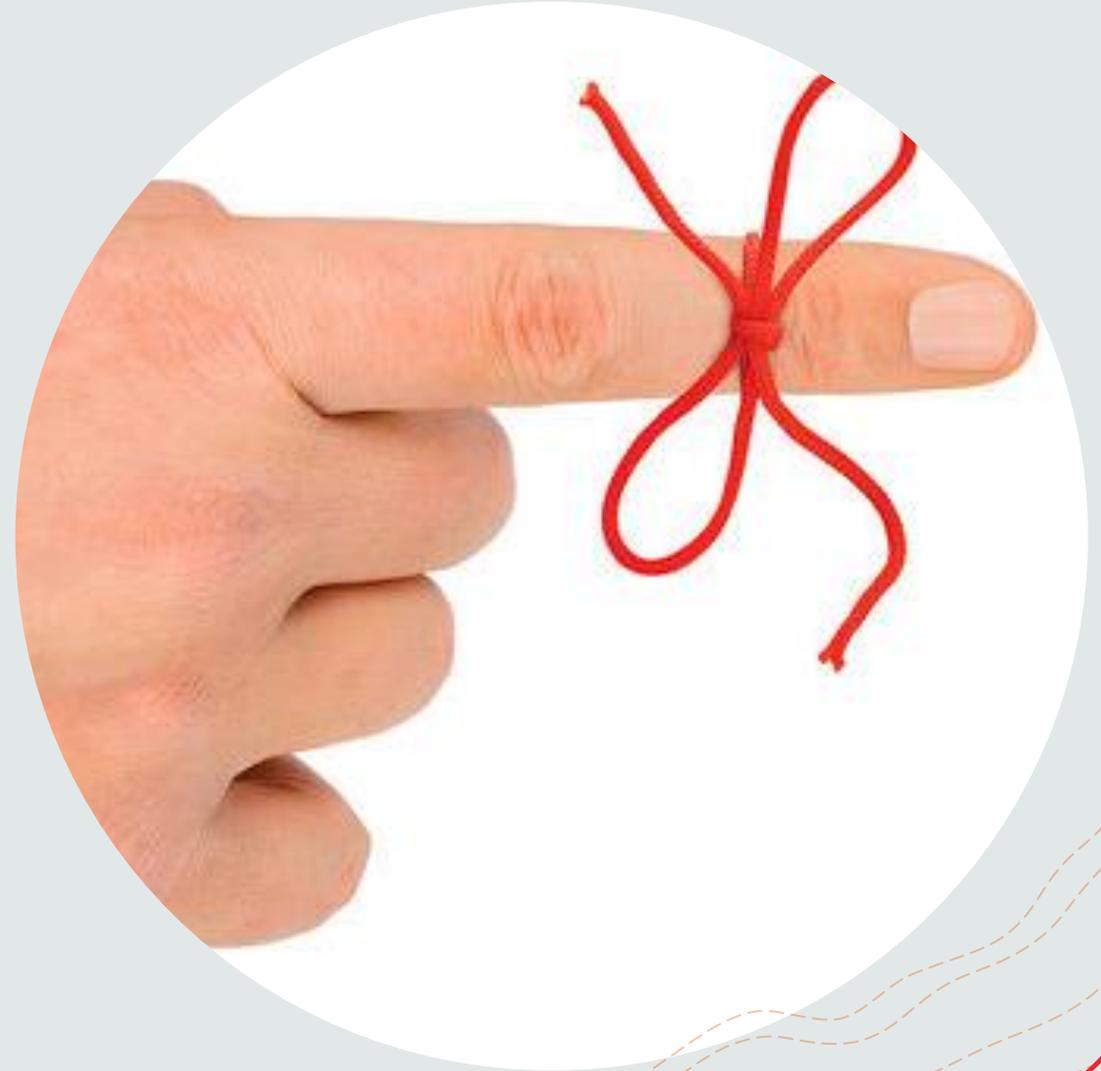
# SWOT Strategies

- + “Study Without Tears”: advice on how students can **use** their learning **modalities** and skills to their advantage when studying for an upcoming test or assignment (Fleming & Baume, 2006).



# Visual SWOT Strategies

- Utilize graphic organizers such as charts, graphs, and diagrams.
- **Redraw** your pages **from memory**.
- Replace important words with symbols or initials.
- Highlight important key terms in corresponding colours.



# Aural SWOT Strategies

- Record your summarized notes and listen to them on tape.
- **Talk it out.** Have a discussion with others to expand upon your understanding of a topic.
- Reread your notes and/or assignment out loud.
- **Explain** your notes **to your peers**/fellow “aural” learners.



# Read/Write SWOT Strategies

- Write, write and rewrite your words and notes.
- **Reword** main ideas and principles to gain a deeper understanding.
- Organize diagrams, charts, and graphic **organizers into statements.**

 **Reword**

 **Reword**

 **Reword**

 **Reword**

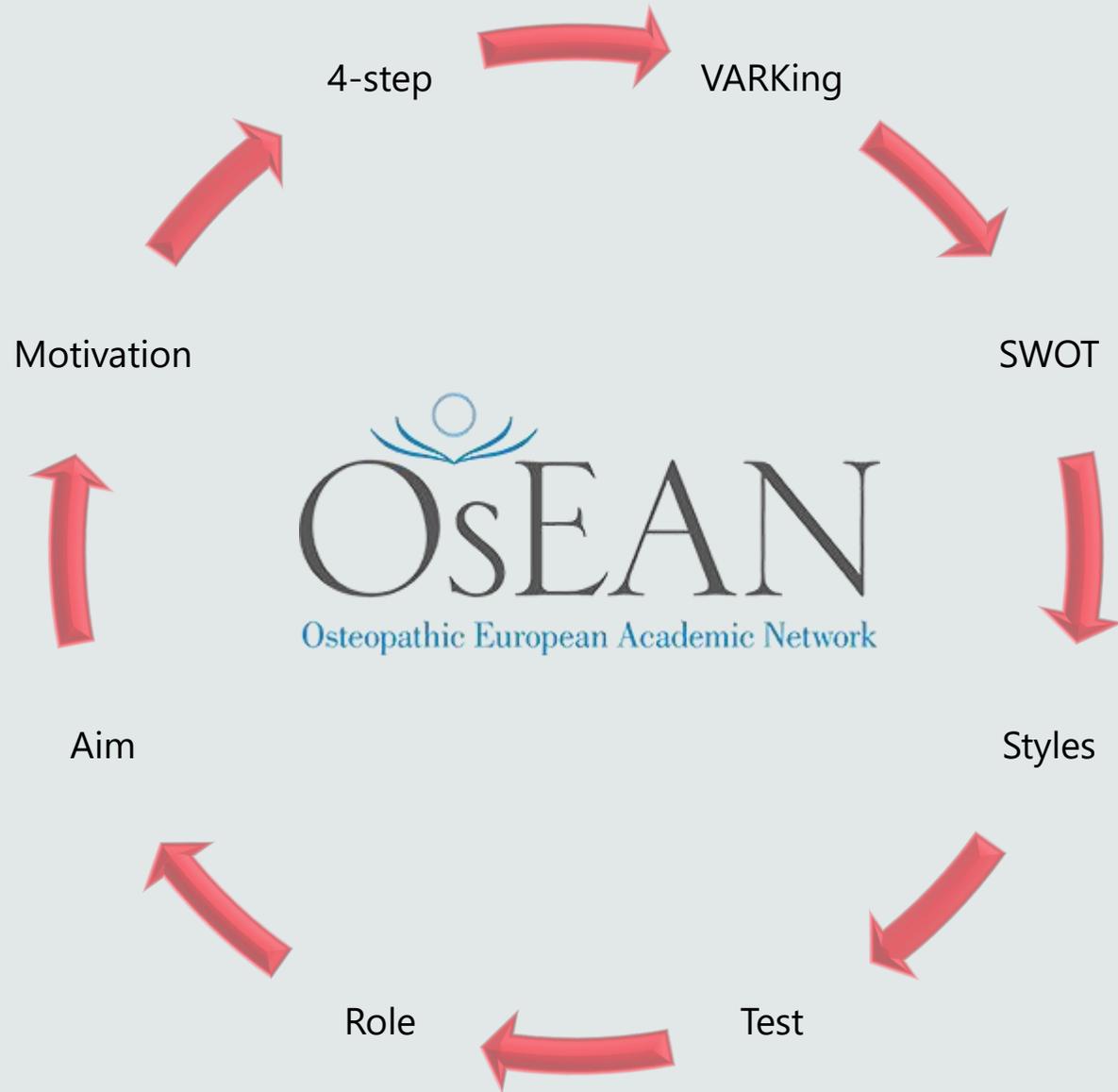
 **Reword**

# Kinesthetic SWOT Strategies

- Use **real life** examples, **applications** and case studies in your summary to help with abstract concepts.
- **Redo** lab experiments or projects.
- Utilize pictures and photographs that illustrate your idea.



# Overview



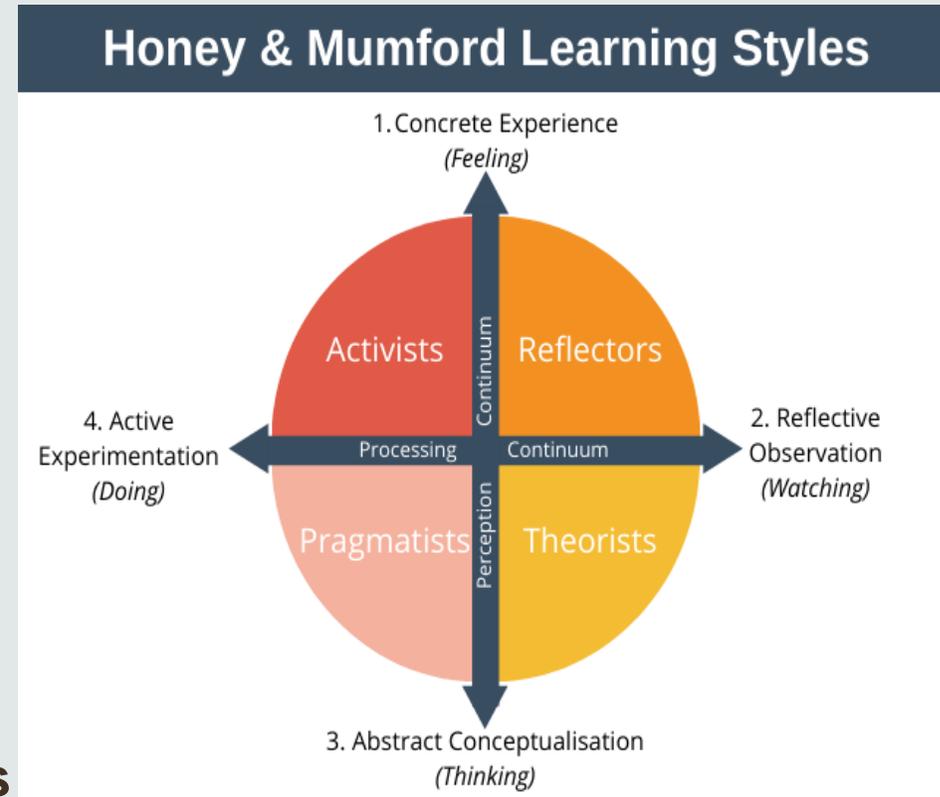
# Different learning styles (Honey-Mumford Model):

## + Activists:

- learn by **doing**
- like to work in **groups**
- bored by repetition,
- open-minded and enthusiastic

## + Reflectors:

- data collection and subsequent **analysis**
- slowly to make a decision, but then they don't change it



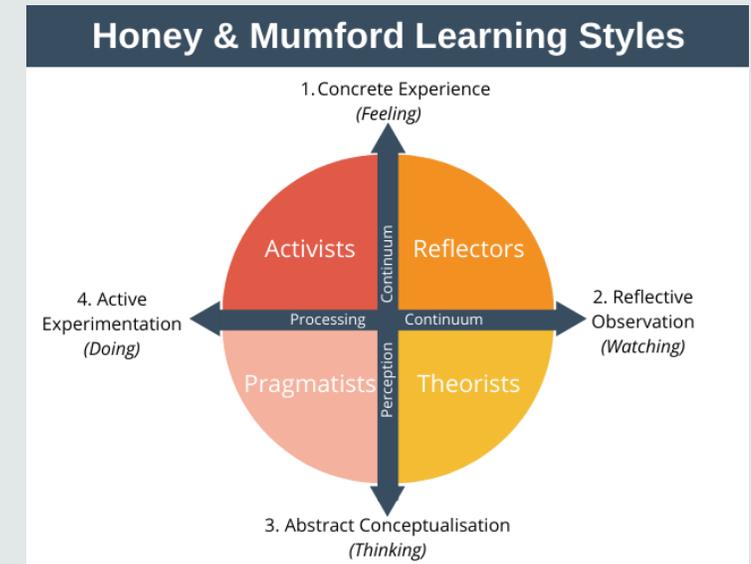
# Different learning styles (Honey-Mumford Model):

## + Theorists:

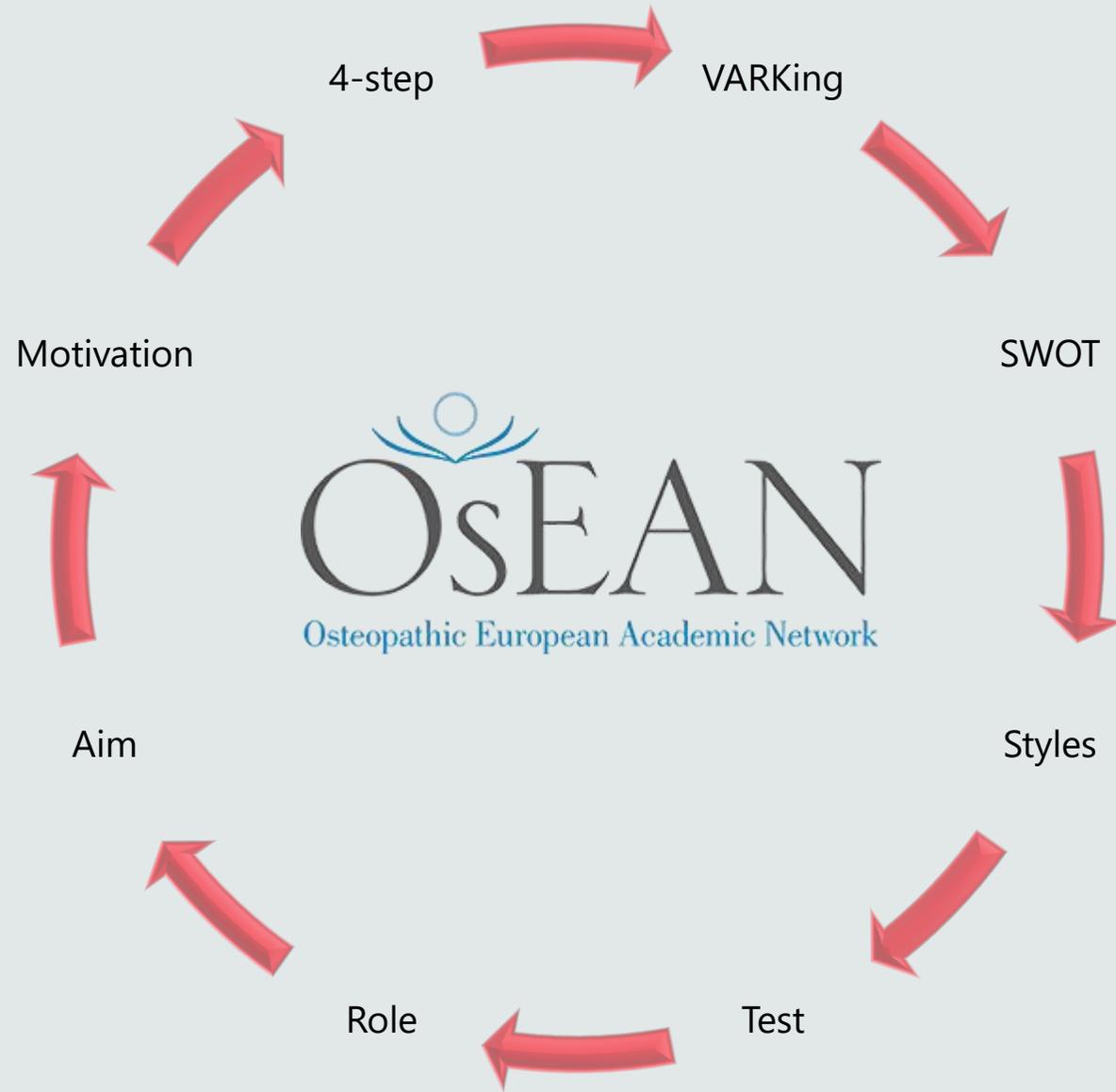
- integrate new info into frameworks
- well-organized minds
- uncomfortable with subjective or ambiguous
- use a logical **one-step-at-a-time approach**

## + Pragmatists:

- practical implications of new info, before making a judgement on their value,
- if **something works**, all is well, if not little point in spending time
- most at home in problem-solving situations



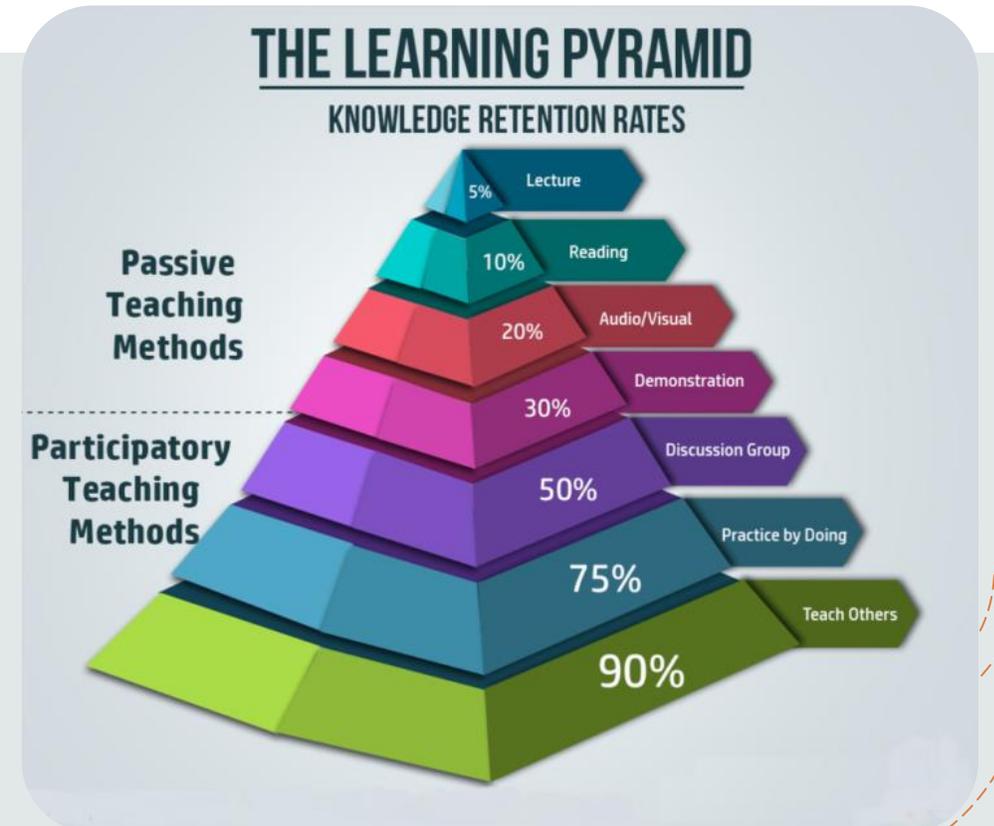
# Overview



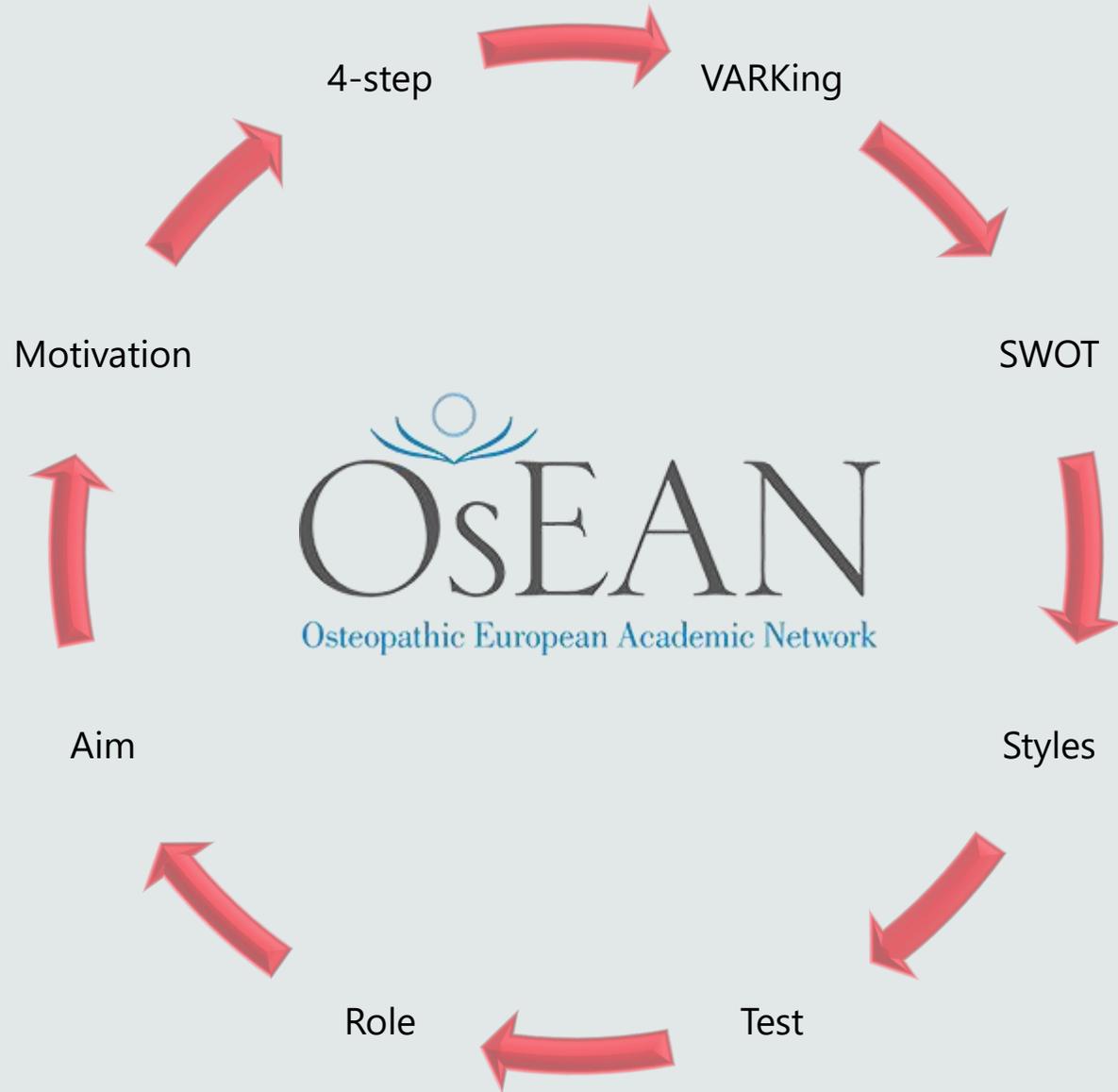
# Teaching to the test

(Brooks, J. G., & Brooks, M. G. (1993). In Search of Understanding: The Case for Constructivist Classrooms. Alexandria, VA: Association for Supervision and Curriculum Development. )

- + Lecture 5%
- + Reading 10%
- + Audio visual 20%
- + Demonstration 30%
- + Discussion group 50%
- + Practice by doing 75%
- + Teach others/immediate usage 90%: PAL



# Overview



In the dark ages: The 'sage on the stage'

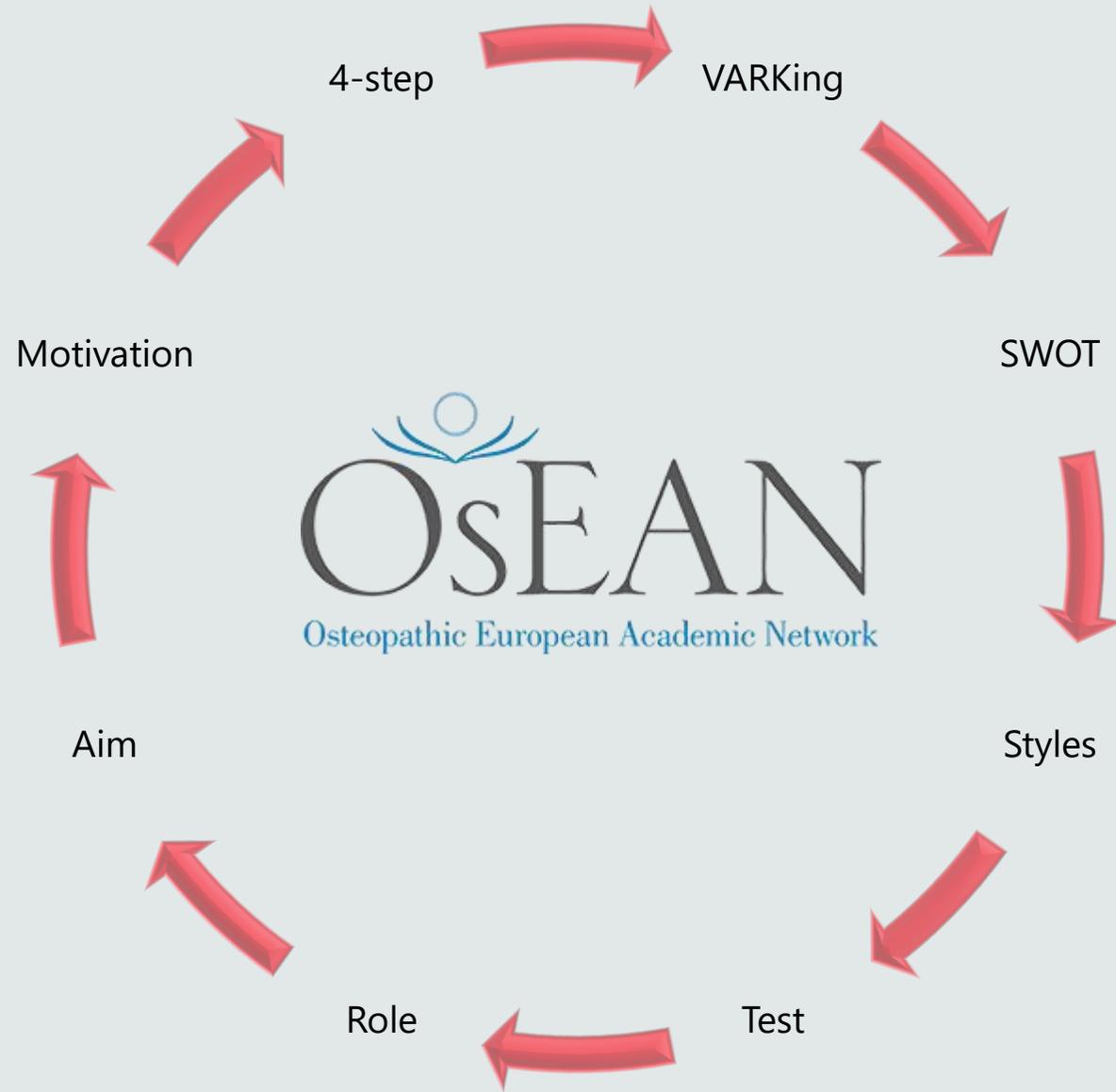
In PBL times: 'Guide on the side'

'Buddy with study'

'Ally on the fly' (learn together)

# Roles of the teacher, through the ages

# Overview

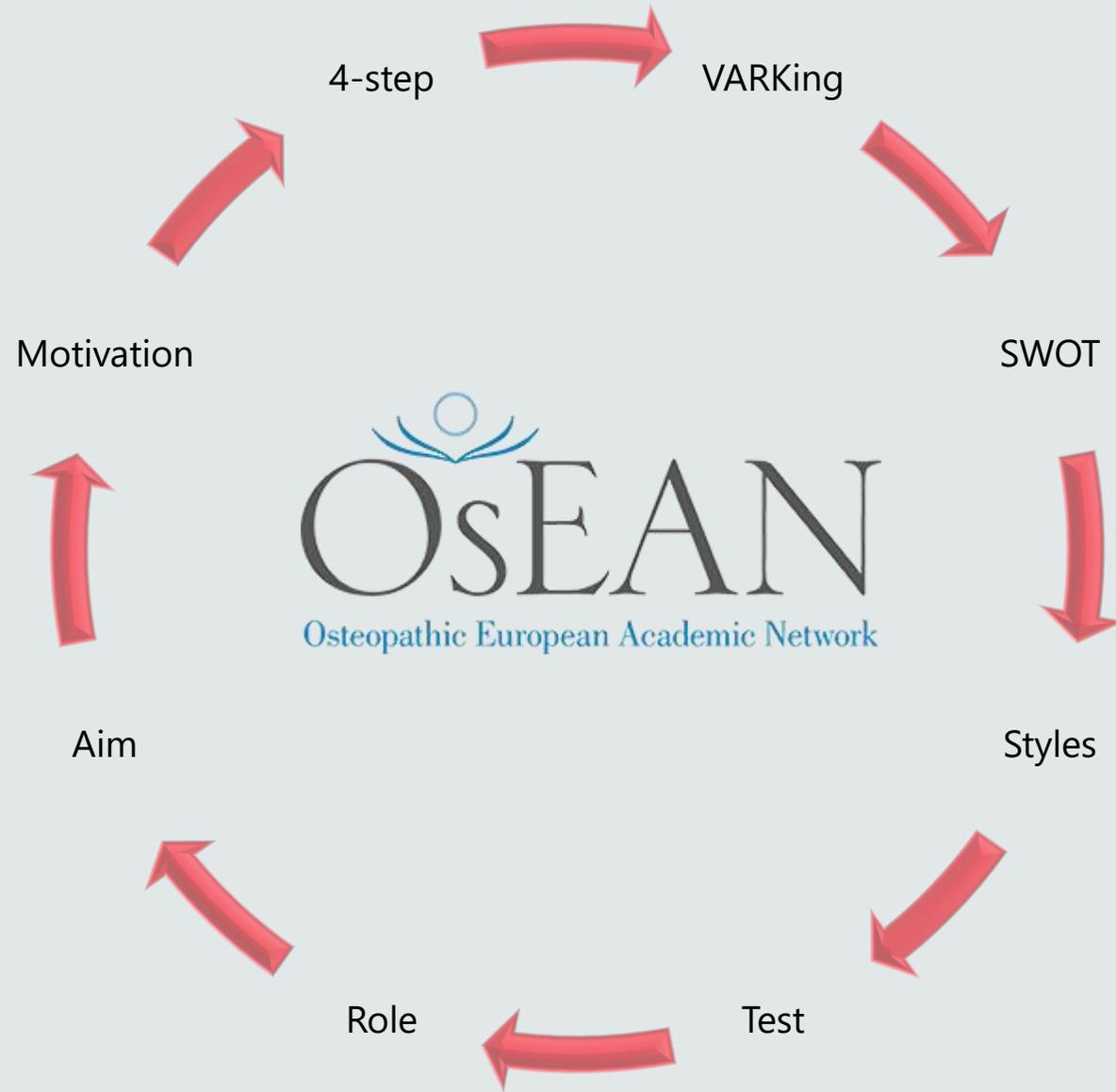


# Teacher aims

- + Give **information**
- + **Demonstrate**
- + **Trigger** participation and thinking
- + Stimulate observational **scanning** for improvement
- + Accomplish didactical **pull** techniques rather than merely push knowledge
- + Arouse **participation** and attention
- + Stimulate **PAL** (peer assisted learning).



# Overview

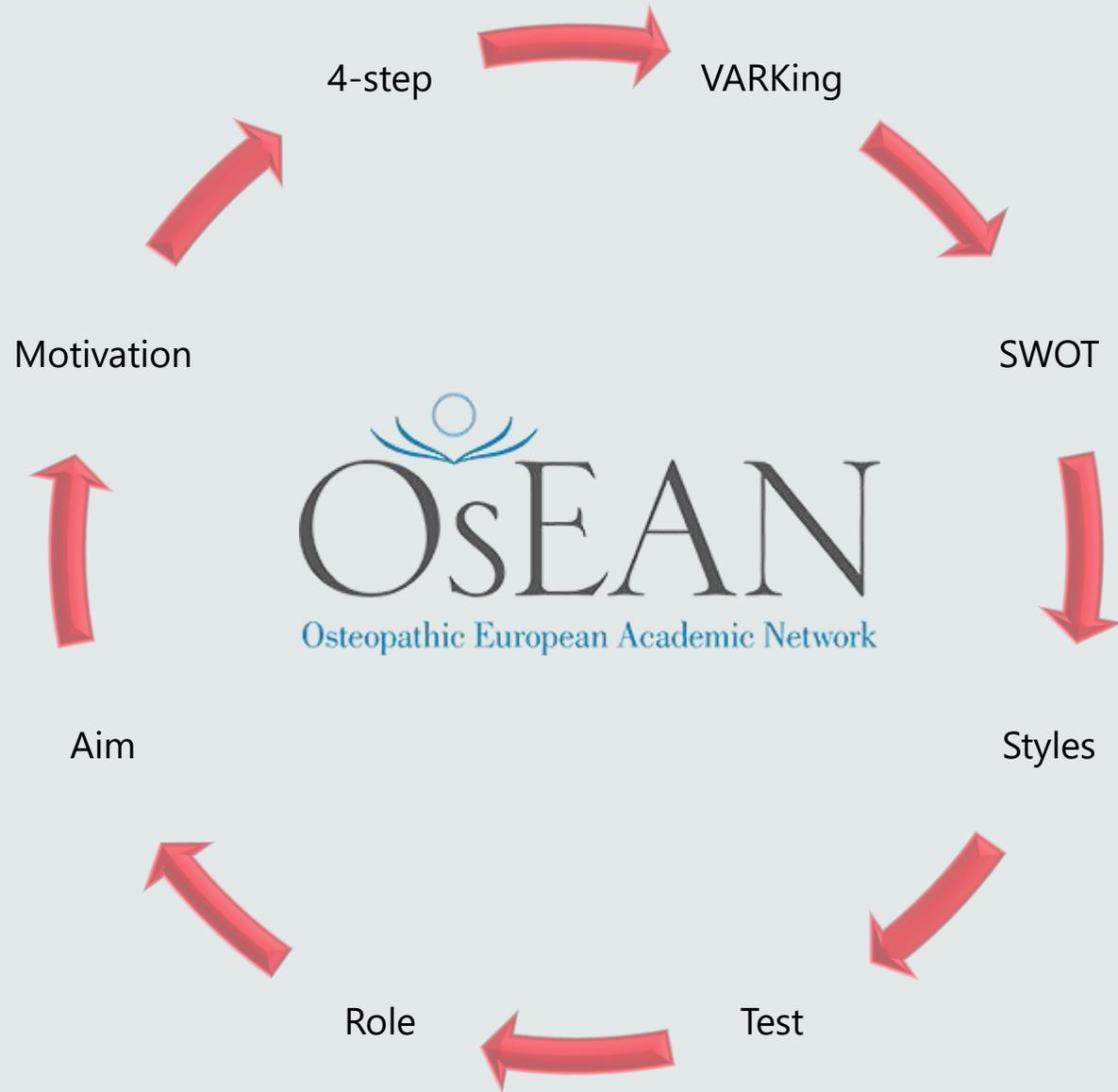


# Motivation

- + There is a need for **simple** teaching **methods** every teacher can adopt, which are accepted by the students and provide a sustainable outcome (Munster, 2016).



# Overview



## Peyton's 4-Steps-Approach (Peyton, 1998) (Fabry, 2008).

The approach by R. Peyton (Walker, 1998) to teaching practical clinical skills:

1. **Demonstration:** The teacher performs the skill in real time without comment. This step is taken to provide a benchmark.

3. **Comprehension:** The student describes every step of the skill whereupon the teacher performs on instruction. The description and execution do not occur simultaneously.

2. **Deconstruction:** The teacher performs every step slowly with an added explanation. The skill should be divided into smaller subsections.

4. **Execution:** The student simultaneously narrates and executes step by step.

## Peyton's approach combines multiple aspects of learning theory:



- + Steps 1 and 2 is based on a **social-cognitive** approach to learning theory: model-learning according to Banduras (Banduras, 1976).
- + Step 3 is crucial (Jawhari et al., 2012): „The perceptually **processed information** (Step 1 & Step 2) must be actively manipulated in the working memory in Step 3 to be transferred into the long-term memory“.
- + The description of the procedure without simultaneous administration, produces a mental correlate of the procedural motions, which leads to more **efficient motor learning and better reproduction** (Krautter et al., 2015).
- + Step 4, the actual **implementation** and training of the procedure up to its successful application, is associated with the behaviorist learning theory (Banduras, 1976)
- + From a constructivist pedagogy POV, Peyton's approach can be described as the endeavor to create a **constructive** “place of furthest reaching own world **invention**” (Reich, 1997).

# A simple five-step method for teaching

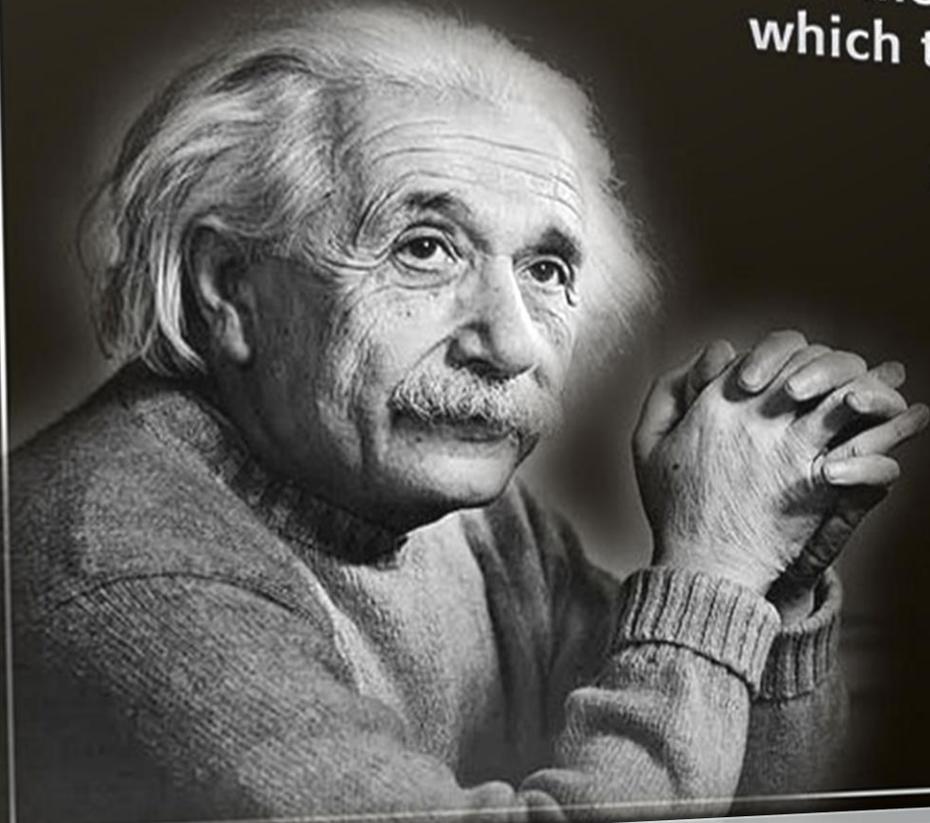
## clinical skills (George JH, Doto FX., A simple five-step method for teaching clinical skills. Fam Med. 2001 Sep;33(8):577-8)

- + Step 1: **Overview**: To be motivated to learn a skill, the learner must understand why the skill is needed and how it is used in the delivery of care.
- + Step 2 The preceptor should **demonstrate** the skill exactly as it should be done without talking through the procedure. This silent demonstration gives students a mental picture of what the skill looks like when it is being done correctly. This image is important since students will use this picture to self-evaluate their own performance when practicing the skill.
- + Step 3 The preceptor then repeats the procedure but takes time to describe in **detail** each step in the process. This will help students see how each step fits into the optimal sequence and will allow time for students to ask questions or seek clarification of a step or a procedure.
- + Step 4 Students **talk through** the skill. By asking students to describe step by step how to do the skill, the preceptor will ensure that the students understand and remember each step in the sequence of performing the skill. This will also help the students commit the process to memory so they can recall steps as they move to the next procedure.
- + Step 5 The students **perform** the skill. Now students are ready to do their first attempt at the skill with the preceptor carefully observing and providing feedback or coaching as needed. Following a successful attempt, students should continue to practice until they reach the desired level of proficiency.

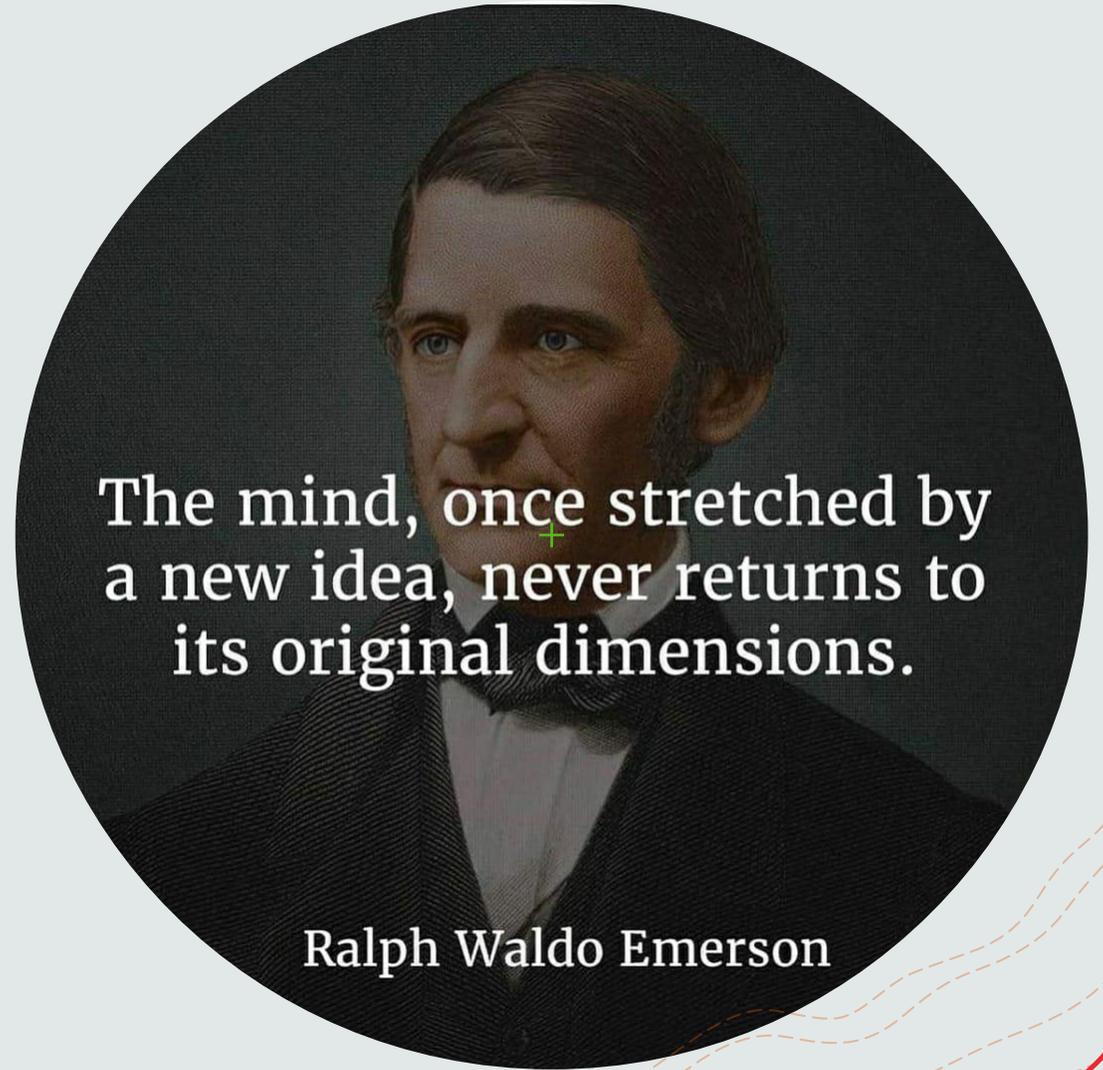
# Fascilitator

„I never teach my pupils, I only  
provide the conditions in  
which they can learn“

Albert Einstein  
1879-1955



**Thank you**



The mind, once stretched by  
a new idea, never returns to  
its original dimensions.

Ralph Waldo Emerson