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Design and Management of Teaching Programs With Survival In Mind

Larry J. Connor

Agricultural economics teaching programs are becoming stressed. They vary considerably because of different institutional settings and are conducted under changing college, university, and department trends and paradigm shifts. To ensure success, strategic marketing processes need to be used in analyzing programs: identifying potential students (clientele or customers), ascertaining what to offer (majors, minors, service courses, enrichment options, and distance education), finalizing the strategic plan, and executing the plan (with students, administration, industry, and disciplinary peers). Conclusions and recommendations for enhancing teaching quantity and quality are presented for the strategic marketing processes. Finally, some implications and conclusions for graduate education are discussed.

Key Words: strategic marketing, teaching, undergraduate and graduate education

JEL Classifications: A20, A22, A23

Introduction

Teaching programs in agricultural economics (like colleges of agriculture) have undergone considerable stress since the early 1990s. The recessions of the early 1990s and 2000, coupled with tax cuts from legislatures, sharply impacted funding for higher education. The Boyer Commission of the Carnegie Foundation, which first released their report in 1990, called for a fundamental revitalization of teaching in the United States higher education system. Since that time, fundamental changes have been taking place in the way teaching is approached in higher education. An example is the paradigm shift from teacher- to student-centered classroom learning. For agricultural economics to survive and prosper in this changing academic world, it will have to use new approaches in the design and management of its teaching programs (Boland and Akridge).

The major objectives of this presentation are to discuss: 1) the rationale for tailoring strategies and approaches to specific institutional settings; 2) major higher education trends and paradigm shifts impacting teaching programs; 3) strategic marketing processes for enhancing enrollment; and 4) some implications and conclusions for graduate education. The major emphasis is on undergraduate education because there are greater issues with it.

Tailoring Teaching Programs To Institutional Settings

Agricultural economics is taught in a variety of institutional settings (Table 1). At one extreme, it is taught in the 17 land grant Association of American Universities (AAU) uni-

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Table 1. Rationale for Tailoring Educational Approaches to Specific Institutional Settings

1. Broad institutional types
a. Land grant—AAU
b. Land grant
c. AASCARR
d. 1890 Land grant
e. 1994 Land grant
2. Major institutional differences
a. Funding approaches
b. University enrollment status/trends
c. History of curricular innovation
d. Faculty development programs
e. Importance of community college transfers
f. Distance education

AAU is Association of American Universities. AASCARR is American Association of State Colleges of Agriculture and Renewable Resources.

versities (such as the University of Florida and University of Illinois). These are primarily large-enrollment, research-oriented institutions that comprise most of the large graduate programs in the country.

Next, there are the remaining land grant-programs. A few of these are fairly large, although most tend to be medium and smaller sized with respect to student enrollment. In the smaller land grant colleges, graduate education becomes less important relative to undergraduate education. The American Association of State Colleges of Agriculture and Renewable Resources (AASCARR) universities include state institutions that offer agricultural programs, such as Southern Illinois or the University of Wisconsin at Platteville. Some of these institutions have large undergraduate programs, but typically limited graduate programs. Finally, there are the 1890 land grants (Southern, black institutions such as Florida A&M), and the 1994 land-grant tribal colleges.

Given this broad range of settings, there are obviously great differences in enrollment, funding, and the diversity of degrees offered (Table 1). Undergraduate enrollment varies considerably, because of university size, relationships with community colleges, state population base, the institutional history of curricular innovation, faculty development programming, distance education, and other factors. Hence, appropriate undergraduate programs for large schools, such as Texas A&M and the University of Florida, can be expected to be somewhat different from those of smaller institutions, such as South Dakota State University and the University of Wyoming.

Table 2. University Trends/Paradigm Shifts Impacting Agricultural Economics Teaching Programs

1. Funding/Budgeting
a. Stressed budgets
b. Increasing tuition
c. Movement to output/performance budgeting
2. Changing student demographics
3. Shortening graduation time
4. Increasing use of learning assessment
5. Increasing use of nontenured faculty

Trends and Paradigm Shifts Impacting Teaching Programs

A number of trends and paradigm shifts at the university, college, and departmental levels are impacting agricultural economics teaching programs (See Tables 2–4). At the university level, funding has been impacted by reduced state support, increasing tuition, the movement to output or performance budgeting, and other state-mandated programs. Within universities, student demographics continue to change, with increases in minorities and nontraditional students. Legislative mandates, such as shortening graduation requirements to 120 credits, has impacted some universities. Greater em-

Table 3. College Trends/Paradigm Shifts Impacting Agricultural Economics Teaching Programs

1. Continuing movement to nine-month appointments
2. Increasing emphasis on external funding
3. Providing distance education
4. Offering enrichment options
5. Producing "society ready" graduates
6. Increasing number of more generic, market-oriented, interdisciplinary majors

Table 4. Department Trends/Paradigm Shifts Impacting Agricultural Economics Teaching Programs

1. Reduced faculty base and budgets
2. Larger classes
3. Student demographic changes
4. Declining market share of college enrollment/ degrees awarded but still important part
5. Undergraduate program dominated by agribusiness
6. Still sorting out "agribusiness"
7. Many stressed doctoral programs
8. Imbalance between research and teaching appointments

phasis upon learning assessment and nontenured faculty is also emerging.

At the college level (Table 3), some major trends and paradigm shifts impacting agricultural economics are the continuing movement to nine-month appointments and the increasing emphasis upon external funding (particularly for individuals with research appointments). In some aspects, colleges of agriculture are beginning to look more like colleges of liberal arts and sciences. Distance education has become a fact of life in many colleges of agriculture as they attempt to better serve their individual states. Individual curricula continue to undergo change as more emphasis is placed upon "society-ready" graduates, enrichment options, merging majors, and the use of more generic, market-oriented, interdisciplinary majors, such as environmental management, plant medicine, and human resource development.

Departments have had to adjust in a variety of ways to the external forces impacting them (Table 4). Many undergraduate programs have had to become adjusted to various combinations of smaller budgets, reduced faculty bases, and larger classes. These problems have been compounded at some institutions by having to use smaller classrooms in older buildings. This has caused some departments to reexamine their objectives relating to teaching output and program quality. In some cases, nontenured faculty (lecturers) have been employed for handling increased teaching loads. This is common in colleges of business or liberal arts and sciences, but less appropriate for agricultural economics because of the absence of very large classes and a saturated market for temporary faculty. In other instances, larger classes with teaching assistants and different teaching models have become more common.

Student demographics continue to change at many institutions as international, minority, and other student groups vary. Agricultural economics still occupies a very important role in most colleges of agriculture, although its market share of college enrollment and degrees awarded has been somewhat declining over the past decade. Doctoral enrollments have become stressed in many institutions or are being maintained with international students. Undergraduate programs have been increasingly dominated by agribusiness, although the discipline is still sorting out "agribusiness," as evidenced by an American Agricultural Economics Association (AAEA) workshop this past summer in Denver and a recent article by Boland and Akridge.

Finally, some departments are having to deal with faculty appointments that may have an imbalance between research (agricultural economics) and teaching emphases (agribusiness). This may cause tenure and promotion problems for young faculty.

Strategic Marketing Processes for Enhancing Student Enrollment

Academic units are similar to business firms when it comes to looking at alternative processes for enhancing student enrollment. In Table 5, strategic marketing analytical processes for business firms are identified (Luzar, Sperling, and Connor). These are typically employed when firms introduce, change, or otherwise modify their output with respect to clientele or customers. These strategic marketing analytical processes are modified in Table 6 to better reflect strategic marketing for enhancing student enrollment. For many agricultural economics departments to ensure their survival at the undergraduate level, they

Table 5. Strategic Marketing Analytical Processes

1. Defining the organization's business, mission, and goals
2. Identifying organizational group opportunities
3. Formulating product market strategies
4. Budgeting marketing, financial, and production resources
5. Developing reformulation and recovery strategies

Sources: Kerin and Peterson; Kotler; Peter and Donnelly.

will need to use these processes in analyzing their programs.

The first process is identifying potential students (clientele/customers). The second process is ascertaining what products/services to offer potential students (majors, minors, service courses, enrichment options, and distance education). The third process is finalizing an overall strategic plan, which specifies student groups and academic options to offer them. The final step is that of implementing/executing the strategic plan. This must be done with respect not only to students, but also with administration, industry, and disciplinary peers.

Identifying Potential Students

Student groups need to be identified by program types, such as departmental majors, interdisciplinary majors, minors, service courses, and distance education (Table 7). These different programs typically appeal to varying students, although most have an applied business or social science interest.

Next, students need to be identified according to their potential within these various program types. The most obvious one is traditional agriculture and rural high school graduates. They constitute an important base of any agricultural economics program, and the competition is often keen within the college for these students. This is a politically important student base, because many remain in the state after graduation. However, that base is usually not sufficiently large for agricultural economics programs to survive and prosper on it alone.

Table 6. Strategic Marketing Processes for Enhancing Student Enrollment

1. Identifying potential students (clientele/customers)
2. Ascertaining what to offer
   Majors, minors, service courses, enrichment options, distance education
3. Specification of strategic plan
   What students? What to offer?
4. Implementation/execution of strategic plan
   Students, administration, industry, peers

The largest potential base of students is the "found" group. Students have been dubbed by this particular name because they often "find" agricultural economics programs after enrolling at community colleges or in other programs at universities. Agricultural economics is typically selected as a field of study by students who are interested in applied business or social science. A major problem with "found" programs is the large number of students that are denied admission to colleges of business that end up in agribusiness programs. Although 2.7–3.0 grade-point average (GPA) business students are a welcome addition, it is difficult to maintain a successful program with low-achieving students (less that 2.4 GPA). A minimum GPA may be required for admittance at some institutions. A related problem is the lack of access at some institutions to business and economics courses. This creates

Table 7. Identifying Potential Students for Undergraduate Programs

1. By program types
   Departmental majors vs. interdisciplinary majors, minors, service courses, distance education
2. By potential students
   a. Traditional agriculture/rural high school graduates
   b. "Found" students
      1. Intra-university transfers
      2. Community college transfers
      3. Professional/graduate school orientation
   c. Minority students
   d. Distance education students
   e. International students

problems for agribusiness majors, but may open up opportunities for university service course teaching.

Another major problem with "found" students is how to maintain the applied social science identity of agricultural economics with the advent of agribusiness (in such areas as community development, environmental economics, human resource development, economic development, etc.). Departments appear to be struggling with this problem.

Minority and international students are special classes of students. Minority students are usually part of the "found" student class and are heavily influenced by other minority students. International students, on the other hand, enter the department in various ways. Undergraduate enrollments of international students are typically not large in most colleges of agriculture, at least compared with graduate student levels. Finally, distance education students need to be assessed from the standpoint of those enrolling in a specific major versus those taking specific courses, such as sales or strategic marketing, who are not in a degree program.

The potential student base within a university will vary according to these categories. A large land-grant AAU university with 45,000 or more students will have a large recruiting base compared with smaller land-grant institutions with less than 20,000 students. Another important factor is whether the university enrollment is constant, increasing, or is undergoing some stress. This will influence the nature of the competition for students.

What Can Agricultural Economics Offer?

Agricultural Economics can offer a wide variety of departmental or interdisciplinary majors, minors, service courses, distance education, and enrichment options (Table 8). These need to be tailored to individual institutions.

Agribusiness has increasingly become the dominant undergraduate major (or specialization) in many departments. As a general rule of thumb, it is usually wise to offer a potentially high enrollment option, such as agribusiness, as a major to provide greater visibility. The applied, social science aspects of agricultural economics should be offered under a general agricultural economics major with perhaps some options for applied social science areas (community development, etc.). It is difficult to visualize how the applied social science focus of agricultural economics can prosper if it is not offered under a holistic, general agricultural economics approach as opposed to several narrowly defined options. Options should not be offered in an area in which there is no student interest. Some options, such as environmental economics, may attract a large service course following that does not always translate into enrollment in departmental majors. Because of enrollment/budget constraints, small institutions may only offer a single major with a limited number of options.

Table 8. What Can Agricultural Economics Offer to Potential Students?

1. Departmental majors
a. Agribusiness, agricultural economics, etc.
b. Majors vs. options/specializations within a major
2. Interdisciplinary majors
a. Human resource development, environmental management, community development, etc.
b. Limited success to date
3. Minors
Major issues are credits, courses, prerequisites
4. Service courses
Recruiting vehicle, credit generator
5. Distance education

Although interdisciplinary majors are becoming more prevalent in colleges of agriculture, agricultural economics has not been a major participant. Some interdisciplinary majors (such as human resource development, international development, environmental management, and community development) have some potential for development. However, departments are often reluctant to enter into them because of difficulties as to who has control, how departments are credited, and the individual teaching demands. A recent attempt at Florida to establish an undergraduate major in Human Resource Development involving the

departments of family, youth, and community sciences; agricultural education; and food and resource economics was unsuccessful. Nevertheless, this may be a route that some agricultural economics departments may wish to pursue in the future.

Minors in agribusiness (or related areas such as sales) appear to be flourishing in many agricultural economics departments, according to comments at the 2004 AAEA teaching workshop in Denver. Major issues appear to be the number of credits required, courses offered, and prerequisites. At the AAEA meetings, two minors were outlined that contained 21 and 23 credits. These would be inappropriate for institutions that require a cap of 120 credits for a degree where, 12–15 credits would have to be the maximum required. Another related area is what courses should be required for the minor. Major courses mentioned to the author by industry representatives typically include strategic marketing, sales, human resource development, and finance. There will undoubtedly be variations in these courses by states. Finally, course prerequisites are often cited by commodity departments as a major impediment for minors. Some compromises may be needed on prerequisites for major service courses, or a few service courses with minimal prerequisites may need to be offered.

Service courses for nonmajors can be a very important vehicle for departments in recruiting students and generating credits. At Florida, some large college credit generators are Man's Food, and Molds, Mildews, Mushrooms, and Man! At Michigan State University, a very popular service course has been Food, Population, and Poverty. These courses are typically offered at the sophomore level and may generate large student credit hours as well as serving as a recruiting vehicle for the department.

Distance education must be distinguished from off-campus teaching programs (such as the Florida program at Ft. Pierce). It is increasingly being used by departments to better serve state and national constituencies. In the 1990s, technology was a major factor in adopting distance education. Now, budget concerns, the appropriate degrees and courses to offer, and teaching load versus overload with pay are more prevalent issues. A viable distance education program requires a meaningful department plan and commitment. Although the total enrollment/credit hours generated will likely be small compared with campus programs, the political significance of serving the state and national constituents should not be underestimated.

Table 9. Delivering Quality, Differentiated Undergraduate Programs

1. Communications and interpersonal skills most important
2. Using curriculum mapping
3. Major core courses versus niche marketing
4. Enrichment experiences
5. Industry engagement
6. Faculty professional department

Delivering Quality, Differentiated Programs

Delivering quality, differentiated undergraduate programs requires a variety of approaches (Table 9). First and foremost is the development of communication and interpersonal skills. They were identified in both the 1990 and 2004 industry surveys of agribusiness as the most important factors in hiring undergraduates. The development of these skills must be specifically emphasized in curricula. Curriculum mapping is an important way to accomplish this objective (see Diamond; Fink; or Weimer).

A major problem in curricula development is defining the core set of courses for the major versus niche marketing options, which differentiate the major from others in national markets. Niche markets for undergraduates are important in providing employment opportunities. Excellent examples of niche marketing are the food distribution programs at Cornell and Michigan State.

Enrichment experiences have become increasingly important as colleges attempt to turn out "society-ready" graduates. Capstone courses; internships; student clubs; state, na-

Table 10. Implementing/Executing the Department Undergraduate Program

1. With students
a. Role of department/college/university recruiting
b. Use of brochures, websites, "preference" lists, recruiting courses, extracurricular contacts, etc.
2. With administration
a. Communicate output successes
b. Offer faculty development programs
c. Encourage industry involvement
3. With industry
Guest speakers, case studies, field trips, internships, mentors, scholarships
4. With disciplinary peers

tional, and international travel; teaching and research practicums; industry speakers; and other such options provide a means for enriching programs for undergraduates. A very important enrichment experience is industry engagement. Whether it be case studies, internships, industry study tours, or industry speakers, such experiences can considerably enrich individual programs.

Finally, faculty professional development programs need to be emphasized. Few graduate programs in agricultural economics enhance professional teaching skills of students. A variety of development programs can be used, such as teaching portfolios with peer evaluation, curriculum mapping, learning assessment, personality typing, teaching large classes, critical thinking, etc. If university or college development options are not available, departments may have to take the lead in providing them.

Implementing and Executing the Teaching Program

As soon as the department strategic plan is specified, units need to turn to the implementation/execution phase (Table 10). The first and most important activity is recruiting individual students. Student recruiting goes far beyond developing departmental brochures and attending state 4-H and FFA conventions! The role of the department versus the university and versus the college needs to be kept in mind. For example, individual high school recruiting is best left to university personnel. They are better equipped to assist high school counselors in helping students make a university choice. Intrauniveristy and community college recruiting are best handled by the college recruiting office. At these levels, advisors are helping students to focus on an area of study. The most important things a department can do are to work with the college recruiting office, help develop brochures and websites pertaining to individual programs, and work with department alumni. The college recruiting office has a greater advantage in working with university and community college counseling centers and admission offices in reaching potential students.

Implementation/execution must also necessarily include college administration. Department chairs and undergraduate coordinators must continually communicate important output measures of success, industry involvement, enrichment options, and needed faculty development programs as well as resource needs. Most departments err on the side of undereducating college administrators and, consequently, do not obtain needed resources.

Implementing and executing the program with industry should be a joint effort between departments and the college because other units in the college may be interacting with them. Some potential industry employers may be located solely in one's state, whereas others may be more nationally oriented. Industry participation needs to be identified for the program in such forms as guest speakers, developing case studies, field trips, internship placements, mentors, and scholarship financing. All too often, industry engagement is left solely to the discretion of individual instructors. Extension faculty are effective in establishing industry contacts.

Finally, individualized programs need to be communicated with disciplinary peers to get a sense of how the department is doing and possible changes or modifications that might be needed. The importance of department niche marketing compared with one's peers cannot be over-emphasized for teaching programs.

Table 11. Implications/Conclusions for Graduate Education in Agricultural Economics

1. How does M.S. in a Agribusiness differ from an M.S. or M.B.A.?
2. Should M.S. in agribusiness contain thesis and/or nonthesis options?
3. Should teaching practicum/course be an option or requirement for Ph.D. students?
4. What differentiates a Ph.D. graduate in agribusiness?

Implications and Conclusions for Graduate Education

Although this paper emphasized undergraduate programs, several implications/conclusions do come to mind for graduate education (Table 11). These do not include the usual graduate education issues, such as the number of fields and courses and the depth in economics and quantitative methods. First, how does a M.S. in agribusiness differ from an M.B.A or an M.S. in agricultural economics? Should an M.S. in agribusiness contain a thesis and/or a nonthesis option? The answers to these questions are not readily obvious, as evidenced by the Denver AAEA agribusiness workshop. If a department is interested in just the number of students passing through an M.S. program in agribusiness, a nonthesis option may be very relevant. However, this may greatly impact the number of M.S. thesis students in the unit. The research option may be very important for departments that need enhanced research outputs. In attracting students, the M.S. in agribusiness must be differentiated in some respects from the M.B.A degree, or it will typically be viewed as a lower-valued degree.

A major question pertaining to agribusiness graduate education is what differentiates a Ph.D. graduate in this area. After looking at job descriptions in recent years for faculty in agribusiness, it is not readily apparent what departments want in new Ph.D.'s. Should a Ph.D. have some training in the college of business, formal education in agribusiness within agricultural economics (and how defined?), a thesis on an agribusiness topic, or some employment history in the world of agribusiness?

Should a teaching practicum or course be an option for Ph.D. students in agricultural economics? Providing significant teaching experience is probably not realistic in most departments because there are not enough courses to satisfy the needs of all students. However, the provision of a one- or two-hour teaching practicum or course might give many students a leg up in the employment market in differentiating themselves from other students, as well as enhancing their future classroom performance. Some departments now require a teaching lecture and research seminar as part of the interview process for positions with teaching components.

Summary

The design and management of appropriate undergraduate agricultural economics programs cannot be answered by a textbook approach. Considerable thought needs to go into what is appropriate for a particular institutional setting. Trade-offs may have to be specifically acknowledged between program output and quality. Strategic marketing processes provide a useful framework for analyzing academic programs. Industry and peer engagement will be increasingly important for specific departments as they work through individual design and management problems. For agricultural economics to survive and prosper, it must use creative, transformational leadership in pursuing educational alternatives for its students (Connor).

References

American Agricultural Economics Association. "Food and Agribusiness Management Education: Preparing Students for an Evolving Industry." Denver: AAEA Workshop, 2004.

Boland, M.A., and J.T. Akridge. "Undergraduate Agribusiness Programs: Focus or Falter?" *Review of Agricultural Economics* 26,4(Winter 2004):564–578.

Connor, L.J. "Moving From Transactional to Transformational Leadership in Colleges of Agriculture." *NACTA Journal* 48,2(June 2004).

Diamond, R.M. *Designing and Assessing Courses and Curricula: A Practical Guide.* San Francisco: Jossey-Bass Publishers, 1998.

Fink, L.D. *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses.* San Francisco: Jossey-Bass Publishers, 2003.

Kerin, R.A., and R.A. Peterson. *Strategic Marketing Problems—Cases and Comments.* 9th ed. Upper Saddle River, New Jersey: Prentice Hall, 2001.

Kotler, P. *Marketing Management.* Upper Saddle River, New Jersey: Prentice Hall, 2000.

Luzar, E.J., E.S. Sperling, and L.J. Connor. "Using Marketing Concepts to Enhance Student Enrollment in Colleges of Agriculture." Gainsville: North American Colleges and Teachers of Agriculture Annual Meeting. 2004.

Peter, J.P., and J.H. Donnelly, Jr. *A Preface to Marketing Management,* 9th ed. St. Louis: McGraw-Hill Book Co., 2003.

Weimer, M. *Learner—Centered Teaching: Five Key Changes to Practice.* San Francisco: Jossey-Bass Publishers, 2002.