Playing games during a lecture hour: experience with an online blood grouping game

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Theory lectures are boring and sleep inducing for students, and it is difficult to get their full attention during 1 h of lecture (7). The ability of students to concentrate diminishes 20–25 min after the start of the lecture (5). There is also a lack of active participation of students during theory lectures (10). In an effort to break the monotony of the lecture, an online blood grouping game was used to engage the students during a lecture on blood groups.

Description of the Activity

The online blood grouping game (latest English version) available freely on the Nobel Prize website was used for this activity (3, 8). After a 30-min lecture on blood grouping, 100 first-year medical students were given the opportunity to play the game in the lecture hall computer. These students are equivalent to the United States undergraduate college students. The activity consisted of blood grouping followed by transfusion of the appropriate blood to a virtual patient. A few students volunteered to play the game. The remaining students watched the game projected in the lecture hall. The spectators also helped the volunteers in doing the blood grouping and transfusion correctly. Feedback on the activity was taken at the end of the session using a questionnaire (Fig. 1).

Student Feedback

Ninety-five students completed and returned the feedback questionnaire; 97% of the students felt that the game helped in understanding the basics of blood grouping, and 95% felt that it improved their understanding of blood grouping. For 89%, the game helped in reviewing their knowledge on blood grouping; 98% recommended this activity for future batches, and 99% wanted such activities for other topics. For 91%, this activity was a relief during the lecture, and 99% felt it was fun. A compilation of student feedback is shown in Fig. 2. Students were also given the opportunity to write their own comments about the activity. Forty students (42%) gave their own comments in the questionnaire. Some of the comments were “Feeling good,” “Fantastic!!!,” “Entertaining!,” “Excellent!!!,” “Amazing and innovative idea,” “Loved it!!,” “SUPERBB!!!,” “It was an excellent way to keep interest going,” and “It was gr8 fun to play. Learnt a lot.” There were no negative comments.

Discussion

The feedback and comments of the students were encouraging. This game can be easily used to supplement theory lectures on blood grouping to help students in understanding the basics of blood grouping. Puzzles and card games have been developed and used effectively by educators to supplement lecture materials (1, 9). The blood grouping game could also be used as a virtual experiment before a blood group practical. The game helped students in enhancing their understanding of blood grouping and gave an opportunity for students to review their existing knowledge. Games have been used by educators to help students to review information provided previously during lectures (2, 6, 11, 12). Students were able to put their knowledge into practical use in a simulated clinical setting while playing the blood grouping game. Games have been shown to provide a fun-filled environment for students to apply the information that they have acquired from lectures (4). The results of the student feedback show that they want such activities for future batches and for other topics. The activity was fun and a relief from the routine lecture for most of the students. Activities like games are useful in breaking the monotony of didactic lectures and also to get active participation of students during the lecture. Such activities are interesting for students and can be used to get their attention during lecture.

Limitations

The game was played on a single computer available in the lecture hall. Hence, only a few student volunteers were able to play the game. However, the remaining students watched the game and helped the volunteers to correct their mistakes while playing the game. Feedback about the activity was obtained using a simple questionnaire. This offered only limited choices for the students to rate the activity. A five-level Likert scale could be used in the future for assessing the effectiveness of the
activity. Student assessment for evaluating improvement in understanding of the subject or improvement in examination performance was not done. Such assessments could be done for future classes comparing one group exposed to lecture alone and the other group exposed to lecture and the blood grouping game.

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DISCLOSURES

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AUTHOR CONTRIBUTIONS

Author contributions: A.B. conception and design of research; A.B. performed experiments; A.B. analyzed data; A.B. interpreted results of experiments; A.B. prepared figures; A.B. drafted manuscript; A.B. edited and revised manuscript; A.B. approved final version of manuscript.

REFERENCES


Fig. 2. Compilation of student feedback.