USING THE AI FOR TEACHERS IN MEDICINE

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The AI (Artificial Intelligence) has entered into all spheres of out life, including teaching. Teaching medicine in Medical Schools differs from other teaching types, due to its high responsibility. The methods, which the medical teachers use, are various as they join both teaching the theory by lecturing, interactive classes, online classes, ward teaching, simulation technology teaching, etcetera. All this requires for a continuous preparation for the classes, preparing the lectures, additional materials, course profile. Some part of this work could be done by the AI, in order to save the time for the teachers. Here we are going to stop at the main directions of the AI use for medical teachers within their preparation for the classes. In order to write this abstract, we synthesized both our and our colleagues experience.

Definitely, the AI could be used for developing the course content and plans of lectures and classes. The AI could generate the structured class plans, according to the requirements set by the teachers (e.g., "help to produce a plan of the 90-minute practice class in human anatomy, the theme "Respiratory system", the 2nd revision class"). After suggesting the structured class plan, the AI could suggest possible range of the methods which the teacher could use: case studies, discussion in groups, problem-based learning, or the flipped class.

In order to prepare the visualization for the class, the teacher could use the AI to create high-quality medical images or 3D visualization, without the need to address the sources or pay to the producers. The AI could be employed to make presentations, once the teacher defines the theme, duration of the presentation in

slides, and the main sub-themes. Also, the AI could be used to make up the clinical cases, scenarios, for teaching and checking the skills of diagnosis and clinical reasoning.

Then, the medical teacher can spare their time by making the AI design tests, multiple-choice question, case situations, as well as let the AI check these works by the students. This presents a good opportunity to save time for the manual work. The AI could personalize the teaching material, tailoring it for the needs of each specialty, or the level of knowledge of the students. E.g., if the student is weak in anatomy of the respiratory system, and he is studying the respiratory disease course in the Internal Medicine, the AI will first provide the revision course on the anatomy of the system, only then moving on to the clinical features.

Despite the AI is not a human being, it could be successfully used for the simulation of the doctor-patient interaction, with clearly defined tasks for the AI, like explaining the diagnosis of the patient, the social role of the patient, and how the AI should respond to the questions of the student. This provides a good training opportunity for the medical students, without interacting directly with the patients before it. The AI could switch only the communication regimen, or the mistakes correction regimen, upon the programmed information of the medical teacher. The AI can analyze the latest research, in order to keep the medical teacher up-to-date with the information on a certain theme, which will save time of the teacher, make up the bibliography and review the sources. Also, the possibilities of the AI in translating the medical articles from various languages contribute to apprehension of the material. The AI could also be used for making transcripts for videos and lectures.

Overall, the AI could be especially helpful in automating repetitive, time-consuming tasks as writing tests, preparing slides, making reminders, etc. The AI could be used for the teachers' feedback, monitoring the knowledge pattern in the group. All the above mentioned represents the advantages of the AI. Nonetheless, there are numerous disadvantages of it. First of all, the AI is often associated with mistakes. Unfortunately, it makes mistakes, both in generating the educational content, and checking the test results, and it needs constant supervision by the medical teachers. The second point is that the AI is not a human, and the medical students, who are used to dealing with the AI only, may forget the skills of the human interaction. Also, the AI could not be used completely as a substitute for the clinical bedside practice.

Overall, despite these disadvantages, the AI represents a potential tool which allows medical teachers to save money for preparation and holding some parts of the classes.