

# An Entrepreneurial and Experiential Learning Project to Integrate Business Concepts into an Introductory IS/IT Course

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## Hook

Are you teaching a Introduction to IS/IT and frustrated with uninterested non-IS/IT majors and bored IS/IT majors? This just might be what you are looking for. This paper presents a scalable project that can range from a two session class module to a full quarter/semester case study that merges marketing, finance, and strategy concepts with hands on IS/IT application solutions.

## Abstract

The paper presents an experiential learning project that can be used as a course module covering two class sessions or as an experiential entrepreneurial session that can be used throughout a course that extends either as a quarter or semester session. The main intent of the project is to introduce, inject, and embedded business concepts such as marketing, finance, and strategy into an introductory information systems course. Most of the students who take this course are in the first and second year and this project serves to illustrate, educate, and give the students an opportunity to learn how information systems in embedded in some of the main functional areas of business. Furthermore, it seeks to introduce concepts that will reappear as they move through the core AACSB business curriculum. The stand-alone course module only requires perfunctory knowledge of MS PowerPoint. The semester long course project requires slightly more knowledge of website development although students are introduced to online methods that require more focus on content development than programming. The semester long project also requires planning, executing, and measuring marketing strategies along with corporate financial analysis.

**Keywords**—entrepreneurial, experiential learning, IS Curriculum, business education, introductory course, strategy

## 1. INTRODUCTION

The information systems discipline has been around since the 1950s and formal guidelines for information systems curriculum began to be developed in the 1970s (Leidig, & Salmela, 2020). Curriculum guidelines are helpful for providing guidance for IS programs. Most people recognize these guidelines which are the joint efforts of the Association of Computing Machinery (ACM), the Association of Information Systems (AIS), Education SIG of the Association for Information Systems and Computing Academic Professionals (ED-SIG) in the current report iteration known as IS2020 (Leidig et al., 2021; Leidig & Salmela, 2020). There were many previous versions before IS2020 with each model addressing changes in technology and societies. For example, the IS 2010 report provided guidelines on IS capabilities, knowledge, and skill requirements by specifying core IS curriculum, electives and career tracks (Topi et al. 2010). To illustrate and honor the foundation to which this curriculum report was based on the model curriculum report prior to IS2010, was IS2002 (Gorgone et al., 2003). The IS 2002 was an update of IS'97 (Davis et al., 1997) and both of those were a joint effort between the ACM, AIS, and DPMA/AITP (Data Processing Management Association/Association of Information Technology Professionals).

Traditionally, the Introduction to Information Technology or Systems courses were focused on providing students with technical skills to help them succeed through college and career and many used hardware, software, and networking as the foundational learning of their curriculum (Frydenberg & VanderClock, 2024). This works fine if the IT course is housed in a College of Engineering, yet many IS courses are offered in business schools. Admittedly, the IT/IS distinction is not a hard and fast rule as IS courses can be found in science and engineering and vice versa IT in business schools.

One of the reasons for this distinction can be traced to decline in enrollment and many programs changed names to reverse the decline (Tabatabaei, & Tehrani 2010). Firth, Lawrence, & Looney (2008), Zhang (2007), and Ferrat, et al (2010) examined the decline and the IS/IT division debate. One of the main conclusions was that information systems courses should teach information systems and be of interest to all students. This conclusion would later become guidelines in the IS2010 Information Systems Model Curriculum which included a Foundations

of Information Systems course for all students of all majors (Janicki & Cummings, 2022).

When these Intro to IS/IT are taught in business schools the courses are less technical and concentrated more on why information and the technologies associated with it are driving organizations' strategy, processes, and successes. In addition, unlike their science and engineering counterparts there is a wider range of diversity of students with some being IS/IT majors and many have no interest in being an IS/IT major let alone interest in the subject (Modaresnezhad, & Schel 2019).

The curriculum guidelines and topics are just one part of course. Advances in technology and societal perspectives are now turning towards the learning process. Specifically, a new emphasis is being placed on promoting critical and analytical thinking by engaging the students in tasks which shift from course structure to student learning (Frydenberg & VanderClock, 2024; Leidig & Salmela, 2020). In addition, faculty and universities are redesigning their curriculum to teach and engage the students so they can learn, enhance, and use their creativity, empathy, and problem solving skills along with technology in an effort to be more effective in their work (Frydenberg & VanderClock, 2024, Levit, 2018). Lastly, critical thinking and using digital technologies efficiently and ethically to solve business problems were identified by National Association of Colleges and Employers (NACE) as highly important and valuable to career readiness and development (NACE 2023).

The remainder of this paper first discusses the background of the course, followed by the class module project which includes details of our food truck case study. Next, we discuss the course module project which includes financial performance and website and final evaluation, and finally we present our conclusions.

## 2. BACKGROUND OF THE COURSE

Others have noted that students enjoy experiential, engaging and relevant coursework (Asay, Crable, Sena, 2022). Kolb and Kolb (2005) found that experiential learning can be programs, including longitudinal student development, outcome assessment, and curriculum development. This project was assigned to an Introduction to Information Technology Management course (ITMG 100) at a private university located on the west coast.

ITMG 100 consists of 40% Excel topics, 30% computer concepts, 10% business concepts, 15% database concepts, and 5% ethics and

other career concepts. The course has one major deliverable where all students sit for the Microsoft Excel Certification Exam (MOS). The objective is to prepare the students to be successful in their college courses and more specifically in business majors. The initial and ongoing design of the course was structured so that it was applicable and prepared students for the functional areas of business to which they can major. For example, the course covers balance sheets to address accounting course issues, pareto charts for operations, amortization tables for finance, statistical analysis for business analytics, and what-if scenarios to accommodate management and marketing. Working excel examples.

The computer concept topics include general computing terminology, file management, social computing hardware, software, networking, legal aspects of information systems, and security. The business concepts include the blend over electronic commerce, and also supply chain management, customer relationship management, information systems on the managerial level, and competitive advantage. The excel topics include formula, functions, logic and reference, date, time, text functions, charting, modeling, scenario and goal seek situation and pivot table. The database topics include database theory (normalization, relationships), table creation, and queries. Lastly, the course also has the student create a resume as evidence of their MS Word knowledge.

### 3. CLASS MODULE PROJECT

While the course is heavily tilted towards MS Excel it does have a goal of full MS Office proficiency, with full MS office being defined as MS Excel, MS Word, MS Access, and MS PowerPoint. This project was originally created to satisfy the MS PowerPoint component as well as integrating business concepts. The topic of the assignment was a food truck which is rapidly becoming a topic of interest both commercial and through research. For example, Toast.com has a website project how to write a food truck plan (<https://pos.toasttab.com/blog/on-the-line/food-truck-business-plan>), as well as legion for trucks <https://legionfoodtrucks.com/starting-a-food-truck-business/how-to-open-a-food-truck-in-california/>. There has been other case study research on food trucks, yet they take a different approach. Deale & Schoffstall (2016) wrote a case study that has students asking operational and strategic questions, while Larson (2021) created an interesting case study involving food trucks and databases.

### 3.1 Food Truck Case Study Project

This case study project has the students applying competitive advantage concepts along with technological innovations. This project can be accomplished in two course sessions. The project components are as such; introduction to project task description, training in PowerPoint; lecture on competitive advantage and historical innovations, class time teamwork discussion, PowerPoint submission, online evaluation, and concludes with debrief.

#### 3.1.1 In Class IS Competitive Advantage Assignment Description

You and your group have just inherited a food truck business and learn that you can use it to obtain some extra revenue on campus. Using what you learned in lecture, from Chapter 2 readings, other sources, and specifically Porter's Competitive Forces Model and Value Chain Model come up with a strategy to obtain to set up your business. You are to consider the Business Processes, the consumer standpoint, and how IS can also be applied for a competitive advantage. Your specific tasks deliverables are to:

1. Determine a company/team name and type of product.
2. Decide on a competitive strategy. You can select up to two, yet you must rank which is your primary strategy. You are only to tell your strategy to the professor.
3. Within your group decide on placement, specific products served, service enhancements, advertising/promotion efforts
4. Once you have decided your strategy you need to define how will implement it. The more specific you can be the better.
5. You are encouraged to be creative and think outside the box. For example, you might decide to use a delivery method that might not be currently economically viable such as drone delivery.
6. You will submit to the professor an email with your team's name, team members, strategy, and PowerPoint. You are not to disclose your strategy on your PowerPoint as that will be publicly available during a voting evaluation process.
7. Your PowerPoint is due before the second session and each team will present/pitch their concept to the class

and without disclosing the team strategy.

- At the end of the presentation all class members will evaluate each proposal with the specific intention of trying to determine each team's competitive strategy selection.

This project requires two class sessions. The first-class session consists of quick introduction of the assignment, followed by a lecture discussion of concepts creating the student teams and then having them decide on a team name, concept and strategy. They are tasked with submitting this information before the session ends and told they need to complete their PowerPoint by 9PM the day before the second session. They are told this is necessary for all the files to be processed and uploaded to the web for people to evaluate and vote.

The second session begins with each team giving a presentation on the company, highlighting products, innovations, location, promotions, and any other creative thought that comes to mind. Once all the presentations are completed the students are directed to a Qualtrics website to evaluate each team's proposal and is illustrated in Figure 1 below. Qualtrics is a robust online survey instrument that our university has purchased a license for teaching and research purposes. Qualtrics has a very nice real time feature so that the students can be immediately debriefed with results once they have completed their evaluation of all proposals.

### 3.1.2 PowerPoint Demonstration

The students are provided with a quick PowerPoint demonstration on topics of creating a theme, importing pictures, creating transition, animations, and hyperlinks. They are also provided some training resource in GMETRIX which is an online software program designed to train people for testing on Microsoft Products.

### 3.1.3 Competitive Advantage and Technological Innovation

A quick lecture discussion is provided to the students on Michael Porter's competitive forces and strategy and Thomas Friedman's Flatteners. The material is adopted from the Rainer and Cegielski Introduction to Information Systems third edition (Rainer and Cegielski, 2010). The older edition is used because the newer versions have removed the Friedman material. The Friedman flattener materials is used despite being dated because it serves a great historical



**Figure 1 Example of Team Evaluation on Qualtrics**

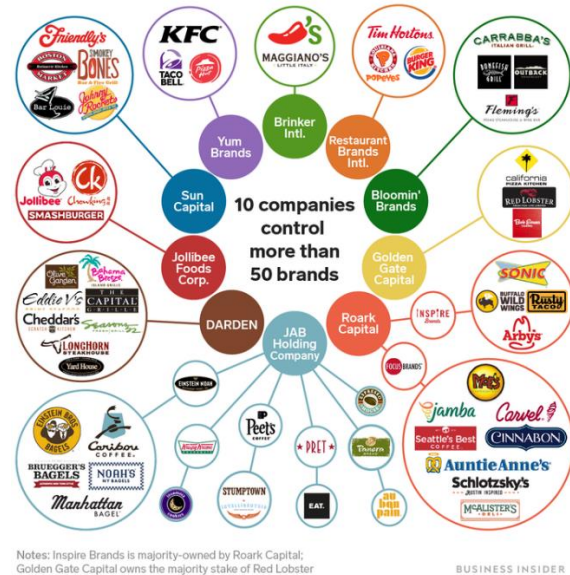
model to show how innovations can be transformative. The material used for lecture discussion is less than one chapter and the university library is able to get a pdf copy of the material. If your library is not able to get the materials you can download a free copy of competitive advantage slide here (<https://www.slideshare.net/slideshow/competitive-advantage/14279305#24>) and for the flatteners you can download it here (<https://www.slideshare.net/slideshow/the-ten-flatteners/2950565#2>).

## 4. COURSE MODULE PROJECT

This project can be used over the entire course or spread out over a month although the longer the better. The only nuance to the course module is that the students are required to select a parent food corporation company to belong to by first analyzing their corporate position. Then the students are directed to make a website and then promote their product. After the specified period had ended, in the case of ITMG 100 the websites were made midway through the class and then students were told to canvas the university promoting their business. The promotion was evaluated through an online portal and people were directed to another Qualtrics portal to signify their interest in specific companies. A final debrief session was conducted at the end of the semester with token prizes handed out for performance. The following is more specific detail.

#### 4.1 Finance Performance

A lecture discussion on corporate financial metrics such as revenue, net profit, and stock valuation is conducted. They were informed as to the illusion of choice with the large number of restaurants being controlled by a few corporations which is illustrated in Figure 2. As a team they were instructed to research each company and then select the company of interest. They would receive revenue points based on the stock valuation each week which would be in addition to revenue points.



**Figure 2 10 Companies who control 50 brands**

#### 4.2 Website Development

This is an area that is wide open to personal preferences or most likely university funding. Our university used to provide free websites for students and has since discontinued that service. Wix.com, GoDaddy.com and WordPress.com offer free trials and in the case of Wix.com you can petition for an academic license. As of 2024, the best option is to direct the students to Facebook sites. These are free sites with functionality provided one has a personal website account. Facebook sites offer some electronic commerce tools and if that presents a challenge you can always measure a team's performance by the number of likes tied to a promotion or product.

#### 4.3 Final Evaluation

At the end of quarter, semester, or session a final Qualtrics survey is sent out to anyone and everyone. The students are encouraged to get as many people as possible to evaluate the

'global web store' and they are told outside listservs would be contacted for participation in the virtual market as shown in Figure 3.

Welcome to the Knauss School of Business ITMG 100 Public Market (KSBITPM)!

We thank you for taking the time to help out our fine 13 IS entrepreneur student merchant teams. We are providing each visitor on each visit is provided a \$50 virtual credit to use towards any of the merchants. They are listed below and at the end of the company listing is where you are being asked to provide your selections (the \$50 credit should allow for at least 3 merchant selection). Thank you for your time and helping our aspiring IS entrepreneurs with their endeavors!



**Figure 3 End of Course Module Virtual**

### 5. CONCLUSION

This entrepreneurial and experiential case was assigned to undergraduate business students who were taking their first information systems course. The intent was to provide a realistic project simulation to highlight strategic, financial, marketing, advertising, promotional concepts and how technology could be applied to each functional area. The project has primarily been assigned in the two-course module and only recently has it been expanded to the full course. Upon conclusion of the project, learning projects such as this can provide a much better learning experience for students than just a traditional lecture. The expansion from a two session to a full course case study allowed students to delve more deeply into and experience the material. Knowledge retention seemed to be much superior to a typical exam. Future iterations of the course will implement a research component to compare the standard course with the augmented course with this new case study approach in order to gauge its effectiveness quantitatively.

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