
An Invitation.....

Curriculum Change: The Need For Fundamental Redesign in Agricultural Science

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Curriculum change is difficult for faculty, particularly those who have invested 10 or 20 years of contribution and revision in the present curriculum. However, an increasing number of fundamental curriculum reviews are being undertaken, in Canada, the United States, and elsewhere. There is an increasing sense of urgency and a recognition that a redesign is necessary, however difficult the process. This article is prepared as a means of identifying some of the major curriculum redesign projects with which the author is familiar and an invitation to others to add to the process. (The *NACTA Journal* is an excellent publication in which to record curriculum development projects.) NACTA is well positioned to provide a forum, through its annual conferences and its journal, for an exchange of ideas and experiences.

At the annual meeting in June, 1994, NACTA members indicated their willingness to take a leading role in assisting the process of fundamental curriculum change. This article will serve as a beginning summation of some of the new curriculum initiatives undertaken to this point. Others are encouraged to submit articles that broaden the picture and share their experiences in subsequent issues. A beginning but by no means complete listing of ongoing or recent curriculum revision activities includes the following institutions, with an individual or publication identified that will serve as a contact for further information.

Australia

Western Sydney R. Bawden • *J. Dairy Sci.* 74: 2236-2373, 1991 (Hawkesbury)

Canada

Alberta restructuring of faculty, degrees, departments; Dr. E. Tyrchniewicz, Dean, College of Agriculture and Forestry, University of Alberta, Edmonton, Alberta T6G 2P5

Saskatchewan systems based learning and integration of traditional disciplines; Dr. G. Storey, Associate Dean, College of Agriculture, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0

Manitoba new degrees in Agroecology and Agribusiness; Dr. J. Elliot, Dean, College

of Agriculture, University of Manitoba, Winnipeg, Manitoba R3T 2N2

Ontario

Vision 95 Curriculum Development Project, University of Guelph, G. M. Jenkinson, Guelph, Ontario N1G 2W1

New Zealand

Massey

Combination of several degrees into one B. Applied Science degree; Dr. R. Anderson, Dean, Faculty of Agricultural and Horticultural Sciences, Massey University.

United States

Florida

Agricultural Economics • Dorothy Comer, Florida State University, Gainesville, Florida

Minnesota

Project Sunrise 1986-89; Bonnie Pechtel, Director University of Minnesota, St. Paul, Minnesota

Nebraska

Animal Science • D. R. Brink, University of Nebraska-Lincoln, Lincoln, Nebraska

Oklahoma

Animal Science • D. S. Buchanan, Oklahoma State University, Stillwater, Oklahoma

USDA/H. Kunkel "Systemic Change" NACTA Conference, Texas A & M, June 1994

In 1989, the American Society of Agronomy devoted time at its annual meeting to curriculum revision when it hosted a preconference workshop that focused on curriculum. In 1987, the North Central Curriculum Committee Project (RICOP) published a report entitled "Curricular Innovation for 2005" under the chairmanship of George Sledge. These initiatives served as the catalyst that was needed to engage us in the curriculum change process in North America. Project Sunrise (University of Minnesota 1986-9) is regarded by many as the first of the current curricular development projects in North America. Now there are a number of initiatives, both at the department and at the college level, that are underway

or complete as evidenced in the June 1994 issue of the *NACTA Journal* and by the NACTA annual conference proceedings at Texas A & M which appear in this issue of the *NACTA Journal*. (Sept. 1994)

The questions that are often asked by those who are skeptical of the need for change have to do with why?, what's wrong with the present curriculum? Perhaps the answer is more related to the need to change our basic learning objectives than it is a reflection of an outdated faculty or curriculum. Some faculty began to look at learner outcomes as they developed their courses, rather than a simple reiteration of the content knowledge of the course. This process, as distinct from a knowledge based approach, results in faculty being able to measure learning outcomes in students. This process was well described by Norman Gronlund at the University of Illinois throughout the 1970's. Shifting faculty interest in their teaching from course content to learner centered outcomes can be an exciting first step to a fundamental reexamination of the curriculum. Gronlund's practical guide to this process is a very useful beginning point for faculty who wish to take a fresh look at their teaching.

The volume of knowledge now deemed useful is many times greater than it was 25 years ago. Some of the knowledge that students acquire in their university degree is outdated before they graduate! The knowledge explosion moved us to create ultra specialized undergraduate majors, increasingly more narrowly focused, until we lost sight of the agrifood system in its totality. Our highly specialized, technically competent graduates have been more specialized than employers require, and less adept at communicating their science, addressing public issues, and responding to real world situations.

The reports in the 1980's of Litzenburg and Schneider in the United States and of Fairnie, Stanton and Dobbin in Australia began to focus our attention on employers' needs and the deficiencies in the interpersonal skill levels of our graduates. Many of the recent curriculum development projects have this societal/employer dimension in their origins. The workplace is different now, as companies flatten their corporate structure and as professionals work together in teams on specific assignments with increasing frequency. Agricultural faculties and colleges seem to be responding to these factors more readily than their colleagues in other disciplines. Colleges of agriculture are mission oriented and, as a result, are often more knowledgeable of their clients' needs because of their research, extension, and service activities.

There are many elements to successful curriculum development projects. Academic, leadership, grassroots (faculty) support, employer needs, and student inputs are all on the list of essential ingredients that are required to initiate the process. So too is a series of agreed learning objectives and learner outcomes, together with a strategy that is designed to accommodate the particular circumstances on a given campus. No one approach is necessarily best. Perhaps the best response to those faculty who continue to resist the need for fundamental curriculum redesign is embodied in the notion that "the status quo is not an option".

With this brief beginning, let me on behalf of NACTA invite those who are presently involved in fundamental curriculum change to communicate their activities and those of colleagues through the medium of this journal. We can all learn from each other's experience and strengthen the outcome of the process.

Dean

College of Agricultural Sciences and Natural Resources The University of Tennessee

The University of Tennessee invites nominations and applications for the position of Dean of the College of Agricultural Sciences and Natural Resources (CASNR). The College is a unit of the University's Institute of Agriculture headquartered in Knoxville. The Dean provides leadership for and administers the undergraduate and graduate instruction programs in agriculture and natural resources. Specific areas of responsibility include program planning and implementation; organization of resources; financial planning and management; personnel recruitment and management; student recruitment, advising, and scholarship administration; coordination with other units of the Institute of Agriculture and the University of Tennessee, Knoxville (UTK) campus-wide academic programs; and private fund development.

The CASNR has a total of 1,300 graduate and undergraduate students, and offers five baccalaureate, 11 master of science, and five doctorate programs and participates in the intercollegiate Graduate Program in Ecology. Some 125 faculty positions are shared primarily with the Agricultural Experiment Station. An excellent scholarship program currently benefits 300 to 350 students annually.

The Dean is administratively responsible to the Vice President for Agriculture. The Dean is also responsible to the UTK Vice Chancellor for Academic Affairs for academic program planning and implementation, and for budgeting and financial planning. The CASNR enjoys wide academic support from several UTK colleges. Current UTK enrollment is about 25,000 students.

The applicant must hold an earned doctorate in agriculture or related field. A record of professional achievement and administrative experience in higher education is highly desirable. Strong communications, leadership, and resource management skills are required. The salary is competitive and commensurate with experience. Review of applications will begin on March 1, 1995 and will continue until a suitable candidate has been selected. Applicants should submit a letter indicating interest, a resume, and names, addresses, and telephone numbers of three references. Send applications and inquiries to Dr. John I. Sewell, 103 Morgan Hall, P. O. Box 1070, The University of Tennessee, Knoxville, Tennessee 37901-1071; telephone 615-974-7105.

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