LETTERS

Developing Effective Study Groups in the Quest for the “Holy Grail”: Critical Thinking

To the Editor. Study groups that include problem solving are valuable educational experiences for health sciences students. They complement the traditional lecture-based teaching model. In an effective group, students develop critical-thinking, listening, and persuasion skills that would be difficult to accomplish on their own. Small-group discussions enable students to apply basic core knowledge to clinical practice scenarios. There are efforts in pharmacy education to focus on active learning in the curricula to promote higher-order learning.¹

Selecting the appropriate quantity of members is essential in the creation of a study group. A group of 4 to 6 students is probably optimal. All members should be dedicated to learning and have a sense of responsibility to the other members. The group should not have a student who dominates or blocks discussions. It may be better not to have close friends in the group. Ground rules must be agreed upon by all group members. These rules could include such things as not talking at the same time as another member or being prepared for each session. Failure to comply with the rules could mean expulsion from the group.

Development of explicit learning outcomes to be met during the upcoming meeting and choosing a suitable set of group tasks that will promote the accomplishment of the objectives are essential steps for study session preparation. For example, if the domain is hypertension, each member would be assigned a specific problem to present (ie, hypertension in the elderly, or hypertension in patients with chronic kidney disease). Each member would develop a case scenario to be discussed during the session. Members should have studied and learned the material to the best of their ability on their own. Learners must understand the basic core knowledge of the situations where problems occur before they can solve problems effectively. Members should not come to the meeting expecting to “just listen.” Knowledge acquisition must be attained prior to moving into the problem-solving phase.

The member who prepared the clinical scenario will be the discussion leader. The leader should not give a lecture on the subject or provide answers too quickly. Thus, the leader facilitates group learning, keeps the group on track, and stays within the time limits allotted for the topic. At first, students may not feel comfortable or even qualified to lead a group of their peers in a discussion. However, the topic leader should be able to guide the group through the

basic or common obstacles. When a roadblock is reached, the group should bring it back to the classroom, which will allow the professor to demonstrate a more advanced problem-solving process.

Study sessions can be beneficial in developing lateral thinking. Once the group reaches a conclusion, the leader could introduce new information requiring the group to reassess the situation and develop new strategies. Members should role play as patients and other members must provide counseling. As Albert Einstein remarked, “If you can’t explain it simply, then you don’t understand it well enough.”

Before promoting study groups for students, the faculty members should consider the type of material to be mastered. If it is basic core knowledge, individual studying may be the most appropriate method of learning. If the faculty member is expecting the students to develop critical-thinking skills, creating an effective study group to practice these new and sometimes frustrating elements of reasoning is essential. For these types of study groups to be successful, faculty members must demonstrate how to collect the appropriate data, interpret the salient elements, and correctly apply logic and reason in the development of an appropriate solution. Faculty members should explain and demonstrate the common mistakes new practitioners make when designing treatment plans.

To summarize, a properly formulated study group can be a highly effective tool for developing problem-solving skills. There are surprisingly little published data on the effects of structured study groups on critical-thinking skills. However, there is growing evidence regarding the effectiveness of team-based learning in pharmacy education.² The study groups described above closely resemble team-based learning but without any faculty presence. Ultimately, the primary role of educators should be to engage students to develop problem-solving skills. Importantly, to be highly successful in the twenty-first century our graduates must be adept at solving different kinds of unfamiliar problems!

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