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PARSIMONIOUS EDUCATION

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In science, the Law of Parsimony or Occam's Razor, is a statement of economy; it expresses the view that the simplest, adequate explanation of data is preferable to a more complex interpretation of equal adequacy (1). The Law of Parsimony may be applied to the area of education as well. It should be the ultimate goal of education to provide the simplest, adequate explanation in communicating to parents and students phenomenon occurring in the classroom.

Perusal of journals and professional magazines clearly reflects the increase in terminology that accompanies expanding knowledge. Is all this increase in terminology absolutely necessary to communicate the phenomena being described? I have no doubt that many of my colleagues would argue that many of these terms do not represent a proliferation, but represent a simplification and clarification of what was once complex phenomena. Sometimes, however, it seems that new terms are generated to simply promulgate the illusion of professional creativity or deep analytical insight, when in essence they only add to the growing professional jargon.

For example, the word, *module*, is currently being used to denote an innovative type of instruction. According to Murray (2), "a *module* is a self-contained and independent *unit* of instruction with a primary focus on well-defined objectives." In what way is developing a *module* different from developing a *unit*? In a similar vein, many teachers no longer use examples or models in their instructional methodology but make use of *instructional paradigms*.

Then there is the phrase, *teaching strategies*. The preferred standard dictionary definition of *strategy* is "the science of planning and directing a large-scale military operation." Was this phrase coined by teachers who ran out of *methods* and viewed their classrooms as battlefields? *Strategies*, however, may be necessary to develop *competencies* without which it would be impossible to teach *effectively in a cognitive and affective style*. In the past, teachers only hoped to provide *learning skills*, which would be imparted in such a fashion as to *improve the knowledge, attitudes and behavior* of students. Somehow one cannot help but feel that some cognitive and affective teaching encourages some educators to provide their students with exogenous encounters along the littoral margin of marine environments allowing them to experience the arenaceous deposits, when in reality all they wanted to do was to take a field trip to the seashore and play in the sand.

It would be easy to continue in this frivolous manner, but I suspect that you have either received the message or are bored. While I have made some flippant comments, I am deeply concerned about the proliferation of vocabulary that impedes rather than clarifies understanding and communication. Everyone should strive to improve their vocabulary and new terms *are* essential to communicate precise ideas. My plea is for a more parsimonious development and use of terminology. Terminology should not be generated or used without an expressed need.

Literature Cited

1. Lachman, S. J. 1960. *The foundations of science*. Vantage Press.
2. The Commission on Undergraduate Education in the Biological Sciences. 1971. (In the statement of purpose) *The use of modules in college biology teaching*, Edited by Joan G. Creager and D. L. Murray.

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Sunshots

Looking for spectacular sun pictures? Get the November, 1976, issue of *Natural History*, it has some of the best solar photographs available in a popular magazine.

The Plains Planetarium

Vol. 4, 1977

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Chemistry Tests

The American Chemical Society and the National Science Teachers Association have been constructing, standardizing and disseminating examinations in high school chemistry since 1953. The tests are constructed by a jointly appointed subcommittee consisting mostly of high school chemistry teachers and college teachers interested in secondary school chemistry. The 1977 tests are now available; write Examinations Committee--ACS, University of South Florida, Science Center, Room 464, Tampa, Florida 33620.

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A Joint International Conference

1977 will be the 20th anniversary of the Science Teacher's Association of Manitoba. To mark the occasion STAM and NSTA will sponsor a joint international conference in Winnipeg, October 20-22, 1977.

If you are willing to present a session, conduct a workshop, preside at a session, evaluate sessions or provide curriculum materials, contact Brian Brudy, Science Department, St. John's High School, 401 Curch Ave., Winnipeg, Manitoba, Canada.