

HELP FOR TEACHING STRATEGY COURSES IN A VIRTUAL WORLD

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ABSTRACT

Due to COVID-19, almost all university instruction has gone online (either synchronous, asynchronous, or a combination of both). Online instruction has existed for many years but was mainly asynchronous with some web conferences for interaction with students. With new tools such as Zoom or Microsoft Teams, synchronous classes have supplemented (or replaced) the previous asynchronous online classes. Either of these methods are especially difficult for a strategy course since many professors use simulations in their course. Professors must make sure each student understands the simulation as well as how the simulation relates to the strategy process covered in strategy textbooks. In a classroom or lab setting, the professor could walk around the class to see what the students are doing and to answer questions in real-time. Online presents more challenges, but if the simulation “matches” the chosen textbook, it makes the professor’s job much easier.

INTRODUCTION

Universities across the world have been offering online courses for the past 20 years. With the ever-increasing competition for attracting and retaining students, online education became a high priority for most institutions. According to the National Center for Education Statistics, enrollment in distance education courses has almost doubled from 2000 to 2010. More than half of the educational institutions are offering some distance education courses (Chasteen, 2014).

Gladieux (2000) discussed the prediction from well-known management guru Peter Drucker that within 30 years, the residential university campus as we know it will be outdated. While this prediction was extreme, there is no doubt that significant changes in higher education have occurred. Gladieux (2000) went on to say it is impossible to know exactly what these changes will be because of the rapid change in computer and related technologies. With the push from administration and students for online learning, there is a new set of challenges and opportunities for business professors.

COVID-19 has accelerated the move to online education. In 2020, almost all university instruction has gone online (either synchronous, asynchronous, or a combination of both). With new tools such as Zoom or Microsoft Teams, synchronous classes have supplemented (or replaced) the previous asynchronous online classes. Both of these online methods are difficult for a strategy course since many professors use simulations in their courses. In a classroom, the professor could walk around the room to see what the students were doing and to answer questions about the simulation in real-time.

But how can a professor do this online? Online synchronous classes allow this real-time feedback to some extent, especially if breakout rooms are used. In addition, if the simulation “matches” the chosen textbook, the professor’s job is much easier since the textbook provides a written template for the total course. This paper is based on the Dess strategy book (Dess et al, 2019) and the Capsim simulation (capsim.com, 2020), but is applicable to other textbooks and simulations.

If faculty are already teaching online courses, they already know the value of a good textbook that provides a written structure for their online material. A good textbook helps to increase student understanding since online faculty do not get the real-time feedback that they got in a face-to-face class.

However, if faculty are new to online teaching, this paper will show how a good textbook can provide a template for students that fall behind, misunderstand some of the key topics in the course, or miss some of the synchronous lectures.

SIMULATIONS FOR STRATEGY COURSES

Simulations span the knowing-doing gap. In previous courses, students have gained much business knowledge in accounting, marketing, operations, and finance courses. In a strategy course, students must combine this knowledge to understand the management of firms. The simulation should illustrate the key strategy question – “Why do some firms outperform others”. In the simulation, whether as teams or as individuals, students manage firms. Teams usually work better since managing a firm is a complex problem (Chasteen, 2016). Some teams will outperform others. Students must then determine what they are doing right or wrong and make changes to improve the performance of their firm. The synchronous format allows the professor to answer questions in real time similar to a classroom.

Students will go through all three parts of the strategy process (analysis, formulation, and implementation) to make operational decisions for their firm. Their decisions should lead to a competitive advantage for their firm. Students will then review the year-end results by reviewing annual reports to see if their decisions resulted in good profits and an increasing stock price. Students will then repeat this process for several more rounds/years.

The simulation involves many of the key attributes of strategic management. The simulation involves multiple functional areas of the firm (R&D, marketing, production, and finance), both short term and long term decisions, and different operational decisions to correspond to different firm strategies. There can even be different strategies for the different products within the same firm.

In summary, the simulation puts each part of the strategic management process into an ongoing exercise where student teams must analyze the current situation of a firm, develop a strategy based on this situation, put this plan into action, and then make corrections as necessary to improve performance (Anderson and Coffey, 2004). The following sections show how each topic in a standard strategy textbook can be demonstrated by various parts of a strategy simulation.

Analyzing the External Environment

One of the key parts of a strategy course is to illustrate the importance of forecasting – deciding what and how many products a firm should build. This is a very important part of most simulations. If you forecast and build too much, you will have excess inventory and a possible emergency loan. If you forecast and build too little, you will stock out that allows the other teams to gain extra profits. Scanning and monitoring the external environment can improve a real firm's forecasting. The same applies to the simulation (Hall, 2015).

One of the major unknowns in the simulation is what the other teams will do each round. However, the annual reports in the simulation can give you a good prediction of what the other teams could do. It shows their existing products and how much production capacity each product has. It also has information on their future products. Based on this information, your firm can decide its decisions for the next year and modify its strategy if required.

Bad forecasting is a major problem for many students. Bad forecasting can look good in the “proforma” reports but these good results do not actually happen, leaving students with large emergency loans. In a classroom, faculty can comment on bad forecasts either before or after the round. This faculty critique was hard in previous asynchronous online classes but can be given easily and in real-time in synchronous classes, especially if team breakout rooms are used.

Analyzing the Internal Environment

The internal environment are the items that students can control during the simulation. Each team must make decisions in four areas (Research and Development, Marketing, Production, and then Finance). This is the standard value-chain presented in most strategy textbooks

Teams decide when and how many different products to develop, the price for each of these products, and a sales forecast. The sales forecast shows how many products to produce based on the existing inventory. The production forecast determines how large a factory is needed and how much automation should be used. Finally, students must determine how much capital is required to finance these decisions including if by stock, bonds, or short-term loans (Teach and Szot, 2018).

The game can be graded by the two evaluation methods presented in most strategy textbooks: either financial ratios or the balanced scorecard. Again, real-time explanation can be easy to do in a classroom but was hard in previous asynchronous online classes. However, real-time explanation can be given in synchronous classes.

Additional Simulations Modules

Most simulations have additional modules such as Total Quality/Sustainability and Human Resources. These topics are also covered in most strategy textbooks. Faculty can decide if and when these additional modules are to be used (Wolfe, 1978).

A Total Quality/Sustainability module allows teams to add unique competencies to their firm that can improve their team's performance with respect to other teams. However, there are costs associated with Total Quality and Sustainability improvements so teams must decide when and how much to invest in these initiatives.

A Human Resources module also allows teams to add unique competencies to their firm with respect to training and turnover. Again, there are costs associated with Human Resources improvements so teams must decide when and how much to invest. There are also advanced Human Resource decisions that relate to possible strikes and negotiations. Again, faculty can decide if and when to introduce these advanced factors.

Previous asynchronous online classes could cover these additional modules fairly well using prerecorded lectures. However, the new synchronous classes allow faculty to check in real-time if students understand the importance of these additional modules that will allow a team to differentiate their team from the competition.

Business-Level Strategies

This topic is a key topic with respect to the simulation. Most strategy textbooks present the three generic business level strategies developed by Michael Porter that a firm can use to create competitive advantages (overall cost leadership, broad differentiation, and focused on a certain niches). Some simulations expand these generic strategies to six business level strategies

(broad cost leader, broad differentiator, niche cost leader, niche differentiator, cost leader with product lifecycle focus, and differentiator with a product lifecycle focus).

A good simulation explains the purpose and objectives of each of these six strategies and then shows how the six strategies should be applied to each of the functional areas (Research and Development, Marketing, Production, and Finance). Some simulations provides example decisions for each of these six strategies if faculty wants to use them.

Most simulations explain that there are no “silver bullet” strategies. Any of these six strategies can be the winning strategy – it depends on how well the team implements their strategy. The team may also have to modify their strategy to meet the external environmental conditions and/or to respond to the actions by the other teams. The new synchronous classes allow faculty to check in real-time if students understand the different business strategies, which ones they should use, and how to pivot to a plan B (a new strategy) if required.

Corporate-Level Strategies

Most strategy textbooks cover corporate strategies. However, few simulations allow mergers or acquisitions. Students may see the value of a corporate take-over if another team has lots of production capacity but little cash to support future activities. Many students will ask if they could buy another team in this situation.

However, buy-outs are not currently in many simulations because what does the professor do with the students in the firm that was acquired? Instead, faculty can discuss the pros and cons of such corporate activities. Such discussion can provide a great learning experience for students since most will not face similar situations until much later in their business careers.

Previous asynchronous online classes could cover these corporate strategies fairly well using prerecorded lectures. However, the new synchronous classes allow faculty to discuss in real-time the pros and cons of corporate merger or acquisition activities as shown in the simulation data.

International Strategies

Globalization is a key issue in today’s world. Therefore, most strategy textbooks have one or two chapters on this important topic. Many simulations have an international component, but not all of them. Faculty must decide how many additional factors they want to have in their simulations and then pick accordingly. If the professor desires international aspects, there are simulations that illustrate most of the factors involved with an international expansion.

Previous asynchronous online classes could cover globalization fairly well using prerecorded lectures and videos. However, the new synchronous classes allow faculty to discuss in real-time the issues involved in global expansion and the complexity it bring to a simulation. Faculty must decide if this added complexity detracts from the basic strategy simulation. Sometimes, faculty decide that a simulation in an international management course could cover the complex international aspects.

Entrepreneurial Strategies

Innovation and Entrepreneurship are key topics in most all business courses, especially strategy courses. New ideas are what keeps an economy and businesses moving ahead, whether a large firm or a small start-up. Managing a simulation firm is much like managing a start-up business. Teams must evaluate possible opportunities, locate resources (both human and financial), and then provide team leadership. Entrepreneurial strategies are much like the generic business-level strategies discussed above and can be included in simulation. The new synchronous classes allow faculty to evaluate in real-time how well teams are managing their simulation firm.

Teams must continue to evaluate their strategy with respect to their performance and the performance of other teams and then make corrections as required. One of the key advantages of a computer-based simulation is that students can more risks than they could in the real world. This allows students to act more like an individual entrepreneur.

Strategic Control

The strategic control topic in most strategy textbooks is a key component of the simulation. Students make decisions at the beginning of each year in each of the four functional areas (similar to the traditional control discussed in most textbooks). Some of the simulations allow one update to these decisions during the year (similar to contemporary control discussed in most textbooks).

Students should use the simulation proformas to assess the quality of their decisions. However, proformas are only projections for the upcoming year but they do help students envision the impact of their decisions and sales forecasts.

At the end of the year, students can see the performance of their firm in the annual reports. Annual reports are the actual results of the previous year. Students should analyze these reports (both for their team’s performance and for the other teams’ performance) as inputs to their decisions for the next year. Based on their team’s progress toward their goals, student may have to modify their strategy and tactics (similar to emergent strategies).

Again, previous asynchronous online classes could cover strategic control fairly well using prerecorded lectures and videos. However, the new synchronous classes allow faculty to check in real-time how well a team is controlling their firm and what modifications should be made.

Effective Organizational Designs

Teams must decide how to organize. Some teams will use a simple structure where everyone works together for the decisions for each of the four functional areas. Other teams will use a functional structure where students make decisions in each of the four functional areas (Research and Development, Marketing, Production, and Finance). Depending on the size of the teams, there could also be hybrid versions of these traditional organizational designs.

The simulations have products in different market segment in the perceptual map such as low tech or high tech products. Therefore, these different market segments may require different strategies for each of the market segments such as low cost for the low-tech segment and differentiation for the high tech segment. Therefore, a team may need to use an ambidextrous organization design. The new synchronous classes allow faculty to check in real-time how well a team is organized and what modifications could be tried. Team peer evaluations can be used in both synchronous and asynchronous classes to allow the faculty to determine how well the team is working together and if changes should be made.

Leadership

Leadership is another key component of real firms and simulation firms. Someone must make sure that all the required actions are completed before the due date. Students will learn and practice leadership as they run their simulated firm. It is essential that everyone on the team contribute. No one person should try to make all the decisions – the team may do OK in the team rounds but the other students will have major problems in individual rounds. Students can practice emotional intelligence as they attempt to lead their group to improved performance by ensuring everyone on the team contributes.

Simulations have peer evaluations where each team member rates himself along with other members of the team. Team peer evaluations can be used in both synchronous and asynchronous classes. There is a summary feedback report where students can see how their peers rate them. Since multiple peer evaluations can be scheduled throughout the simulation, the first one is usually just a wake-up call for the students. If faculty desire, the later peer evaluations can be used to allocate the team score to each person on the team.

Case Analysis

Strategy textbooks go into much detail on how to analyze a case, and then write a report on the case, and then present the case. The rounds of the simulation provides an excellent case for students to analyze the data, write a report on it, and then make a presentation on the results.

Most strategy courses have a “report to shareholders” as a final assignment for the simulation. Several videos on the web show examples of previous student presentations. The key topics for teams to cover are not only how the team performed over the various rounds, but also how they recognized problems and modified their strategy with respect to what the other teams were doing and came up with an emergent strategy. Most faculty also award grades for this report and/or presentation that are usually equal in value to the team simulation results.

For asynchronous courses, these presentations can be voice over power-point or video recordings that are posted to a discussion board for other students to view and comment on. For synchronous courses, the students present these presentations during the scheduled class time much like a face-to-face class. Students seem to enjoy making and viewing these presentations much like much like the traditional classrooms.

ILLUSTRATIVE EXAMPLE OF COVID-19 CHANGES

COVID-19 forced most university classes to go online starting in March 2020. Luckily, this coincided with Spring Break at many universities that gave universities some time to plan. Some universities were much better prepared for this change if they had already been using online classes. For universities that had not used online classes, the learning was much more difficult. Below is a discussion of what my university did over the past year.

University level example

My university was already familiar with online classes – about 20 % of existing courses were online. We had an extensive eLearning support group that had helped faculty develop their asynchronous classes in previous semesters. Therefore, for the remainder of the spring semester, asynchronous online classes mostly continued as before. However, face-to-face classes switched to an online format – either synchronous or asynchronous depending on what tools the faculty had available. Most were a combination of the two modes. The summer term continued much like the spring, but the faculty used more synchronous classes using Blackboard Collaborate. However, Blackboard Collaborate was not that easy to use by faculty or students.

For the fall term, there was more time to plan. The University decided to use a combination of small on-campus classes, our

previous asynchronous online classes, and a new synchronous online format (utdallas.edu/covid, 2020). The university decided to change to Microsoft Teams for its synchronous classes. Faculty could teach these classes just like their previous campus classes but would do it from their office or from their home. All the synchronous classes were automatically recorded via Teams so that students who missed the scheduled class could watch later, much like our previous asynchronous classes. However, since these classes were automatically recorded during the synchronous class, there was not any extra work required by the faculty.

The breakdown of the fall classes was about 20% for the small on-campus classes, 20% for our previous asynchronous classes, and 60% for the new synchronous format. Most everyone (administration, faculty, and students) were satisfied with the results of the fall classes. Therefore, our spring 2021 classes will follow the same format.

Another issue that concerned some faculty was the integrity of online exams. Our previous asynchronous online classes had solved this issue by giving exams at our university testing center or using an online proctoring service such as Examity. However, when most of the university moved to online, using a human proctoring service such as Examity was too expensive to use for all university exams. There was also a concern if Examity could handle the much larger volume of online exams. Luckily, a new proctoring service, Honor Lock, became available at a much lower cost. Honor Lock also used artificial intelligence instead of humans for proctoring so the much larger load was not a problem. At first faculty and faculty were skeptical of this AI proctoring, but it worked throughout the fall semester without any problems.

Strategy Class Example

My four fall classes provide a small sample of these various modes for strategy classes. I taught two undergraduate strategy classes (one was the new synchronous method and one was the previous asynchronous class). I also taught two graduate strategy classes (one synchronous and one asynchronous). The grades were similar for both modes of classes. Although the student evaluations are not available yet, students seemed to like the new synchronous method better since there was more interaction with the professor, there was timely feedback on the simulation results, and team presentations were more like the face-to-face classes. Additional details will be presented in a future paper when they become available. Also, there was not any issues using Honor Lock for exams in all of these classes.

CONCLUSION

Due to COVID-19, almost all university instruction has gone online (either synchronous, non-synchronous, or a combination of both). Since many strategy professors use a simulation in their course, online instruction has always been especially difficult for a strategy course. COVID-19 only increased this difficulty since most classes moved online. However, new tools such as Teams and Zoom have made synchronous online classes much like face-to-face campus classes. This paper has shown how a simulation that is matched to a strategy textbook can provide a professor a template to incorporate all the standard topics in a strategy course into a fun to use simulation. Such a course keeps the student's interest and also provides a good capstone experience to a student's undergraduate or graduate studies.

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