

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

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Motivation

In teaching clinical skills and competences, the teacher is challenged to unite different aspects, eg. 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 and stimulate PAL (peer assisted learning).

An extra challenge lies in the fact that different students have a different level, learn in a different way (eg. visual, auditive, cognitive) and have another different motivational background (eg. pragmatist, theoreticus, practicalist, analyst).

Background

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). A widespread methodical approach is Peyton's 4-Steps-Approach (Peyton, 1998) (Fabry, 2008). The approach by R. Peyton (Walker, 1998) to teaching practical clinical skills consists of four steps:

1. **Demonstration:** The teacher performs the skill in real time without comment. This step is taken to provide a benchmark.
2. **Deconstruction:** The teacher performs every step slowly with an added explanation. The skill should be divided into smaller subsections.
3. **Comprehension:** The student describes every step of the skill whereupon the teacher performs on instruction. The description and execution do not occur simultaneously.
4. **Execution:** The student simultaneously narrates and executes step by step.

Peyton's approach combines multiple aspects of learning theory. The learning in Steps 1 and 2 is based on a social-cognitive approach to learning theory, that of model-learning according to Banduras (Banduras, 1976), whereas Step 4, the actual

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implementation and training of the procedure up to its successful application, is associated with the behaviourist learning theory.

According to Jawhari et al. (2012), the third step of Peyton's approach is crucial: „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“. According to Krautter et al. (2015), 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.

From a constructivist view of learning theory (as in the sense of constructivist pedagogy according to Reich (Reich, 1997) Peyton's approach can be described as the endeavor to create a constructive “place of furthest reaching own world invention” (ibid. 266).

Consequently, a combination of all four steps would be necessary in order to achieve success in learning in the sense of a well-established self-construction.

Summary

A solution is found in a 4-step approach to teach clinical skills & competences, but this approach is also applicable to teach soft-skills and clinical reasoning and to use in the clinic training. Apart from this, the approach can be applied in non-osteopathic settings, because one should learn for life and not merely for school. The 4 steps are elaborated in detail and practical applications are shown. Each step is situated in the learning process and the didactical & pedagogic underlying principles are revealed.

From there the presentation / workshop becomes even more interactive and the participants apply the new learned approach. The approach is direct applicable in the participants daily teachings and clinical work.

This topic can be a presentation, a workshop or both (short presentation and elaborated practical applications in the workshop).