

Teaching Endocrinology Using a Multiple- Intelligences Approach

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In my professional reading, I have been intrigued by the Multiple Intelligences (MI) Theory developed by Howard Gardner. Despite some anxiety about its applicability for college-level courses, I decided to try it in one of my nursing classes. As it turned out, I had probably selected the most difficult nursing class in which to try to use the Multiple Intelligences Theory. My endocrinology class had enrolled as varied a group as one would find anywhere. They ranged in age from 19 to 55. Most held full-time jobs; some were married or divorced. A variety of ethnic groups were represented, and one student had been diagnosed with Attention Deficit/Hyperactivity Disorder.

I spent the first class period explaining the Theory of Multiple Intelligences to this heterogeneous group. Applications relating to health-care workers helped to add credibility to the rationale for basing an instructional strategy on this theory.

To illustrate how learning occurs through the use of multiple intelligences, I incorporated several of

the intelligences in a review of the anatomy and function of the endocrine glands. I began with a brief lecture using transparencies. Then I had the students divide into groups of four or five and cut out colored paper the size and shape of the endocrine glands. They were to write the name and function of the glands on the paper and to tape each gland shape to someone in the group. I then had the students with the glands taped to them come to the front, where I compared and evaluated the positioning and function of each gland. During this brief lesson, I demonstrated the use of linguistic, spatial/visual, kinesthetic, and interpersonal intelligences.

Subsequent classes always included the use of a variety of intelligences: videos, interviews, artwork, journaling, etc. I modeled the use of the intelligences so that students would see different ways to present their assignments in class. This gave them permission to learn, and subsequently present, the content in a way that was meaningful and useful to them.

I then asked them to suggest

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ways they could learn the material and make class presentations. I compiled the ideas and gave the list to each student. Groups were assigned to present the topics that I would normally cover by lecture. The only requirement was that at least three of the seven intelligences had to be incorporated in each presentation. Groups were graded on how thoroughly the topic was covered and how well they incorporated the various intelligences.

Here are some examples of types of student presentations, along with the intelligences used:

- Dramatic presentations—linguistic, kinesthetic, spatial/visual
- Role-playing—patients and caregiver—interpersonal, intrapersonal, linguistic
- Poster—pictures, word list, diagrams, and picture stories—logical/math, spatial/visual, linguistic
- Lectures with overheads and poster—linguistic, interpersonal, logical/math
- Composing of lyrics to a song—linguistic, musical, interpersonal
- Composing and performing a rap song—linguistic, musical, interpersonal, kinesthetic
- A video-TV interview—interpersonal, kinesthetic, spatial/visual, logical, linguistic
- Aerobics presentation—kinesthetic, musical, linguistic, interpersonal

Students made these presentations throughout the semester. As might be expected, this changed the tenor of the class from teacher-centered to student-centered. Other changes were apparent, too. One busy student who worked full time and had a family did not doze in this class as he often did in

others. The socializing that took place among the students now focused on the presentations and content of the course. Initially, the students were ap-

fill in crossword puzzles, role-play a variety of situations, and make sketches to illustrate each of the gland functions. Students with low grades

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prehensive about the new system, but they soon came to appreciate how the assignments affirmed the ways in which they learned best.

Homework was varied and also reflected the multiple intelligences approach. Students were asked to view popular videos and respond to them,

in other classes showed conclusively that they knew the material when they were allowed to respond through intelligences other than the traditional linguistic area usually stressed in tests and term papers.

I realized that ultimately the students would have to pass a linguistic

test that was mostly logical/mathematical, so I included this in my planning. Prior to each class period, I had the students read and report on a professional journal article on the assigned topic. Instead of making summary reports, students were asked to address the following questions, which included the intrapersonal intelligence, as well as the linguistic and logical intelligences:

- What was the author's major theme?
- How did he support his claim?
- Evaluate the major statements of the article, including your feelings about what you read.
- Support your evaluation.
- How would you use this information in a clinical setting?

This simple set of questions incorporated the linguistic, logical, and intrapersonal intelligences and helped to develop the students' critical thinking.

Early in the semester, I videotaped several class presentations and shared them with an elementary teacher who implements MI in her classroom. She remarked that it was no different from the way her fifth graders presented materials to the class. I had a sudden panic attack, fearing that my students would consider the MI approach suitable only for elementary classes. However, none of them ever suggested that this way of learning was just for children or that they were too old for it.

At the end of the semester, I compared student evaluations of a traditional course I had taught with this course, in which I had incorporated the Multiple Intelligences Theory. The response to the MI method was incredibly favorable. Students reported that they learned more because of the teaching methods. They said that the extra research they did for their presentations and the succinct writing assignments gave them new insights

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Some students thought that more lectures would improve the course. Others recommended that better guidelines be given for the presentations, along with suggestions for the spatial/visual projects. Not one suggested that I should return completely to the traditional method of teaching.

Did more learning take place as a result of my experiment? I have no quantitative measurements on which to judge this. Since it is not possible to compare grades from previous years, further work needs to be done in this area. Certainly, students who had seen the class as just

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and a better understanding of the topics. They reported that they enjoyed the class immensely, even though the material was difficult. They said that diseases and symptoms were easier to remember because the presentations had used the various intelligences.

passive learning and "another hoop to jump through" showed more positive attitudes toward the subject. ✍

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