

**Title: RESTRUCTURING AGRIBUSINESS CURRICULA: AN EXAMINATION  
OF TWO APPROACHES**

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## **RESTRUCTURING AGRIBUSINESS CURRICULA: AN EXAMINATION OF TWO APPROACHES**

**Introduction:** Colleges and universities throughout the U.S. (perhaps the world) are being asked to “enroll more students, get them faster, educate them better, make them more employable, and do with less money”. Agribusinesses in the U.S., whose markets have traditionally been domestic, are now being pulled and pushed into the global arena. As a consequence, the agricultural sector is simultaneously presented with opportunities and threats. Increasing globalization and market competition have forced businesses to undertake a restructuring program allegedly to adjust as quickly as possible to the effect of three forces: customer, competition, and change that have together changed the business environment.

Developing and maintaining effective instructional programs within this context require an on going assessment of the changing needs and perceptions of prospective students and employees. This presents challenges for universities and faculty members. First, to conceive a program with relevant focus that would provide for the development of the professional skills and personal qualities required in future agribusiness employees. Second, to provide programs to train/retrain professionals already employed in businesses to maintain competitiveness. Several studies have reported serious shortages of well-trained agribusiness graduates. Also there is an increasing realization that programs in agriculture need to provide students with technical knowledge and communication skills and prepare them to operate in a globally competitive business environment. Graduates who can function effectively in a global environment are in a position to provide direct benefits to businesses, helping them access emerging international markets, supporting the export efforts of small and mid-size companies that have become the greatest source of new jobs in America. Thus, changes in the food and fiber industry and in the total economy have influenced and defined the kinds of job available and the types of skills required for such tasks. Professionals in agribusiness require expertise in a wide variety of areas, some of which were previously outside the realm of agriculture.

Compounding the problem, the institutions of higher learning are being asked to provide higher quality services with flat or even reduced budgets. In these times of budget austerity, the administrators at institutions are critically examining existing programs for their relevance, effectiveness and duplication. They are also seriously questioning development of new programs. At smaller universities / departments the problem is further compounded by fewer number of faculty, additional barriers including limited physical and fiscal resources. There is growing recognition that the enterprise must operate more effectively, more efficiently and more accountably. This presents additional challenges for reorienting or developing agribusiness programs at smaller universities. The challenge is to

reorient the thinking of faculty and administrators around customers and process. They, however, need not only rethink what they do but also how they do it, and how they measure themselves. It is this rethinking and reorientation process that would play an important role in designing and implementing new programs.

**Objectives and Procedure:** While the issues relevant to developing agribusiness programs have received much attention in literature, not much attention has been given to procedures and planning process. There is need for discussions on describing different approaches (models) that are being used to reorient or develop agribusiness programs at institutions with different attributes. The paper focuses on presenting different approaches in offering agribusiness degree programs at two small comprehensive, four-year degree granting universities in the U.S. Under the first approach, the agribusiness program is being developed in a School of Agriculture and Home Economics Environment. This is the traditional approach. The second approach deals with the development of agribusiness program under College of Business Environment with little or no course offerings related to production agriculture.

The paper presents issues, a general model of curriculum content knowledge in Agribusiness and presents components of the two programs in light of this general model. It further discusses the procedures, successes, and constraints in respective approaches. The emphasis is on similarities and differences between these two models and the lessons that can be learned from them. The paper also provides backgrounds, barriers encountered, stakeholders of curriculum, partnerships developed, and implementation.

### **Issues and Curriculum Planning**

In the well-known study, Litzenberg and Schneider (1987) defined the characteristics of agribusiness graduates that were valued by employers. The attributes rated most highly were those pertaining to interpersonal communication skills. Radhakrishna and Bruening (1994) found similar results in a study of agribusiness employees regarding five personal characteristics. Marshall (1985) explains why communication and interpersonal skills have become very important. He states “that collaboration is the premier candidate to replace hierarchy as the organizing principle for leading and managing the twenty-first century workplace.”

Several educational and industry issues have been addressed by many in regard to development of agribusiness programs (Vanderveer and Guedry, 1992). One of the important issues is the concept of the educated person and inclusion of general education components. While it is difficult to argue with the desirability of general education

requirements and the concept of an educated person, adding these requirements creates special problems for an already broad-based agribusiness degree program. Connor (1989) suggests that general education for agricultural students needs to be expanded only modestly, in such areas as international understanding, domestic and global awareness, computer science, and related institutions. At issue here is the breadth versus depth of subject matter, and Madersheid (1988) cautions the profession to avoid overspecialization in undergraduate programs. Another issue discussed by Sonka and Hudson (1989) relates to the uniqueness of agribusiness industry, suggesting a need for special skills and knowledge to facilitate efficient and effective managerial decisions. The other questions important are: who should be involved (stakeholders) in curriculum development, how to encourage cooperation between colleges of Agriculture and Business in developing and operating agribusiness programs and how to develop problem solving and leadership skills.

Along with these issues there are others that may be more applicable at smaller institutions or departments. These issues may be discussed more in terms of myths. They are:

- Many administrators and some faculty members may believe that by “adding few courses to general agriculture curriculum will make it an agribusiness curriculum”
- Agricultural economics curriculum can easily be changed to agribusiness by “replacing agricultural economics courses with business courses from business school”
- Employers are interested only in the business courses included in the curriculum
- By changing name to “agribusiness” enrollment can be increased in agriculture schools/departments
- Agribusiness curriculum is a “watered down” program which attracts “weak students” in business programs.

These myths come in the way in developing quality agribusiness program. Efforts should be made to educate administrators and faculty members as to the issues involved. In this regard an outside review committee could be very helpful in pointing out issues and educating administrators and faculty members.

One of the greatest challenges to teaching at the university level is not that of intellectual development but rather the elimination of learning obstacles, emotional or financial, so prevalent in our present social and economic conditions. Students have to

work excessive hours to pay for ever increasing tuition costs. Also, students (at least some) are willing to work excessive hours (to possess material things). The population of non-traditional older students is growing and bringing with it increased work and family responsibilities and the associated personal and financial stress to detrimental to optimal learning. Learning disabilities pose additional challenges that teachers at the university level are oftentimes ill equipped to deal with. Students graduating from rural schools and inner city schools' depth and breadth of high school education, pose special challenge for university teachers and administrators. These and other issues and concerns make it even more difficult to develop a relevant agribusiness program for all stakeholders.

### **Curriculum Planning**

Curriculum is a plan implemented through courses. It encompasses the set of student experiences directed by faculty which leads to a baccalaureate degree (Erven, 1988). Beauchamp defines curriculum as a written plan depicting the scope and arrangement of the projected educational program for a school. Sledge et al. have outlined two planning processes for curriculum development: Mission-Based and Competency-Based. These processes are depicted as systematic approaches to curriculum development. Curriculum development processes are uniquely institutional specific and related to the goals of an individual department, college, and/or university.

**Mission Based** – curricular development process is conceptual in nature and based on the premise that curricular planning and design relate closely and consistently with an institution's mission.

**Competency Based** – The competency based curricular approach is centered around a competency-based education orientation. The goal is to develop student competencies through specific instructional strategies (Miller and Seller, 1985). Two important assumptions under this process are: first, it involves all who are affected by the program. Second, it is assumed that curriculum encompasses all activities under the jurisdiction of the university including extracurricular activities, and internships etc.

Three distinctive inputs feed into the curricular planning process (Figure 1). The first input includes the concept of the educated person. The concept of the educated person is used to identify the competencies, skills, attitudes and other educational characteristics, such as adaptability, necessary for a graduate to be successful in life. Other parameters which feed into curricular planning and design include the determination of experiences and backgrounds of students coming into the program and the identification of institutional parameters. Student background is especially relevant to agribusiness programs because of

the integration of technical agriculture, business, and economics subject matter. Programs have to be planned to accommodate students coming from both rural and urban areas, as well as students from foreign countries. Institutional parameters include such items as mission statements, admission and graduate requirements within the various levels of the university and the administrative structure of the university. These considerations are again particularly important in planning an agribusiness curriculum because of the interdisciplinary focus of the program. Other related considerations include faculty strengths, departmental resources and industry cooperation and support.

Curriculum planning and design is posed at the center of the competency-based process and highlights two important planning activities that are relevant to agribusiness education. As illustrated, the competency-based process defines the scope of the curriculum. The scope of curricular planning is defined to be inclusive of the total educational process including formal classroom instruction as well as extracurricular activities and experience-based learning, such as internships and cooperative education projects. Secondly, the planning process involves all that are affected by the curriculum. As illustrated in Figure 1, input in the planning process may be solicited from faculty, students, alumni, administrators, and industry representatives. In addition, consultants with expertise in higher education curricular planning may be called in to assist in planning activities.

As suggested, curriculum modeling is a focal point in the curricular planning process (Figure 1). A modeling approach which appears to have relevance to agribusiness curricular development is the core-based curricular design. Sledge, et al. describe the core-based curricular model in concept as "...it will function as does an organism that responds to its environment, allowing for a selective flow of knowledge and internal balancing and interaction with the knowledge assimilated into the organism."

#### **Agribusiness Program at Tennessee State University( The Traditional Approach).**

In 1987, the School of Agriculture and Home Economics at Tennessee State University, a 1890 land –grant institution, was asked by its governing board to consolidate the three degree programs in agriculture into one degree program (department). As a result three departments – Animal Science, Plant Science, and Rural Development (Agril. Econ.) were consolidated into one department of Agricultural Science with three options (concentrations) Animal Science, Plant Science, and Rural Development. At this time, faculty in agricultural economics started examining how the option in Rural Development can be made more relevant and attractive for students and employers. After consultations

with administrators at the university, industry and government officials it was decided to change the option from rural development to Agribusiness. The main reasons for this change were:

- Agriculture is a fundamentally important sector of the mid-south economy: food processing and agribusiness are playing an increasingly important role as the agricultural economy continues to evolve. With this growth and as additional emphasis is placed on processed agricultural products, the need for strong managerial talent will become even more important
- Relationships with food and agricultural businesses: a strong program in agribusiness management provides a natural bridge to the food and agribusiness community.
- Increasing trade exports of agriculture and related products from Tennessee
- Change in make-up of incoming students: more and more students from urban areas, a higher percentage of female students, non-traditional students
- Need for increasing enrollment in agriculture
- An accredited College of Business curriculum

It was proposed (in 1991) that TSU's agribusiness curriculum be given an in-depth examination for evaluation and relevancy. This was done both internally and by a team of outside experts. The process of curriculum evaluation was centered around competency based education orientation (figure 1), the model proposed by Sledge et. al. (1987). This review brought out strengths and weaknesses of the curriculum and recommendations for improving the same.

The core-based model (adapted from Sledge, et al.) for developing an agribusiness educational program, used at TSU, is presented in Figure 1. This model recognizes knowledge from seven general discipline areas. The model includes provisions for addressing both depth and breadth of knowledge issues that are consistent with the concept of an educated person and the planning process in agribusiness education. For example, if one moves outward from the center of the model, depth and knowledge is gained whereas if one moves around the model, breadth of knowledge is gained. The model also includes provisions for core knowledge across the disciplines for students receiving a degree in agribusiness.

The model also emphasizes the interdisciplinary relationships within agribusiness education. These relationships are illustrated by the overlapping of discipline clusters. Within the core knowledge, curricular planners must give attention to interactions within

discipline clusters and establishment of prerequisite knowledge and coherence. For example, if faculty are concerned about international and multicultural awareness in the program, then courses from the humanities and social sciences can be carefully selected and knowledge from these courses integrated into major courses and other specialized subject matter courses.

As applied to agribusiness education, the model is expected to accommodate a wide range of students with different academic and cultural backgrounds. While maintaining an acceptable level of training for all graduates, the model allows flexibility to add depth of training for exceptional students. The breadth of training and the interdisciplinary focus of knowledge are also expected to provide the student with a basis for lifelong learning. In general, the model represents a holistic educational approach aimed at allowing the graduate to receive and assimilate information in a problem-solving framework. Key drivers/stakeholders for agribusiness curriculum and outcomes are presented in Figure 2.

Using the above basic model, an undergraduate curriculum in Agribusiness was developed at Tennessee State University, Nashville. This curriculum has seven components and four extracurricular programs as shown in Figure 3.

Forming alliances through partnerships is important for any quality agribusiness program but it is more so for smaller departments where resources are limited. Partnership here defined is a collaborative effort between and among entities or individuals that integrates expertise and competencies. Partnership properly examined involves both privileges and responsibilities. It is a challenge to build effective partnership while we strive to meet college administrative goals of increased efficiency and effectiveness simultaneously.

Partnership with industry is extremely important to the success of the TSU programs. Good industry interaction can:

- Provide ideas to keep the curriculum relevant
- Provide sources of ideas and data for case study development and thesis research
- May provide opportunities for financial support
- Build relationships that lead to jobs for graduates
- Reduce training cost and save time
- Improve efficiency and effectiveness
- Promote the enhancement of expertise and encourage use of new technology

Industry could be involved in a variety of ways. Industry partnerships with universities are an essential ingredient in preparing graduates for effective agribusiness careers. The benefits of such partnerships accrue to all stakeholders – students, agribusiness firms and university faculty.

Partnerships are established by selling their benefits to stakeholders and implemented by ensuring that the benefits are realized. The most common forms of industry university partnerships are (1) internships, (2) guest speakers from industry participating in individual courses, (3) industry advisor panels, (4) class projects, (5) recruiting students, (6) shadow or mentor programs, (7) case study subjects, and (8) executive in residence programs.

At smaller universities agriculture departments with fewer faculty member (specialts) and very limited financial resources, partnership with College of Business, industries and government agencies can be developed to develop effective programs and benefit all stakeholders.

### **Agribusiness Program at South Carolina State University**

SCSU is a land-grant institution. The School of Agriculture at SCSU was discontinued in 1968 due to the lack of enrollment. As a result of the Federal Desegregation Order in 1983, the State of South Carolina allowed SCSU to offer B.S. and M.S. degree programs in agribusiness. At that time the area of economics was in the Department of Business Administration (DBA) in the School of Arts and Sciences. As a result of the desegregation order, the DBA was organized as the School of Business with the Department of Agribusiness and Economics as one of three departments. Thus, the new agribusiness program and the School started simultaneously. In the euphoria of becoming a school, there was no apprehension on part of business faculty for having the agribusiness program in the School of Business. However, a few business faculty were hesitant for having an “ag” program within the School of Business.

The agribusiness program at SCSU is unique in the sense that it is housed in the School of Business rather than in the School of Agriculture. Only five other agribusiness programs in the U.S. are located in the Schools of Business. Accordingly, the curriculum and supporting student activities carry a total business orientation.

### **Curriculum:** (121 Semester Hours Total)

General Education requirements

48 hours

School of Business Core		46 hours
Economics (principles)	6 hrs.	
Business Statistics	6 hrs.	
Accounting	6 hrs.	
Management	12 hrs.	
Marketing	3 hrs.	
Business Administration	9 hrs.	
Professional Development	4 hrs.	
Major Agribusiness		27 Hours
Economics (intermediate Macro/micro)	6 hrs.	
Agribusiness required/electives	21 hrs	

**Total 121 Hours**

Agribusiness majors, as part of the business program, are exposed to a series of courses and activities called the Professional Development Program. Briefly, the program includes:

- Executive Speaker Series Program
- BA 101 Introduction to Business (Business executives speaker each week)
- SB 201, 202, and 203 Professional Development I, II, and III
- SB 400 Internship and Experiential Learning

The School of Business at SCSU is attempting to get an accreditation from the American Assembly of Collegiate Schools of Business (AACSB). After the school achieves AACSB accreditation, the agribusiness program at SCSU would get a unique distinction of being part of an AACSB-accredited school. As part of the accreditation process, the agribusiness majors are systematically exposed to the issues that form the business context, such as, ethics, internationalization, environment, diversity, etc.

Since the agribusiness students lack exposure to courses in production agriculture, arranging summer internships with the cooperative extension service or some agribusiness firms fills the void. However, majority of the students in agribusiness come from rural, agricultural backgrounds. Thus, a lack of formal courses has not proven to be a handicap for the graduates in getting employment.

Being in the School of Business program has proven to be mutually beneficial to the agribusiness program and the school. Agribusiness/Economics faculty members have

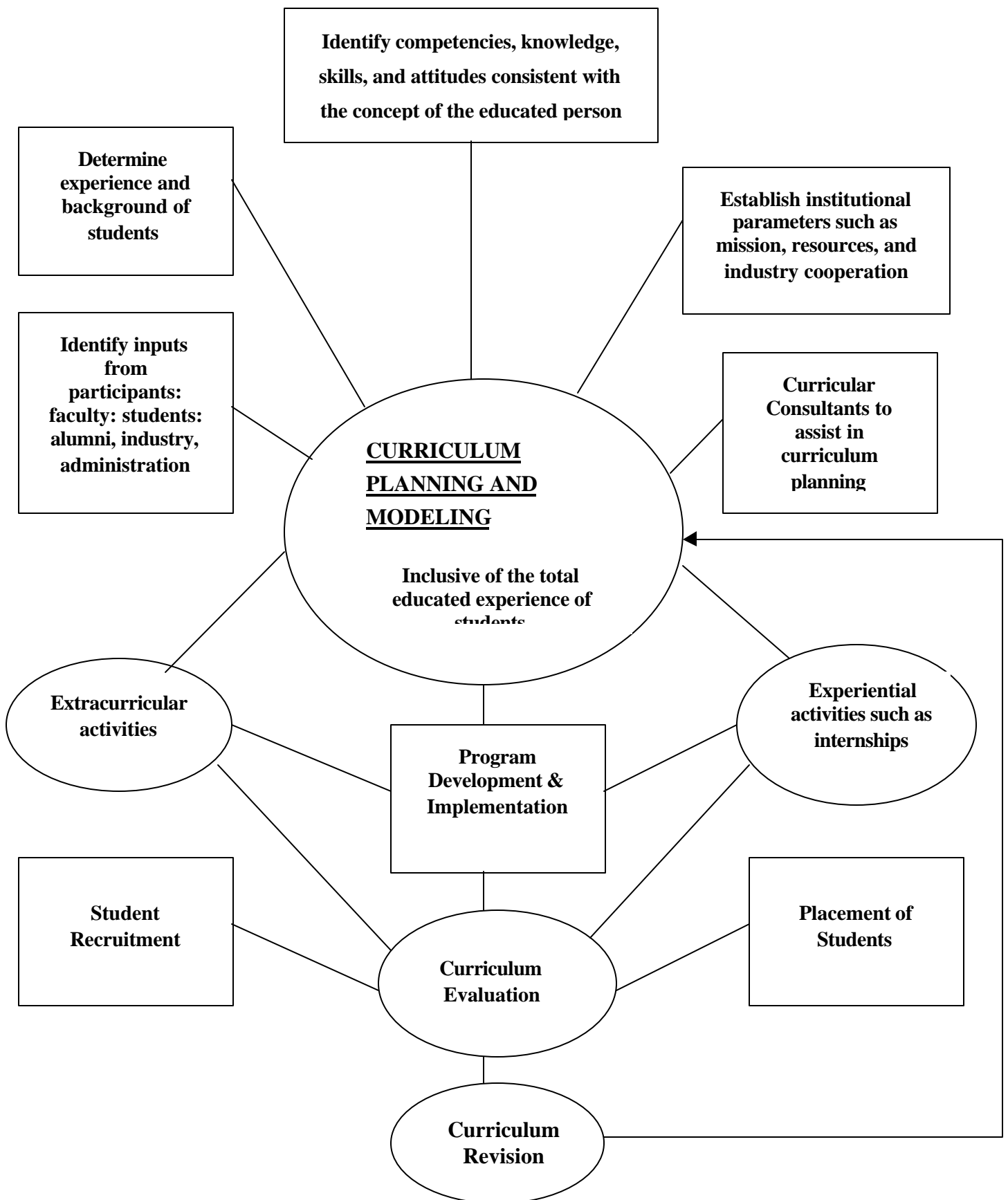
been successful in attracting USDA money to school through the Evans-Allen funds and the Capacity Building grants. Since some business faculty members were also able to tap into these funds, there has been a better acceptance of the agribusiness program in the School. Also, the agribusiness faculty members have taken a strong leadership with research and publications in the school.

**CONCLUSION:** It is recognized that program development is a dynamic process and more discussions on these and related topics would benefit all those engaged in developing agribusiness programs. The competency- based curricular development process represents a holistic approach to planning agribusiness programs. It represents an organized and on-going framework that may be used by faculties and others to address agribusiness educational needs and for achieving balance between what is perceived by faculty as an educated person and what industry perceives as the necessary skills. The two approaches presented have both advantages and disadvantages. It is important for all stakeholders to actively participate and make best use of given resources and take full advantage of characteristics.

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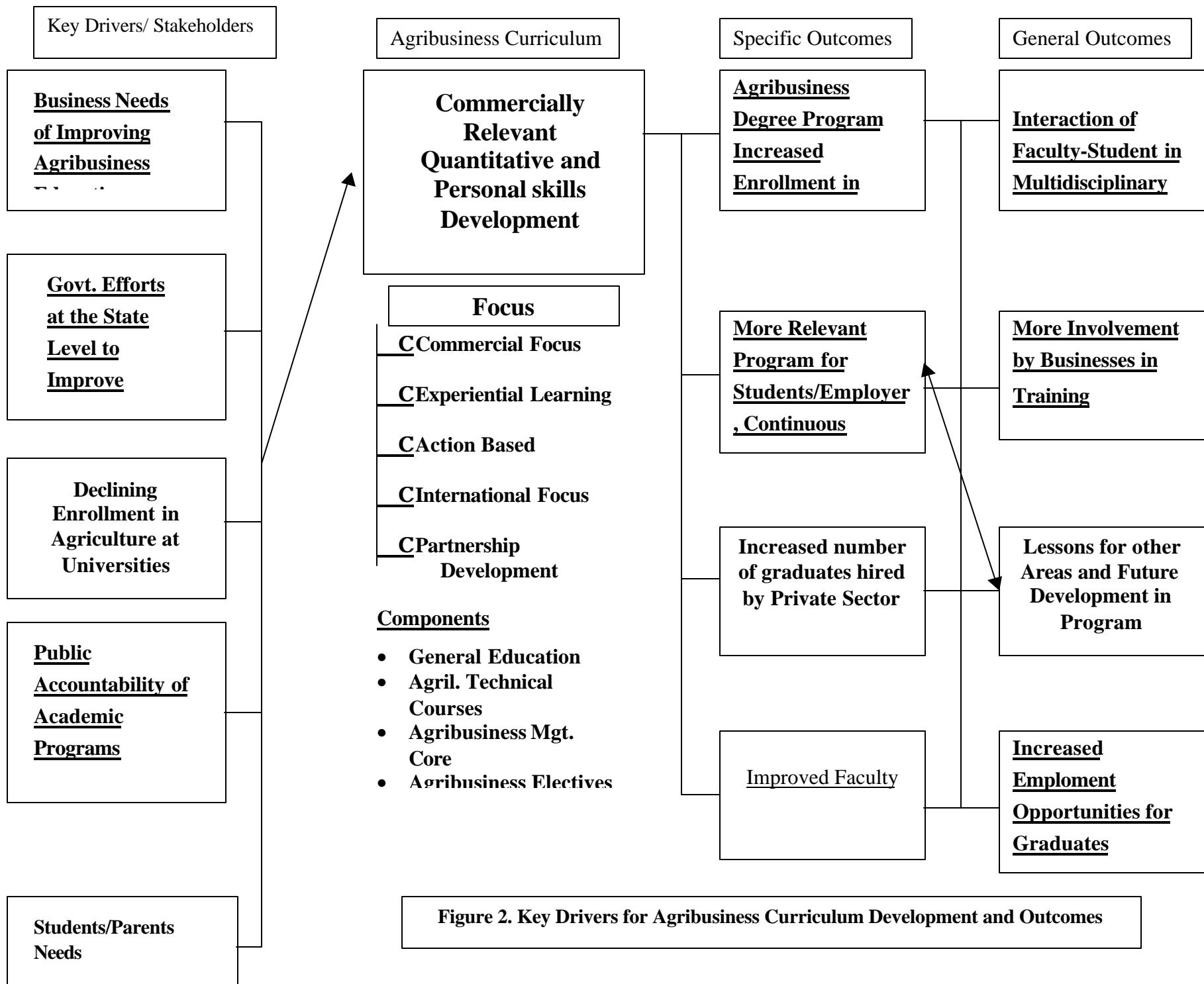
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**Figure 1. Competency-based curricular planning process. (Adopted from Sledge et al.)**





**Figure 3. Agribusiness Curriculum Components  
Tennessee State University**

I. General Education Courses	46 Cr. Hrs.
II. Agriculture Production Technical	15 Cr. Hrs.
III. Agribusiness Core Courses	24 Cr. Hrs.
IV. Agribusiness Electives	24 Cr. Hrs.
V. Quantitative Skills Development	12 Cr. Hrs.
VI. Human Resource/Interpersonal, Communication Skills and Leadership	6 Cr. Hrs.
VII. Practicum	3 Cr. Hrs.