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Changing Motivation of Medical Students

Opportunities for active learning, imagination, and creativity may be suppressed in the traditional medical school curriculum. It is important for faculty in medical schools to learn more about student motivation. Faculty members are too often focused on grades and test performance than on comprehension and mastery of the material students need to know. Professional education that promotes a preference for mastery learning will produce a physician better prepared to adapt to continual change in medical practice.

The authors noted that while medical students begin their professional program highly motivated, by the end of their first year they develop an attitude of “just give me what I need to know or do to pass.” In the traditional curriculum the student is motivated to learn only what material is necessary to pass rather than developing the skills necessary for self-directed lifelong learning. It is suggested that students are more consistently motivated to learn when the physical and social environment is congruent with their affective learning style. Medical education, the authors indicate, should help students develop the attitude that learning is a lifelong process and to do that they need to be motivated to become competent and use such skills routinely.

(Perot LJ, Deloney LA, and Hastings J. “Medical student motivation: does it change over time?” Annals of Behavioral Science and Medical Education. 8:97-100; 2002.)

Medical Students as Standardized Patients

With the use of standardized patients (SPs) becoming a common part of the medical education scene, there are costs and sometimes significant logistical difficulties associated with this component of the program. The Family Practice Department at the College of Human Medicine at Michigan State University utilized medical students in their preclinical and clinical years. A performance-based assessment (PBA) experience was established in the second year evaluating students’ abilities to integrate basic skills and knowledge.

These experiences were perceived by students as being effective and as a reinforcement of the goals of the curriculum. Students viewed the group learning experience provided by the patient training session as being valuable and that it was an important part of their positive attitude toward the time they spent as an SP. It was concluded that it was cost effective using students as SPs for PBA.

Virtual Medical School

“If we don’t take advantage of e-learning, we might lose our relevance,” said Ronald Harden, M.D., of Scotland’s University of Dundee Center for Medical Education regarding the creation of an extensive online medical curriculum. More than 20 U.S. medical schools are involved in online medical education. The National Board of Medical Examiners is a supporter of the International Virtual Medical School Project, as are schools from outside the United States who are contributing to the $4 million budget for the coming year.

Michael S. Gordon, M.D., Ph.D., the director of the University of Miami’s Center for Research and Medical Education, feels that it is critical for his school to participate in the electronic curriculum. “It’s inevitable that more education will be delivered over the Internet,” he said. “If you don’t join them, you’re putting your head in the sand.” However, while Stephen Smith, M.D., associate dean for medical education at Brown University Medical School, indicates that he is creating the structure for virtual medical education, he also cautions that the danger of distance education is that the student becomes unmotivated. “But,” he stressed, “creating an emotional aspect to e-learning makes that learning more powerful.”

Those involved with the virtual medical school seem to agree that it would be best to use e-learning together with the best of clinical training.

(Croasdale M. “Virtual medical school may become a reality. American Medical News; December 2, 2002.)

Cost-Effectiveness of Problem-based Learning

An 18-month study of the basic science faculty in the hybrid PBL curriculum at the University of New Mexico School of Medicine was done to measure its cost-effectiveness. The study was conducted to help evaluate whether excessive time commitments and excessive costs are associated with PBL.

The analysis did demonstrate that while there was an increase in faculty time, it did not support the claim that PBL is excessively costly in terms of faculty time. The investigators, both of who were basic scientists (Department of Biochemistry and Molecular Biology), also concluded that the PBL curriculum did not place unreasonable demands on the basic science faculty.


Medical Education and Handheld Computers

A fifth of the medical schools in the U.S. require fourth-year medical students to use handheld computers. Medical schools are using these electronic devices for such things as monitoring student performance, enhancing student-educator communication, improving course management, and ensuring that students have the latest information in classrooms, hospitals, and clinics.

According to Ray Dannenhoffer, assistant dean for support services and director of medical computing at the University of Buffalo School of Medicine and BioMedical Sciences, handheld computers “can provide more informed patient care at the patient’s bedside.”

Last year the University of Buffalo became the first medical school to provide every one of its 594 students with a handheld computer (Palm m500s). Handheld computers are being used to:

■ Write prescriptions
■ Monitor critical information
■ Indicate drug interactions
■ Calculate health indices.

Graduate Medical Education

Needs Assessment

The Department of Pediatric Medicine at the Hospital for Sick Children of the University of Toronto assessed the different methods of performing a needs assessment of residents. They defined such an assessment as a systemic process to collect and analyze information on what a target group needs to learn. Learning needs assessments identify deficiencies in knowledge, skills, behavior, or attitude in current teaching practices or anticipating deficiencies based on expected changes in health care needs. Needs assessment is a fundamental step to assuring the relevance of educational activity to the target audience. The authors identify several categories of need including:

Normative: Measured gap between a set of established standards (set by expert opinion or research) and the individual or group’s current knowledge.

Prescribed: Areas educators or program planners determine as inadequate and that need educational intervention (takes normative needs into account and focuses on deficiencies).

Comparative: Learning needs identified by comparing two similar groups or individuals against normative standards.

Expressed: What learners say they need to know.

Unperceived: Discrepancies not perceived by learners as needs (what learners don’t know they need to know).

Methods to perform needs assessments include surveys/questionnaires, interviews, chart audits, chart-stimulated recall (residents explain rationale behind a particular patient management decision), standardized patients, and environmental scans (checking existing sources of information in the institutional setting or outside the institution). Educators usually use more than one needs-assessment method to plan educational activities.


Complementary and Alternative Medicine in Medical Schools

A total of 123 courses in complementary and alternative medicine (CAM) are offered in U.S. medical schools. This was determined by a study in which 117 medical schools responded to a survey sent to 124 schools. Of these, 37 percent (28 schools) offered two or more courses in CAM and another 45 (63 percent) offered at least one course. There were 75 (64 percent) of the responding schools that offered one or more courses, including topics in CAM in required courses. Elective course time ranged from 6 to 160 contact hours, with 9 schools providing more than 100 hours. Five schools, including the University of Florida College of Medicine, offered clerkship rotations. Required course time in CAM ranged from 2 to 10 hours, with an average of 4.5 hours.

CAM courses were offered by separate institutes or centers affiliated with the medical schools. These included the Institute for the Study of Health and Illness, which sponsors a course offered by the University of California, San Francisco, School of Medicine, the Center for Spirituality and Healing at the University of Minnesota, Minneapolis, and the Center for Mind-Body Medicine, affiliated with Georgetown University. A report of the Association of American Medical Colleges, Medical School Objectives Project, stated that physicians should be “sufficiently knowledgeable about traditional and nontraditional modes of care to provide intelligent guidance to their patients.”

Applications to D.O. Schools Increase

After several years of decline, the spring and fall MCAT administration rose by 5.6 percent over the previous year. As in the case of the allopathic medical schools, this translates into an increase in the applicant pool for osteopathic medical schools. Allen Singer, Ph.D., of the American Association of Colleges of Osteopathic Medicine (AACOM), indicated that the organization projects that applications to the 2003 entering class will increase by from 8 to 18 percent. In 2002, the nation had the smallest medical school applicant pool in six years with 33,501; in 1996, 47,000 people applied to medical school. AACOM interprets the rise in this year's MCAT-takers to the weak labor market, since enrollments to graduate and professional schools tend to increase when jobs for college graduates become more difficult to obtain.

However, AACOM indicated that their projections for increased enrollments could be somewhat distorted since the new Edward Via Virginia School of Osteopathic Medicine admits its first class this year. Jordan Cohen, M.D., president of the Association of American Medical Colleges, indicated that the projection for this year provides hope that the medical school applicant decline has ended.


The Medical Education Digest also is available for viewing on the Internet at http://medicine.nova.edu/ostmed/admin/facdev.

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