

# Informatike Didaktike

## Leksion 1

ELISA RECI  
Universiteti Luigj Gurakuqi  
Fakulteti i Shkencave të Natyrës  
Departamenti i Matematikës dhe Informatikës  
SHKODER

# Planifikimi ditor

- Udhezime te pergjithshme
  - Te mesuarit angazhon krejt personin
  - Truri njerezor kerkon nje model per te arritur kuptimin
  - Emocionet ndikojne te gjitha aspektet e te mesuarit, ruajtjes dhe rikujtimit.
  - Eksperienat e kaluara gjithmon ndikojne ne mesimin e ri
  - Funksonimi i memorjes se trurit ka nje kapacitet te limituar.

# Planifikimi ditor

- Leksioni zakonisht resulton nje shkallen me te ules te te mbajturit mend.
- Perseritja eshte esenciale per te mbajturit mend.
- Praktika (ne sensin e perseritjes se nje aftesie) nuk te ben perfek.
- Sejcili tru eshte unik.

# Dizenjimi i nje plani ditor

**Direct Teaching.** The teacher lectures, does much of the work, and can present a great deal of information in a short period of time. Extent of student participation varies from none to considerable. Still the most common teaching method in secondary schools and higher education.

**Demonstration.** Teacher shows something, tells what is happening, and asks the students to discuss the demonstration.

**Concept Attainment.** Students figure out the attributes of a group or category (provided by the teacher) by comparing and contrasting examples that possess the attributes and examples that do not. Through discussion, students develop a definition or hypothesis about the concept (lesson objective).

**Socratic Method.** This lesson draws information from students through a series of carefully designed questions that eventually help students achieve the lesson objective.

**Cooperative Learning.** Students work together in heterogeneous groups to accomplish a specific task.

**Simulations and Games.** The lesson centers around a problem situation that represents reality. Role-playing is used to help students understand the motives and behaviors of people. Educational games involve students in decision-making roles.

**Individualized Instruction.** These methods include differentiated instruction, mastery learning, and independent study.

**Drill and Practice.** This lesson specifically targets the recall and improvement of certain skills to enhance accuracy and speed.

- Te mesuarit eshte me efektiv duke pasur parasysh gjithmon faktin sesi funksionon truri njerezor gjate procesit te te mesuarit.
- Kjo dukuri njihet si brain-based teaching and learning.
- Mesuesit duhet te kene parasysh 4 metoda per brain-based teaching and learning.

# LUS – Learning under Self-control [1]

- Eshte nje model qe perdoret per te permiresuar te mesuarit dhe memorizimin e informacionit.
- Merr parasysh faktet psikologjike dhe neurologjike te cilat mund te ndikojne te mesuarit dhe prodhojne nje stukture per temat mesimore bazuar ne 6 faza te memories.

# LUS – Learning under Self-control

- 1. Activation phase** (about 10 minutes): In the first minutes of the unit students should relax and achieve a “ready to learn”-condition.
- 2. Core-information phase** (about 5-10 minutes): The capacity of human memory is limited. Therefore the most important information should be short and precise.
- 3. Consolidation phase 1** (about 5 minutes): During this phase the students should be able to store the information from the previous phase. This time can be used for e.g. administrative tasks and other content, which has nothing to do with the core information.

# LUS – Learning under Self-control

- 4. Repetition phase 1** (about 5 minutes): The core information should be repeated for the first time. In this time students can work actively on given exercises to repeat and deepen the content.
- 5. Consolidation phase 2** (about 10 minutes): Students should have the time to consolidate the repetition of the core information. It is again important to discuss or work on content, which is independent from the core information. An example would be to correct last home exercises together.
- 6. Repetition phase 2** (about 10 minutes): To reach a high degree of storage, the core information should be repeated a second time. For that students can present their results from the first repetition phase and explain how they reached them.

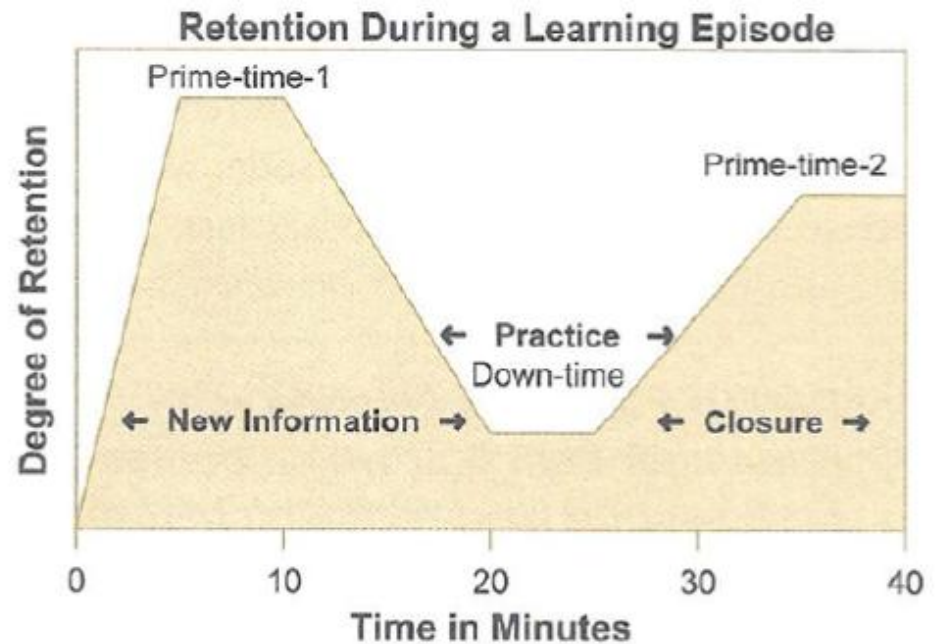


# Sousa Lesson Components [2]

- Sousa paraqet nje model tjeter per dizenjimin e nje ore mesimi bazuar mbi brain-based learning.
- Bazohet ne rezultatet e kerkimeve te tija ne procesin e memorizimit.

## Sousa Lesson

- Prime-time-1: people remember best what comes first.
- Down-time: the new content from Prime-time-1 can be practiced .
- Prime-time-2: the beginning of an episode should be filled with new information and the ending should be used for closure.
- Duke u bazuar ne kete model Sousa sugjeron 9 komponent per ndertimin e nje ore mesimore:



# 9 komponentet nga Sousa

- 1. Anticipatory Set:** The student's focus should be captured by any working technique.
- 2. Learning Objective:** The students are notified what they are expected to accomplish in this lesson. It should also be mentioned how difficult and complex the information would be.
- 3. Purpose:** The students should know why they learn the objectives and how they are related to the student's prior and future learning.
- 4. Input:** This is the information, which is needed to achieve the learning objectives. It can be transported in many different forms.
- 5. Modeling:** Models help students to give the new information sense and meaning. These models have to be clear, correct, accurate, unambiguous, and noncontroversial.

# 9 komponentet nga Sousa

- 6. Check for Understanding:** The teachers should try to verify that their students accomplish the learning objectives. This can happen by an oral discussion, questioning, written quiz, or other techniques.
- 7. Guided Practice:** The students work with the new information and try to solve different tasks. Present teachers can give immediate feedback and check what a student learned from the feedback.
- 8. Closure:** During this time students can attach sense and meaning to the new information. It can have many forms like writing plays, singing songs, reciting poetry, and playing quiz games.
- 9. Independent Practice:** The students try practice and apply new information on their own and thereby enhance retention and develop fluency.

# Jensen's 7 Stages of Brain-based Planning [3]

- Stage 1: Pre-exposure.** An overview of the new learning at the beginning helps the brain develop better conceptual maps.
- Stage 2: Preparation.** In this stage teachers shall create curiosity or excitement. It's similar to the "anticipatory set" of Sousa but goes further in preparing the learner.
- Stage 3: Initiation and Acquisition.** This is the stage of immersion and input. The teacher shall provide concrete learning experiences, activities that employ the majority and enough choice that learners have the opportunity to explore the subject using their preferred modality.
- Stage 4: Elaboration.** This is the processing stage that requires active involvement of the learners.
- Stage 5: Incubation and Memory Encoding.** When attention decreases (down-time) it is time to revise and practice the learned contents.
- Stage 6: Verification and Confidence Check.** In this stage learners need to confirm their learning for themselves. They should present what they have learned, e.g. in form of a project.
- Stage 7: Celebration and Integration.** This phase engages emotions. It shall be a joyful finalization of the learning process, perhaps a presentation of the learning results or products for other classes and parents.

# Caine's Brain-based Teaching [4]

1. Orchestrated immersion means the creation of a learning environment that fully immerses the students in the educational experience.
2. Relaxed alertness: the optimal state of learning consists of a combination of high challenge and high expectations with low threat as well as confidence, competence and intrinsic motivation.
3. Active processing means the continuous and personal engagement of students.

# Brain-based teaching methods

- Discovery Learning
- Learning by Doing
- Learning by teaching
- COOL

# Principie te brain-based learning [4]

1. Learning engages the physiology.
2. The brain/mind is social.
3. The search for meaning is innate.
4. The search for meaning occurs through patterning.
5. Emotions are critical to patterning.
6. The mind/brain processes parts and wholes simultaneously.
7. Learning involves both focused attention and peripheral perception.
8. Learning always involves conscious and unconscious processes.
9. We have at least two ways of organizing memory: A spatial memory system and a set of systems for rote learning.
10. Learning is developmental.
11. Complex learning is enhanced by challenge and inhibited by threat.
12. Each brain is uniquely organized.



# Students learn more effectively when

- they are involved in experiences,
- their needs for social interaction and relationship are engaged and honored,
- their interests, purposes and ideas are engaged and honored,
- they can use their innate capacity of patterning,
- their learning is accompanied by positive emotions,
- details are embedded in wholes, that they understand, such as a real life event,
- their attention is deepened and multiple layers of the context are used to support learning,
- they have time to reflect on,
- immersed in experiences that engage multiple ways to remember,
- individual differences in maturation, development, and prior learning are taken in consideration,
- the environment is supportive, empowering, and challenging,
- their individual talents, abilities, and capacities are engaged.



# Referencat

- [1]. Theurl, P. 2009 “Lernen unter Selbstkontrolle” – Entspannung und Kontemplation in Schule und Unterricht. In *Neurodidaktik: Grundlagen und Vorschläge für gehirngerechtes Lehren und Lernen, Second edition*, U. Herrmann, Ed. Beltz Verlag, Weinheim und Basel, Germany.
- [2]. Sousa, D. A. 2006. *How The Brain Learns. Third edition*. Corwin Press, Thousand Oaks, California.
- [3]. Jensen, E. 2008. *Brain-based Learning. The New Paradigm of Teaching*. Corwin-Press, California.
- [4]. Caine, R. and Caine, G. Caine Learning Center. Overview of the Systems Principles of Natural Learning. [Online] [www.cainelearning.com](http://www.cainelearning.com).