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Visual and Auditory Techniques as a Tool for Improving Information Competence of Medical Students at the Initial Stages of Training

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Background. Medical training at Universities is concerned with acquiring loads of professionally-oriented information. This assignment seems to be especially complicated at the initial stages, that determines the effectiveness of the further educational outcomes.

The purpose of the study. To assess the effectiveness of introducing the combination of visual (Mind Maps) and auditory (Podcasts) techniques into the educational process of medical training at its initial stages.

Methodology. An interventional study was conducted among 1st-year medical students, who were randomly assigned into two groups (each group=30). Mind-mapping and podcasting were used while training the students from the intervention group. While the control group had traditional textbook-oriented and lectures-oriented training. Summarizing tests on the topics taught were conducted in both groups and the results were compared. The feedback was obvious in the intervention group.

Results. The average result of the topic tests by the intervention group (181,34±4,16) was significantly higher than of the control group (164,68±3,28). The students stated that using mind maps in training stimulates better understanding of the information learnt as such a presentation makes them more structured and demonstrative. Besides this such visual techniques facilitate easier recall of the information learnt. But such a recall has more short-term effect and the knowledge is not so detailed and deep. That's why an effective addition to visual mind-mapping was the introduction of auditory podcasts. Podcasts were used to enhance deeper thinking of the object content and

transfer into practice, stimulated cognitive activity of students and helped long-term recall.

Conclusions. The results of a combined introduction of mind-mapping together with the auditory method of podcasts demonstrated an obvious effectiveness in the formation of information processing skills at the initial stages of training – analysis, synthesis, organization, understanding and recall. Such learning techniques help students to overcome difficulties concerned with processing loads of new complex information and stimulates its short-term and long-term recall. Skills of correct organizing of learning information for its processing in accordance with individual demands of students determine the effectiveness of further stages of learning activity which is characterized by increase and complication of information loads.