

Comparative Assessment of Clinical Skills Potential Assessment of Clinical Skills Using Interactive Methods

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Annotation: The observable new wave in optimizing the educational process is undoubtedly linked to the growing interest of educators in interactive learning forms, which act as a springboard for advancing students' knowledge potential (6, 7, 8). Interactive learning methods (ILMs) include those that require students to independently acquire, process, and apply information presented in a didactic form. Unlike traditional forms, this type of learning significantly enriches the knowledge base while simultaneously enhancing students' creative thinking potential (9).

Interactive forms of learning are commonly divided into simulation-based and non-simulation-based. Simulation-based methods, including clinical learning games (CLGs), immerse students in an environment that closely mirrors real medical practice. Moreover, they generate and sustain an emotional tension among participants, increasing their sense of responsibility for patients' outcomes—at least on an intellectual level. CLGs allow for systematic monitoring of the quality of students' professional training and act as a barrier, only permitting adequately prepared students to work directly with patients (1, 2, 4, 5).

This paper presents the results of using the interactive learning methods “brainstorming” and “academic debate” in the subject of propaedeutics of internal diseases. It was found that these interactive learning methods have different effects on the formation of knowledge levels. The interactive method “brainstorming” primarily contributed to improving levels I (familiarity) and II (copy). Meanwhile, the knowledge gained through the “academic debate” clinical game was much more advanced, corresponding to levels III (knowledge-skill) and even IV (knowledge-transformation). Notably, during the “academic debate” game, students' analytical thinking potential expanded much more rapidly, which is an important and distinctive advantage of this approach.

Given the above, the aim of this study was to provide a comparative assessment of the level of clinical knowledge acquired by students using the interactive learning methods “brainstorming” and “academic debate.”

To achieve the stated objectives, interactive clinical games—specifically, “academic debate” and “brainstorming”—were purposefully used over several years during practical classes in propaedeutics of internal diseases (PID). Ratings obtained from traditional knowledge assessments were used as controls. The groups of students involved were also individually evaluated based on their ratings. The level of knowledge was systematically assessed during ongoing, intermediate, and final tests. The interactive “brainstorming” game was applied in a modified form, with questions divided into three levels of difficulty: easy (L1), medium (L2), and difficult (L3). The ratio of these questions was 1:2:1. The points awarded and the time allotted for correct answers depended on the question’s complexity and increased accordingly.

The research revealed the following results. ILMs, unlike traditional methods, were generally more effective in promoting the assimilation of comprehensive clinical knowledge. Moreover, they distinctly differed in their impact on the formation of known knowledge levels. While traditional methods primarily influenced the development of basic levels I (familiarity) and II (copy), ILMs improved the more advanced levels III (knowledge-skill) and IV (knowledge-creativity).

Classes using the “brainstorming” game were marked by high participant activity, partly because this method requires the active participation of all group members. The game’s final rounds, especially when only the final pair of participants remained, always sparked excitement and enthusiasm. Determining the group’s top “expert” always resulted in a burst of emotions and competitive spirit among participants. However, the potential of this game to improve certain knowledge levels was found to be quite uneven. According to the obtained results, the “brainstorming” method mainly contributed to the development of levels I (familiarity) and II (copy), without significantly impacting the more advanced levels III (skill) and IV (creativity). This limitation restricts the application of the “brainstorming” game for developing higher-level skills. Therefore, its use should be carefully differentiated according to the specific lesson, as the level of knowledge gained may ultimately be low, especially in specialized parts of the PID curriculum.

The results obtained from using the “academic debate” game were somewhat different. This interactive learning method significantly enhanced students’ theoretical and practical knowledge, promoted a better understanding of the doctor-patient dialogue, and developed clinical thinking and the ability to timely apply theoretical knowledge in practice. It’s important to note that successful implementation of the “academic debate” requires a broad foundation in fundamental medical disciplines and a wide range of practical skills. This requirement is driven by the need to gather subjective and objective information in a way that closely mirrors real clinical situations.

Another positive aspect of the “academic debate” game was observed: there was a steady increase in the number of participants mastering physical examination techniques and, importantly, in the quality of their application. This aligns with the goals and objectives of propaedeutic therapy (3, 10). The only noted drawback was the inability to ensure active participation of all group members.

At the department, various clinical scenarios have been developed, clearly outlining the responsibilities of each participant in the educational game. In addition, the necessary equipment and tools for conducting CLGs have been created. Throughout the game, the instructor closely monitors and controls each participant’s actions, meticulously correcting any mistakes. As needed, the instructor adds additional information to complicate the clinical scenario. During the game, participants discuss the role of each symptom in diagnosing the disease and the plan for upcoming patient examinations. At the end of the lesson, the instructor gives an objective evaluation of each participant’s actions, comments on their responses, and adjusts the

examination plan they devised. Acting as an arbitrator, the instructor thoroughly addresses any errors made by the “players” and suggests ways to correct them.

Based on the conducted research, it can be concluded that the ILMs “brainstorming” and “academic debate” have differentiated impacts on the development of knowledge levels. The former primarily enhances levels I and II, while the latter enhances levels III and IV. Given this, the choice of an educational game should correspond to the specific lesson’s goals and objectives. We believe it is advisable to use the interactive “brainstorming” game for general classes and the “academic debate” game for specialized parts of the PID curriculum.

In summary, the use of clinical learning games in propaedeutics of internal diseases significantly develops clinical knowledge and simultaneously enhances students’ cognitive abilities, fosters creative independence, and broadens and strengthens their practical skills. Importantly, this process is engaging for students, ultimately improving their acquisition of new theoretical and practical knowledge and raising the quality of training for future general practitioners.

Conclusions:

- The interactive learning methods “brainstorming” and “academic debate” have differentiated impacts on the formation of specific knowledge levels.
- The choice of the educational game should be made depending on the practical class topic.
- The “brainstorming” interactive game is more effective in general classes, while “academic debate” is better suited for the specialized part of PID.

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