Teaching with Cases to Graduate and Undergraduate Students

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Case studies are tools that are widely used in graduate and undergraduate education. It takes time to learn how to get the most out of them for you and your students. The process involves trials and errors to determine the techniques that work best. What works for teaching graduate students may or may not work for teaching undergraduates. Likewise, teaching with cases in relatively large classes is different than dealing with small groups. To help speed the learning process for other academics, the four authors of this article shared their insights, methods, and tricks at the 1997 meeting of the Financial Management Association International in Hawaii. This article presents their views on that subject. (JEL: I220)

I. The Work of Professionals Requires More than Mastery of Core Knowledge

The philosopher, Alfred North Whitehead, said, "A merely well-informed man is the most useless bore on God's earth." Whitehead argued for a scheme of education that carried the student beyond the absorption of information, and into greater wisdom, and the ability to take action. Professional education should strive for nothing less. Finance is no stranger to this need.

In the wake of every corporate financial crisis, the public is treated to anguished reflections on the inability of technically competent managers to anticipate and forestall the ultimate reckoning. One memorable critic of the bankruptcy of the Penn Central Railroad in 1970 said that the securities analysts could report the number of railroad ties between Chicago and New York but not how likely was the survival of the newly merged firm.

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Exemplars in finance show us that exceptional performance is as much a matter of what you do with the important ideas in finance, as it is knowing those ideas. I encourage academic colleagues to comb the writings by and about leading practitioners such as Peter Lynch, Warren Buffett, George Soros, Sam Zell, Henry Kravis, Richard Rainwater, the Bass brothers, and even Michael Milken. Though often presented in an overblown (and sometimes anti-intellectual) style that makes scholars uncomfortable, the exemplars give us useful insights into attributes that are foundations of their success. In addition to technical mastery, such attributes include a sense of irony about technical mastery, familiarity with the limitations of the tools and concepts of finance, the ability to think critically and “outside of the box,” and the capability to seek and identify extraordinary investment opportunities. Other attributes are the ability to extract valuable information and useful analytical insights from a noisy environment, skillful bargaining, creative deal design, agility in moving into and out of investment positions, and a strong work ethic. Exemplars engage with confidence and sensitivity countries and regions outside of the United States. Finally, exemplars display a tough-minded empathy for the decision-maker, the person on the firing line, the person who needs to take action.

II. Implications for How We Teach Cases

Case teaching can build these kinds of exemplary attributes in our students. But teaching with cases is no guarantee of achieving these ends; it is true that there is no one style of case teaching. To prepare a new generation of finance exemplars requires classroom learning experiences that model and exercise these attributes. Here are some implications for how to frame those experiences.

A. Select Cases that Employ, Exercise, or Explore a Tool or Concept

The case should contain an analytic task, rather than simply describe an outcome. The starting point in case teaching should be an emphasis on active learning as opposed to passive teaching where the teacher or casewriter does all the work. Ideally, the case would take the student out to the frontier of his or her comfort zone in terms of technical challenge, familiarity with general business knowledge, and the need to take action based on analysis.

B. Highlight the Dilemmas of the Decision-Maker

To build empathy with decision-makers, good case discussions should dwell on the nature of the problem: its imponderables, the dilemmas it creates, and the practical effect of making one choice over another.

C. Get the Numbers and Critique Them

Students will resist the detailed review of their analysis out of a fear of embarrassment. But this search-and-discovery process is absolutely crucial. First, it models an intellectual fearlessness in rooting out error—this modeling leaves a lasting impression about how the student can conduct this kind of search in professional work. Ideally, it is the student rather than instructor who should lead the search, make the discovery, and recommend improvement—this again, is in the spirit of active, student-centered learning. Second, the process of critiquing an analysis builds social skills that will be invaluable throughout professional life: how to give and take critical feedback. Third, a careful focus on analysis usually reveals opportunities to economize on analytical effort, and to challenge faith in high precision—one can remind students of Warren Buffett’s saying, “I would rather be approximately right than precisely wrong.” Finally, it exercises “critical thinking,” a questioning mindset that challenges assumptions and conclusions. It is said that “there are no right answers in finance, but there are many wrong ones.”

D. Embrace Uncertainty

It is relatively easy in many case discussions to reduce analysis to one concluding number on which a recommendation is based. One often does this with novices who strain to get the analytical point of the case and are unconcerned with its managerial implications. But carried on too long, this reductionist approach is bound to backfire—it ignores the practical uncertainties associated with the messy world. Where possible, the instructor should encourage students to test the sensitivity of their findings to variations in assumptions, and to encourage the use of range estimates (rather than point estimates).

E. Demand the Action Recommendations Arising from Analysis

Every discussion should contain a “so what” to be explained to the decision-maker in the case. One of the enduring attributes of novice business students is their reluctance to commit themselves on a decision. Often this results from a lack of familiarity with the situation, a lack of confidence in the analysis, or from “analysis paralysis,” the overpreparation of a case. Ideally, two or three students would be asked to give recommendations. The instructor can focus on points of disagreement among the recommenders, and the reasons for their disagreement.
F. Look for Unintended Consequences

The decision-maker's current path, and alternative courses of action often carry the possibility of side effects. Peter Senge (1990) and others have advocated the need to consider the larger perspective of causes and effects throughout the "system" that constitutes the firm and its environment. Students need to be encouraged to anticipate side-effects of their recommendations, such as the loss of customers due to tightening of credit terms, changes in the motivation of employees due to changes in compensation, or changes in currency or interest rate exposure due to changes in financing policy.

G. Explore Opportunities for Further Work

As a practical matter, students have limited time to prepare a case for discussion and are bound to stop once they get an answer, any answer. Toward the end of a discussion, it is useful to stimulate students to consider how they would extend or polish their analysis if they had more time, how they would check assumptions, and what other sources of information they would draw upon. What the instructor should look for here is learning in real-time, i.e., from the criticisms, suggestions, and analyses of others. Most important, this models the learning mindset of professionals.

III. Conclusion

John H. McArthur, Emeritus Dean of Harvard Business School, liked to begin an explanation of the case method by saying, "How we teach is what we teach." My list in this note aims to connect the "how" and the "what" with a "why," our vision for the kind of professionals we want to prepare.

Benton E. Gup: Teaching With Live Cases

I began to experiment with live cases in graduate level courses after years of teaching with "traditional" case studies. A live case is the study of a present day financial issue using current, publicly available information to resolve that issue. Examples of live cases include determining the intrinsic value of a firm, making asset/liability management decisions for a bank, and making investment portfolio decisions. Both the students and I have benefited from this approach.

I. Selected Courses Using Live Cases

Two courses in which live cases are being used at the University of Alabama are Corporate Financial Policies and Bank Administration. Both are graduate level courses designed for our MA/MBA programs. In addition, live cases are used in other courses that are not discussed here.

Corporate Financial Policies is a case course that deals with the valuation of a firm. In this course, each student selects a company, and then determines the intrinsic value of that firm. Their choices are restricted to non-financial and non-regulated domestic firms. Their first case is to determine the strategies of their firm and at least two of its major competitors, and the critical factors (technology, demographics, etc.) affecting those firms. Next, they do an extensive financial analysis of their firm and its competitors. This is followed by determining their firm's cost of capital. The final phase is to determine the intrinsic value of their firm. The process involves making long-term projections of expected cash flows and then discounting those cash flows by the cost of capital. Note that each case is a building block for the one that follows.

The Bank Administration course uses both live and traditional cases to supplement lectures. Each student is asked to select a bank from the listing of bank stocks in the American Banker. Their first live case is an analysis of their bank's strategies and a financial analysis of their bank. Understanding banks' strategies is important because the financial behavior of a regional consumer oriented bank is going to differ from that of an international investment oriented bank. The second live case is an asset/liability management decision. Based on available information about expected interest rates and economic conditions, students have to make a recommendation to their bank's asset/liability management committee about the "dollar gap" position and how to hedge that gap. Their final case involves a commercial loan decision. The loan decision combines a traditional case about a lending decision with lending requirements of their banks.

II. Requirements for Teaching a Live Case

Live cases are not self-contained like traditional cases, and they are not suitable to deal with many types of issues. First, a live case must deal with a problem that can be examined using publicly available data, e.g., corporate valuation problems. Second, the problem must be resolved within the time frame of the course. Finally, live cases require readily available data. A tour of the library, with an explanation of all of the resources that are available for the course is essential. It should be done the first few days of class. Typical resources include:

- Internet
- Securities and Exchange Commission: Edgar (SEC Filings)
• Federal Reserve Bank of St. Louis: FRED (Federal Reserve Economic Data)
• Federal Deposit Insurance Corporation (bank financial statements)
• Corporate web sites.
• Bloomberg—financial data, betas, earnings forecasts, etc.
• Lexis/Nexis
• ABI Inform
• COMPSTAT
• Search engines on the internet

Students are encouraged to contact the company for information as soon as possible.

At the beginning of a live case course, it is important to stress to the students the use of “judgement” in making financial decisions, including which data to use. In this regard, “assumptions” play a crucial role. Accordingly, there is no single “correct” answer. This point is emphasized throughout the course.

III. Why Use Live Cases?

• Live cases provide the opportunity to apply finance theory to practical situations using the latest “real-world” data.
• The “hands-on” approach keeps things real and interesting as new developments emerge day-to-day.
• Freedom of choice: The students are free to choose the firm they will analyze. This increases their interest in the case because the firm was their choice – not yours.
• Students learn to use “judgement” in dealing with issues, rather than seeking a single “right answer,” and they learn how to apply finance theory.

IV. Shortcomings of Live Cases

Live cases are not suitable for every case course. They are limited to situations for which current data are available. Such situations include: valuations, selected investment decisions, portfolio decisions, forecasting, etc.

Another limitation is that the quality of the data for publicly held companies varies widely. Annual reports, 10Ks, 10Qs, and corporate news releases may be out of date, but that is the best primary information that is available. Data from secondary sources (COMPSTAT, Bloomberg, etc.) may differ from primary data due to adjustments they make to standardize the data.

Finally, live cases require more effort from students than traditional cases because the information is not neatly packaged in a case book, or sanitized to eliminate unnecessary or confusing data. Thus, the student must decide what is relevant.

Bennie H. Nunnally, Jr.: Case Study in Undergraduate Finance

The purpose of this section is to present what I believe are the most prominent aspects of using the case method of instruction at the undergraduate level. There are a variety of reasons for the case method’s enduring use. However, professors report varying degrees of success with its use. These varied results may be due to the manner in which cases are selected, the way in which cases are used in class, especially in terms of the appropriate classroom “atmosphere,” or the type and level of course for which cases are used. There is an extensive body of literature, going back 25 years, which explores most of the relevant considerations in this useful and interesting approach to finance instruction. This section acknowledges much of that literature and presents a discussion of additional points, which may make the use of cases more efficient for the student and the instructor.

If the overall objective of the finance instructor is to facilitate the learning process, (as opposed to “teaching”) then the case method in all its variety is appropriate irrespective of course level. The difference between teaching as a focus and student learning is not merely semantic. The present day emphasis on “outcome” is concerned with what is learned. Thus, the relationship between effective teaching and what is actually learned should be of great interest to the classroom instructor.

The use of cases continues to receive considerable attention in the literature. Case books continue to be published and case “clearinghouses” and other sources of cases do a relatively brisk business. (Useful sources of cases include the Case Research Journal, the Business Case Journal, and case textbooks from such publishers as Irwin/McGraw-Hill.) The reasons for the enduring use of the case method as learning tools are varied. The literature on the subject places this in both historical and pedagogical perspective. Roulac (1975) states that “the case method can accelerate the transition from intellectual dependence to independence and self reliance.” Viscione and Aragon (1978) wrote, “When successful, the case method can provide a unique opportunity for students to become intimately involved with the financial decision-making process.” It is clear, however, that use of the case method must be approached with careful consideration for the task at hand. Gitman, Lewis, and Yates (1987) wrote, “The selection of cases depends upon three key parameters: cognitive educational objectives, course level, and case complexity.”

In a 1993 article, Trahan urges caution because “There are many possibilities for case types, instructor roles, and student roles,” “The myriad of combinations
makes describing one correct approach impossible." Thus, the selection of the appropriate case and when it should be used is of great concern. The Trahan article is not only a useful and comprehensive assessment of the flexibility of the case method, but it also provides a thorough bibliography of research on case teaching. The idea here is to complement that assessment with a discussion of the role of the classroom atmosphere relative to the efficacy of the case method of instruction. Brigham, Fischer, Johnson, and Jordan (1972) argue for the use of "short cases" in the basic finance course, but cautions that "... they can be used, if they are used properly, by almost anyone, although they are not necessarily the best way of teaching every basic finance course." Nunnally and Plath (1997) state that the purpose of their case book is to "... reinforce and expand upon the theoretical material learned in the introductory undergraduate business finance course."

I. Teaching with Cases Today

It seems clear, based upon nearly 20 years of using cases in the undergraduate finance courses, that cases accelerate the experience of students, to paraphrase Roulac (1975). Such benefit may be seen in the project usually required at the end of the course, and in the day-to-day preparation and enthusiasm of the students. But, it will be useful to start at the beginning in order to illustrate the entire process.

The introductory course in business finance at the Belk College of Business Administration at the University of North Carolina at Charlotte is taught using the lecture method. This is a committee decision, and it has stood for some time. Two business finance courses (in addition to four other finance courses) are available to the finance majors at the Belk College beyond the introductory course. One is a finance "theory" course, the other is known as "Applied Business Finance." The "applied" course is the case course. The use of cases in that course, which has been the primary learning tool since the course's inception in the early 1980s, is based on a process which has the following primary characteristics.

- The instructor's intimate familiarity with the manner in which instruction is delivered in the introductory course.
- Clearly defined objectives for the applied course. (To broaden and deepen the material covered in the introductory course.)
- A candid discussion with students on the first day of class concerning why cases will be used, how they will be used, the instructor's idea of the most beneficial role of the student and the instructor in the case method environment and, the overall evaluation process of those enrolled.

To take the above in turn, any information concerning the experience, academic or otherwise, of the students in a case course is very important. It provides a general idea of the proper level and tone of the classroom environment. For example, if the introductory course experience has been comprehensive, and reasonable expectations set, then those students taking the subsequent case course are less likely to be apprehensive about the demands of this unfamiliar type of learning tool. In such a situation, given thoughtful case selection, the students will find themselves having moved from extensive and regularly assigned end-of-chapter material to cases.

The objectives for the case course should be carefully set down for the students. Regardless of whether the course is business finance, investments, multinational finance or some other course, clearly defined objectives are essential. Clear objectives let the students know that even though they are unfamiliar with the use of cases the instructor is not. When students see cases for the first time, it is advisable to reassure them as to the learning value of cases. Stated objectives for the course help to accomplish that.

The instructor, in explaining the "why and how" of case learning should be very clear concerning the day-to-day operation of the classroom setting and the evaluation process. For example, class participation is a logical and beneficial part of the case method. Certain ground rules should be laid down concerning participation, the first of which must be that students observe common courtesy. The case classroom is a learning environment; not a place for the unrestrained exercise of egos or any other behavior that impedes the learning process.

In addition, the instructor should plainly state what her or his role would be. For the undergraduate course, the instructor's role is best described as that of "coach," illustrated by Gitman, et al. (1987) as taking a "...more active part in the case and assumes more responsibility for the conduct of the class but still allows students to play their own game." This is an ideal stance for the instructor. If this role is not properly assumed the time in class may be inefficient. The discussion may get off-track or become too far ranging.

The evaluation part of case method learning is also important. The instructor simply has to learn to keep a mental "record" of the class participation of the students and to record such participation in a grade book in the office once class is over. It may be reasonable for class participation to constitute fifty percent of the total course grade. Students must be
made aware of this at the outset and the instructor has to ensure that it is carried out. This works if the students sense a non-intimidating and non-threatening environment, and if they are given "feedback" at least once, approximately midway through the course. The students' names should be learned as quickly as possible. This greatly facilitates the instructor's role as coach.

II. Case Selection and the Day-to-Day Use of Cases

In selecting cases, several things must be considered. First and foremost, cases must suit the course objectives; objectives must be related to the level and the experience of the students. For example, if the overarching learning objectives in second level undergraduate finance courses are problem formulation in unstructured contexts and formulation of alternatives, (Visscione and Aragon, 1978), then the cases selected should offer that learning opportunity.

There are "open-ended" cases of the Harvard or University of Virginia's Darden School variety, and there are more structured cases from which to choose. The distinction between these two types of cases is perhaps not as clear-cut as it once was. It is essential; then, that the instructor becomes intimately familiar with the case material before it is selected for classroom use.

In the classroom, once a semester's worth of cases have been selected and are in the hands of students, the actual operation of case study is underway. The initial discussion may proceed along the lines of a general outline of the case. "What is this case about?" is a question that is useful to open the discussion. From there, the objective is to narrow the discussion to focus upon the "environment" described in the case. That is, what part of the problem is within management's control, and what part is not?

From that point, it is a matter of guiding the discussion (managing the discussion may be a better word, as the concern now is to keep the discussion within some reasonable bounds, and moving toward an objective). Once the class is almost over, it is very important that two things happen: 1) to reach some level of resolution, this may be a matter of illustrating a correct way in which the problem may be resolved, and 2) to summarize the things which were said in class which bear directly upon the problem and its resolution.

Finally, there will be students in class who will not readily participate. They can be brought into the discussion by referring to them by name, especially when there is a fairly straightforward question on the floor. This may serve as a confidence builder. Also, a final project is a useful means for bringing together the things learned in the course. This may be assigned at the outset of the course, with the outline provided by the instructor. A few minutes at the beginning of class may be devoted to questions concerning particular aspects of the project. This clarifies the assignment, allows similar questions to be answered all at one time, gives the reticent students a reason to participate, and makes for a better final product. A "valuation" paper is a useful final project. It requires a progression from a company's financial ratios to its position in the industry to its capital structure/cost of capital to an intrinsic value calculation for the common stock. Students report that such a project is most helpful in "pulling it all together."

Cases are flexible and useful as learning tools and the variety of cases available permit a selection appropriate for many different classroom settings. With a bit of forethought, familiarity with the prerequisite courses, and ample preparation, case teaching is interesting and effective. Most important, cases make the material more "memorable" and relevant for the students.

Laurence C. Pettit, Jr.: Designing The Case Course, Step-By-Step

The elements of designing a case course differ little between graduate and undergraduate levels. The primary method of adjusting the course for level of its content is in the selection of cases. For example, a corporate finance course at the graduate level may assume more preparation, experience, and sophistication on the part of the students. The necessary elements are as follows.

I. Prepare an Outline

A. Develop Objectives

The course should be designed with topical objectives such as working capital management and capital budgeting techniques as well as developmental objectives like developing cash flow, analytical competencies, and group leadership opportunities.

B. Inventory Potential Cases—Two per Topic

An inventory of potential cases, usually two per topic, should be included in your outline. This provides an opportunity to explore different approaches or situations, which apply to the same financial issues. Cases should touch on more than one developmental or topical objective at a time, thus providing overlap and reinforcement as you move through the course.
C. Fit Cases or Topic to Outline

Fit the cases into your course outline in such a manner as to provide cumulative impact on specific objectives. For example, use cases with significant receivables problems or production and inventory problems to develop and reinforce the management of working capital.

D. Prepare Lectures, Notes, or New Cases

Prepare short lectures or class notes that will augment and focus the cases as they apply to your course outline. Limit the lectures to 15-20 minutes and the notes to one to two pages. Remember that the case is not to illustrate or provide examples for these lectures or notes, but rather the lectures or notes are to provide insights into the framework, which the outline is developing.

E. Revise Outline

By this time, you will discover that either you have too much material or that the outline does not represent cohesive developmental effort in bringing the topic into the learning environment. So—revise accordingly.

II. Begin Instruction

A. Teach and Revise by the Day

Once in the classroom, the case may teach very differently than you imagined in your preparation of the outline. The level of understanding may vary from class to class or because of other courses, such as marketing or policy, which may bring different insights into your case topics. Therefore, you may need to revise your course objectives by the daily results.

B. Use Case or Discussion Exam Only

If cases are the primary teaching vehicle, you must examine with cases to continue to amplify the pedagogy. Cases are not designed to teach facts, but rather to teach processes. For example, a multiple-choice exam would destroy the continuity required to develop such processes.

C. Assume the Following Roles

Throughout the semester the instructor is called upon to assume varying roles within the class. Some roles are particularly appropriate early on in the class, while others dominate the teaching execution in the closing stages of the class. As discussion leader the instructor must provide both the environment and the incentive to bring topics and problems to the fore in the case discussion. In my experience, this is a particularly important role early on in the course. Later, the instructor needs to step out of this role and allow the discussion leadership to reside with the students.

Occasionally, the instructor must provide information or insights to round out the information provided in the case. Not all students come to the classroom with an equally broad background. Students are often content to allow the instructor to be the expert. To avoid being forced into the expert role, the instructor should resort to comments like “have you thought about... is this similar to an acquisition... or do we need this information to resolve the issues in the case.” If forced to use the expert role, limit it to a specific issue or technique and—don’t dwell on it.

The role of summarizer is extremely important throughout the class and as a means of connecting cases through the course. Summarizing students’ points brings closure to intermediate topics and allows the class to move on towards solution. Summarizing topics discussed on a day by day basis will provide connection among the cases with regard to both topical and developmental objectives. In addition, the instructor is required to make judgments about material presented or the direction of the case discussion, so that focus and order can be maintained within the classroom. You should seek to do this using an informal technique if possible, so that the class continues to think together about the problem rather than looking to the instructor for positive reinforcement about a debatable point.

III. Teaching the Case

What follows is a typical day’s action in the classroom. It should be clear that more direction is required earlier in the course rather than later in the course when students initiate analysis without prompting.

A. Warm Up with Informational Questions

Informational questions, which fill out the environmental or prime actor portions of your blackboard, are useful in eliciting comments from students who lack confidence in their own solutions and analysis.

B. Use Directional Questions

Encourage students to participate in the “question asking” as well as “question answering” aspects of the case.

C. Be Selective with Blackboard Material

Be very selective about which student comments actually make it to the blackboard. By midterm, students will understand the importance of making
comments that move the discussion forward (show up on the blackboard) versus regurgitation of case facts.

D. Implement an Optimal Pattern of Discussion

The optimal pattern of discussion would include dialogue between students rather than the student to instructor and back to student technique used in lecture formats. In summary, a well-run case environment will likely appear as in Figure 1.

Overall Summary

The use of cases in graduate or undergraduate finance courses is flexible and effective if used with care. Such care begins with the selection of cases. The educational objectives, the type and level of the course, and the background of the students are the key criteria for case selection. In a broader sense, the professional attributes desired for students should influence how cases are selected and used. The wide variety of case types and levels make careful selection even more important. Cases may be “live,” those that address managerial situations using the latest data, or cases may be of the more traditional variety. In either instance, the educational objective must be paramount in the selection and use of cases.

Students must be made comfortable with case learning. The instructor must be candid with students concerning why cases are being used. The day-to-day operation of the class, and the evaluation process must be a central part of this “orientation” by the instructor. The role of the instructor is another critical part of the successful use of cases. A clear outline, creating and maintaining the proper classroom environment, and guiding the discussion rather than dominating it are necessary tasks for the instructor. Each aspect of the course, from case selection, to classroom atmosphere, to evaluation must be related directly to the interactive format, which is a desirable and necessary part of the use of cases.
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References


