

**Designing an Agribusiness Capstone Course in a
Non-Land Grant, Business School Environment**

by

**Gregory A. Baker
Associate Professor
Food and Agribusiness Institute
Santa Clara Univeristy
gbaker@scu.edu**

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INTRODUCTION

Capstone courses have become fairly ubiquitous both in business school and agribusiness management curricula. Many undergraduate and graduate degree programs have also added a capstone course to their programs. This is not surprising since the integration of discipline-based knowledge, the application of theory to real-world problems, the development of critical thinking skills, and an emphasis on oral and written communication skills, all common elements of many capstone courses, address a common set of deficiencies in most discipline-based courses.

While it might be expected that capstone courses in disciplines as diverse as wildlife ecology, power technology, radiology, and journalism would adopt very different pedagogical approaches, the different approaches used within the relatively well-defined field of agribusiness management is remarkable. A quick survey of the syllabi of agribusiness management capstone degrees reveals a diverse set of contents, instructional methods, and methods of assessing performance (Peterson; Hall; Baker). The lack of uniformity may be viewed as either liberating or a source of frustration. For those who believe that it is the latter -- keep reading.

The purpose of this paper is to explore some of the major issues involved in designing a capstone course in agribusiness management offered by a business school at a non-land grant institution. I have organized the paper around four major themes, course objectives, course content, instructional methods, and performance assessment issues, key areas in the design of any capstone course.

By way of disclosure, I should note that my experience with capstone courses is in teaching the agribusiness management capstone course to MBA students in a business school as well as

the undergraduate capstone class for business school majors and a capstone course to environmental studies majors.

COURSE OBJECTIVES

The capstone course for the MBA in Food and Agribusiness at Santa Clara University includes four explicit course objectives (Baker):

- Integrating and applying the knowledge gained in courses in the functional areas of management
- Learning the new material covered in the class
- Improving skills in clear, analytical thinking, and
- Improving written and oral communication skills.

There is also one objective that Westgren and Litzenberg, authors of one of the few published papers on the design of capstone courses in agribusiness management might call covert:

- Facilitating the transition between students' academic careers to their industry careers.

The rationale for the first objective, integrating and applying the knowledge that students have learned in the functional areas of management, is straightforward. Most courses are discipline based, however, most students will work in an environment that requires using information from several disciplines. Initially, students may find that their work falls within the confines of their chosen field of study, such as accounting or operations management. However, their effectiveness and career advancement will depend upon developing a broader perspective and the ability to communicate with managers in several areas.

An example from another field will serve to illustrate the importance of integrating knowledge. Engineering students may choose from several majors, including, chemical engineering, civil engineering, computer engineering, electrical engineering, and mechanical engineering. A student majoring in electrical engineering may take courses in electric circuits, electromagnetics, and information storage devices. However, because of the large amount of information required of today's graduates of electrical engineering students coursework is highly specialized and there is virtually no opportunity for students to learn the relationships between the various topics and fields of engineering. In the real world, electrical engineers will work with mechanical engineers and computer engineers to design products such as keyless entry systems or remotely controlled vacuum cleaners. To help students integrate their engineering knowledge many engineering schools have a senior design class or project that encourages students in one area to work with students in other areas.

Despite the fact that students will use knowledge in an integrated fashion, most courses are still discipline based. Perhaps this is because knowledge is best transferred in this way. Perhaps it is because it is convenient since most instructors learned in discipline-based courses and most textbooks are organized along disciplinary lines. Regardless of the reason for compartmentalizing knowledge it seems clear that students benefit by having a capstone experience that encourages the integration and application of knowledge as they will most likely use it in their careers.

The second objective is learning the new material taught in the class. The principal framework used in the course is strategic management, discussed in more detail under the section on course content.

The third and fourth objectives are to improve students' skills in clear, analytical thinking, and improve students' written and oral communication skills, respectively. Although both sets of skills are important to employers, they are not emphasized in most courses, which focus on learning specific concepts or tools. Furthermore, most instructors emphasize thoroughness in the analysis of problems and completeness in the exposition of answers, whereas most managers and executives require quick analyses of complex problems and a clear and concise recommendation. The purpose of these last two objectives, which emphasize critical thinking and communication skills, is to help prepare students to participate in a corporate decision making environment very different from the one to which they have become accustomed.

The above four objectives are all geared toward the unwritten course objective of preparing students to make the transition from the academic to the business world. Being able to work in a multi-functional environment, seeing the big picture, being able to analyze complex problems quickly, and communicating clearly and concisely are all skills that employers value and that will serve students well in their careers.

COURSE CONTENT

Strategic management is the principal paradigm for teaching capstone courses in business schools both at the graduate and undergraduate levels. I define strategic management at the business unit level as a comprehensive plan for the long-term success of the business unit. It includes the following elements:

- Definition of the business in which the firm competes

- Development of long-term objectives
- Identifying and maintaining core competencies, and
- Developing and maintaining a sustainable competitive advantage.

I believe that the strategic management framework is an appropriate choice for business school capstone courses in general, and for agribusiness management courses specifically, because it facilitates the accomplishment of the primary course objectives. Moreover, strategic management is concerned with the overall direction of the business, students are forced to think across functional lines. Because the use of the strategic management approach encourages students to take a broader perspective than they are accustomed and also prepares them for a career in industry where few issues have implications for only the marketing department or the production department.

While the strategic management paradigm is widely used as the principal framework for teaching business school capstone courses, there are several approaches to teaching strategic management. One approach is to focus on the *formulation* of strategy, as I have described above in my definition of strategic management. Others prefer to focus on the *implementation* of strategy, which focuses on the systems and processes required to successfully implement strategy, including strategic planning systems, organizational processes and structure, incentive systems, and control systems. Yet another approach is the *behavioral* approach to strategic management, which emphasizes the politics of making strategic decisions, and the bargaining and negotiation involved in making executive decisions.

One of the major arguments against using the strategic management paradigm as the framework for business school capstone courses is that students, particularly undergraduate

students, will not be in a position to participate in strategic management decisions for many years. The argument is that students will be better served by focusing on material that will be more immediately useful to them.

At the undergraduate level, there has been some movement in recent years for individual departments to offer their own version of a capstone course. Like the capstone courses designed for all business school students, the focus of these courses has been on the integration and the application of knowledge. The difference is that discipline-based capstone courses focus on integrating knowledge learned in diverse subjects within a discipline rather than across disciplines as is the case with business school capstone courses.

INSTRUCTIONAL METHODS

Capstone courses are characterized by a variety of teaching methods. The focus on the integration and application of knowledge learned in previous course work affords instructors the opportunity to be more flexible in their pedagogical approach than most courses. The list of instructional methods commonly used in capstone courses includes, lectures, discussions, case analyses, business simulations, projects, and presentations. The diversity in instructional methods mirrors the diversity in course objectives. In the discussion below I focus on those instructional methods that are especially important for accomplishing the objectives of capstone courses. These include case analyses, business simulations, projects, and presentations.

The case method is useful in accomplishing all four of the primary course objectives. Cases are chosen so that students are forced to integrate and apply prior knowledge in the functional areas of management as well as the strategic management framework in their analyses.

Students must present and defend their findings either in formal class presentations, in class discussions, or in written analyses. Students are required to clearly analyze the problem, make recommendations that are well supported, and clearly and concisely communicate their analyses. The case method is an ideal format for applying strategic management tools because well-written cases can succinctly convey the large amount of information required to make decisions related to the strategic management of a firm.

I have found that the case method works particularly well in accomplishing the primary goals of the capstone class. The use of many different cases allows the instructor to focus on the various facets of strategic management. Some cases may be used for more than one class period when the case is particularly involved or when it is used to accomplish multiple learning objectives. Students appreciate the opportunity to put into practice what they have learned as well as learn about many different companies in a variety of industries.

I have also found that establishing high expectations early on is key to ensuring that students get the most out of the case analyses, presentations and written assignments. In addition to clearly making my expectations known at the beginning of the course, I typically choose students whom I know will conduct a first rate analysis and make an excellent presentation for the analysis of the first case. Asking a few students in advance to critically evaluate the presentations is another way of encouraging students to adequately prepare the case analysis.

Business simulations also provide a format for accomplishing the multiple goals common to capstone courses. Simulations that focus on the management of the entire business require students to integrate knowledge from various disciplines. Furthermore, simulations, almost by definition, encourage students to apply the knowledge they have learned. To do well, students

must analyze complex situations and critically evaluate their results. Many instructors also require students to present their plans to the class as a way of developing their communication skills. Lastly, the decision-making process usually requires students to work in teams, a skill that is highly valued by employers.

One of the primary advantages of using business simulations is the depth of knowledge students gain. By making repeated decisions for one company, students develop an understanding of the company and the industry in which it competes in much the same way that managers develop expertise within an industry. Students learn from their mistakes and instructors can use the iterative decision-making process to illustrate the importance of various concepts.

Term projects are another method that is well suited to a capstone course. Projects that have as their aim the development of a strategic plan for a company accomplish the objectives of the integration and application of knowledge learned in the functional areas of management as well as the application of the tools of strategic management. They also require students to practice their critical thinking and communication skills. Like the business simulation, strategic management projects require a team effort, which can be a learning experience in itself.

One method that I have successfully used to motivate students to produce high quality term projects is to force them to find what I call a "client firm." The client firm is a firm that agrees to work with the student group by providing information on their company and industry, granting access to managers and executives, and agreeing to be present at the students final presentation of their term project. This is highly motivating to students because of the external pressure to produce justifiable results based on a solid understanding and analysis of the client firm's situation.

METHODS OF PERFORMANCE ASSESSMENT

Performance assessment is a challenge largely because of the non-traditional instructional methods utilized in capstone courses. Instructors who rely heavily on the lecture method for presenting class material will likely be satisfied with the traditional methods of performance assessment, including homeworks and examinations. The traditional performance assessment methods are less effective at measuring student performance on case study analyses, business simulations, and term projects.

I have abandoned examinations as a means of assessing student performance in capstone courses. While examinations are useful in measuring some aspects of student learning encompassed in capstone course objectives they do a poor job of measuring many aspects important to the accomplishment of the course objectives. More importantly, I believe that eliminating examinations is a symbolic gesture that indicates that the course is not a typical course and that the expectations are more in line with what will be expected of the students as professional managers than as business school students. The challenge is in devising a means of performance measurement that measures students contributions that are highly subjective in nature. It is particularly problematic when the deliverables are the result of a team effort.

Case study analyses are an example of material that is highly subjective in nature. Of course this is not unique to the field of strategic management. Case studies in marketing, human resource management, and organizational management are also subjective in that answers may not be clearly right or wrong and multiple approaches to solving the problem might be appropriate. One approach to measuring performance under these conditions is to be very clear about what is expected. I emphasize that the content will be judged on the soundness of the

students' recommendation(s), how well they have supported their recommendation(s), the appropriateness of the analytical tools they have selected, and the effectiveness with which they have communicated their ideas (clarity, conciseness, and organization).

When groups are used, as is often the case with term projects and business simulations (and sometimes case analyses), instructors are faced with a different problem. Each team produces only one piece of work but performance must ultimately be assigned on an individual basis. Some instructors handle this problem by assigning the same grade to every member of the team. This works well when the proportion of the overall course grade that is attributable to the team effort is relatively small, when the teams function well, and each individual's contribution to the team effort is relatively equal. When these conditions are not met, assigning the same grade to every member of the team is likely to lead to a great deal of dissatisfaction.

One method that is widely used to assess individual performance in a team environment is the peer evaluation. Group members are asked to assign each member of the team a grade based on the individual's contribution to the team's efforts. Alternatively, each team member is asked to assign each member of the team some number of points out of a fixed total. Because this is also a subjective evaluation, it is important to be clear regarding what the team members are being asked to evaluate. It is also critical that students know that their grade for the team project will be adjusted based on their evaluation by their peers, that is individuals may receive a higher or lower grade, based on the peer evaluation, than the raw team grade. This has the impact of eliminating the "free rider" problem and allowing students to base their contribution to the team project on their desired grade, like they would for an individual project assignment. Informing students in the early stages of the team project that peer evaluations will be used as a means of

performance assessment has the additional advantage of limiting problems between group members because members recognize that they will be rewarded based on their contribution and that free riders will be punished.

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