

Problem Based Learning: A Medically Based Ally of Invitational Education

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A lady walked into her husband's hospital room and saw him lying amidst an incredible array of tubes attached to an equally complicated conglomeration of bottles. Doctors and nurses were whirling around the room doing tasks smoothly but hurriedly as if there was no time to lose. She stood silently as her stomach lurched with indescribable fear that she had to restrain in order not to upset her spouse. She was an emotional cauldron.

This true story can be repeated by millions of people worldwide. There are moments of life and death in all medical settings and people's emotions are taxed their limits. It is imperative that physicians help their clients cope effectively with their seething feelings.

The New York Times quotes C. Everett Koop, the former US surgeon general, as saying:

... in their preoccupation with learning and using new techniques, some doctors have lost sight of the human side of the doctor patient relationship. (New York Times, September 2, 1992, A 6)

The Wall street Journal is even harsher. It said:

The board (medical examining board) is responding to a persistent complaint: The bedside manner of physicians is abominable....When the University of California, Los Angeles asked why its medical students chose the healing arts, the no. 1 reason

was to earn a comfortable living. Working with people was third (Wall Street Journal 3/17/92, B3).

So, there is reason to assert that medical education should be more inviting and should prepare its students for those inevitable moments when they must respond effectively to the emotional states of patients and patients' families.

Medical Students' Interpersonal Skills

Given the importance of emotions in medical situations, one of the emergent questions is whether or not physicians have sufficient interpersonal skills. There is some evidence that speaks to this matter.

An anecdote from the Wall Street Journal speaks loudly to this question:

Francis Vogler (a physician) lay in agony on a table several years ago. Her neurosurgeon, radiating all the warmth of his stainless instruments, was cruelly blunt as he prescribed immediate surgery. "You have a 50% chance of dying or becoming quadriplegic," he announced. As the patient began to cry, the surgeon briskly walked out of the room. "I was totally shocked," she says.

Objective evidence is equally indicting. It reveals that during office visits, general practitioners spend on an average less than seven minutes talking with patients (Nazard, 1992).

Medical education faced itself in the early 1980s when the Association of American Medical Colleges published a classic report titled, *Physicians for the Twenty First Century* (1984). It stated boldly, "The present system of general professional education for medicine will become increasingly inadequate unless it is revised" (p. xiii). The critical question was: What specific changes needed to be made? One of the recommendations was, "The focus of learning should be on patients and patients' families" (p. 15).

One mayor issue was: How adept are medical students at responding to patients' feelings? Aspy (1976) completed two studies of medical

students' interpersonal skills in two separate medical schools. In each investigation 50 second year medical students completed medical history interviews with normal patients. Those interviews were evaluated according to Carkhuffs Scale for Interpersonal Understanding whose scores range from a high of 5.0 to a low of 1.0. The mean score for both groups of medical students was 2.0 with a range of 1.5 and standard deviation of 0.3. Subsequent investigations in other medical schools have yielded almost identical results.

The findings for medical students are consistent with wide ranging investigations in other areas. Carkhuff (1983) completed an extended series of studies of various helper groups and found that mean scores for their interpersonal functioning clustered around 2.0. Aspy, Aspy, and Roebuck (1984) have conducted studies of thousands of teachers in 42 states and 7 foreign countries and have also reported means of 2.0. There is much evidence to support the thesis that most of the American population is operating at a 2.0 level interpersonally. Diagnostically, this is detractive in the sense that responses of that type decrease a person's level of self exploration (disclosure).

The foregoing data indicate that medical students probably are functioning interpersonally at a level comparable to the remainder of the population. This is to say that without training their responses diminish the intensity of their clients' expressed feelings. Thus, they tend to decrease the levels of client communication.

The importance of interpersonal functioning among medical practitioners was illustrated by Aspy's (1992) research, which indicated that the quantity of the information disclosed by patients is directly and significantly related to the physician's level of interpersonal functioning. This study is supported by earlier investigations by Roebuck (1984) at Johns Hopkins University.

Can Students' Skills Be Improved?

If the untrained responses of medical students tend to diminish client communication, then a significant issue is whether or not they can be helped to make better ones. Is it possible to teach physicians to respond to their clients in ways that elevate patient communications?

Several medical education programs are implementing specific procedures designed to enhance physicians' relationship skills. Among those efforts a significant strand is Problem Based Learning (PBL).

This approach originated during the 1960s in Ontario, Canada, at McMaster University Medical School where the instructional staff took their first steps toward emphasizing the human side of medical education by reducing the formal or ritualized aspects of their program.

Other medical programs were searching for more human ways to educate a physician and many procedures were tried. One of those institutions was the University of New Mexico Medical School where a few professors sought, processes that would emphasize the human quality of the doctor patient relationship. Thus, it was serendipitous that in 1975, Dr. Howard Barrows of the McMaster Medical School met Drs. Scott Obenshain and Arthur Kaufman at the southwest school.

Dr. Barrows' enthusiasm for McMaster's new program captivated the New Mexico professors who initiated a similar effort at their institution. The foundation of their program was the intent to replace the students' passive role with methods that made learners active participants in their own learning. The impetus for this effort grew from the repeated experience of seeing eager enrollees mutate into passive recipients of information doled out by others

A carefully designed effort at New Mexico was implemented slowly with the intent of inviting everyone to participate. The new program was structurally simple. Five students were to be placed in problem-solving groups where they were given medical problems that developed from real or simulated patients. They were supposed to devise treatment programs to meet the problems.

Instructors met periodically with small groups of students to help them discuss their problems and their proposed treatments. In the periods between group discussions, students had access to laboratories, professors, etc., for information.

This instructional mode was entirely new for most professors in that it redefined their role almost diametrically. They went from lecturers to listeners and responders. This change was a shock to many teachers and created a great deal of stir among them. The main concern was how to control the cultural shock of the new and threatening instructional procedure.

In good scientific form, the innovative program, now called problem-based learning (PBL), was implemented as an experiment. It was tried by a small group of volunteer students and professors.

The major question was: Would the students in the PBL program cover and learn the required material? Or, would they miss some of the vital content?

The critical test for all American medical education programs is the students' performances on the National Medical Boards, which usually are taken the second year of medical school. Their test results revealed that the PBL students earned scores equal to those of their traditionally educated cohorts.

The results from the National Board tests indicated that when medical students are exposed to an instructional program that trusts and uses the students' intrinsic desire to learn, they do as well as those who are provided highly structured educational experiences. In addition, the PBL students developed better self-directed learning skills and liked both themselves and school significantly better than did the traditional students (Kaufman, 1985).

The PBL approach to medical education continued to spread across the nation and was given a significant boost in 1985 when Harvard Medical School adopted its New Pathways program, which is based heavily on PBL methods (Tosteson, 1991). The new program is now entrenched at Harvard and other institutions such as the University of Chicago,

Emory University, Stanford University, Dartmouth Medical School, and Southern Illinois Medical School.

The intervening events underscore the correctness of an observation by Dr. C. Everett Koop who said:

The time is ripe for change because all parties—students, faculty, and public—agree that system isn't working. Nobody doubts patients are dissatisfied. Medical faculties realize they are teaching a group of people who are not satisfied with their education. The average medical student feels dissatisfied, let down by her/his education. (New York Times, Editorial, September, 2, 1992, p. A6)

While Koop's comments are general, it is clear that PBL is one of the specific cutting edge changes in medical education.

Implications of the Spread of PBL for Medical Education

To non-medical observers the advent of PBL in medical education may seem relatively insignificant. But, to medical educators this change has important ramifications for their field as well as education generally. Dean Wilson of the University of Kentucky Medical School put the issue in perspective when he commented that, "Changing the curriculum is like moving a graveyard. Faculty members have lectures prepared and some don't want to do the extra work of changing the way they teach." (Gil, 1992, p. B1). However, PBL is a means for bringing about the curricular alterations that seemed so impossible a decade ago in a medical profession entrenched in tradition.

Since medical education is related to a prestigious profession, its clout throughout the educational world is rather significant. It speaks with some unusual authority. Thus, it can influence events beyond its boundaries.

The impact of PBL in medical education may have a ripple effect. If medical schools seek students who can operate effectively in self-directed learning environments, then they will select students who have those skills. This means that elementary, secondary and undergraduate institutions will be influenced to prepare students for self-initiated learning

contexts. This is a diametric change from the status quo because for many years the pressure from medical schools has been directed toward passivity in learning.

One extended outcome of PBL in medical education is a general movement toward programs that encourage learner initiated behaviors. This is highly significant shift throughout education in general.

Implications for Invitational Education

Invitational education is a highly significant movement for the twentieth and twenty-first centuries. It has distinguished historical roots that reach into a rich reservoir of human educators such as Comenius, Pestalozzi, Rousseau, Christ, Rogers, Combs, Kelley, Wiles, Avila, Tatum, and others. Lineage is long and illustrious. Now, the International Alliance for Invitational Education stands at the cutting edge of that movement.

The main thrust of the entire parade of humane advocates has been to free all people so that everyone could develop their inherent potential for being fully human. Today, as the main custodian of that noble challenge the Alliance has the privilege to both see the fruits of the collective labor of humane educators as well as to nourish them and thereby extend them to the next generation.

As one example of the flow of humane efforts, Problem-based Learning, which began in medical education is moving into pre-college programs. Already an institute for the advancement of PBL at the secondary and elementary levels is being established in Aurora, Illinois and the Association for Supervision and Curriculum Development (ASCD) sponsored a conference on the subject in the summer of 1992 (O'Neil, 1992).

PBL is consistent with the principles of invitational theory and practice. Purkey and Schmidt (1990) wrote, "The goal of invitational learning is to change the entire structure of organizations by building a foundation of respect, trust, optimism and intentionality (p. 1). Surely, PBL meets those criteria.

Thus, Problem-based Learning is an ally of invitational approaches. It is an offspring of the thinking that also created the International Alliance of Invitational Education. Hopefully, cooperative efforts will develop between invitational learning and PBL advocates and, within the near future, physicians will be exposed to more of the type of education that all proponents of human decency advocate. In short, invitational educators have a strong friend in medical education and that is good news for everybody.

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