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An innovative experiential and collaborative learning approach to an undergraduate marketing management course: A case of the Philippines

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ABSTRACT

This paper proposes a collaborative approach with the Computer Science Department and Product Design Course to conducting Marketing Management (MM) in the undergraduate program to achieve the skills critical to the 21st-century. These skills are collaboration and teamwork, creativity, and critical thinking and problem-solving. This study aims to present a case of innovative experiential learning in teaching an advanced MM course by bringing in students from other programs (collaborative learning) and working with real-life clients (experiential learning). Instead of the traditional teacher-centric lecturing and the use of case studies, this proposed approach is student-centric learning (i.e., students were tasked to identify the needs of the real-life client and offer an innovative solution). Ninety five percent of the MM students found the new method to be effective in terms of: applying theory in real life situation, improving their ability to identify needs and opportunities, developing actual products/services based on the identified needs, working with an interdisciplinary team, enhancing their interpersonal skills, developing their leadership skills, improving their communication skills, and encouraging them to keep learning. Areas for improvement are also discussed in the paper.

1. Introduction

The traditional teaching method of a typical management class would include lectures, invited speakers, case studies, and maybe a small project all handled by a single instructor. Specifically for marketing management, a more outcome-based approach would be to invite real clients to work with the students to market an existing product. The output of the latter approach is usually a marketing plan based on the lectures, instructions, and consultations of the faculty-in-charge. However, the rapid technological change ushered in the proliferation of data in the 21st-century, making data available to anyone who has access to the Internet. Interestingly, most often than not, students may even get better information than the teachers due to their ability to use these new technologies to find data. Thus, the claim by many that in the classroom the teachers are no longer the only source of information may be justified.

In a way, this accessibility changed the way students learn, and thus, the academic institution should respond by changing what the students should be learning in the classroom. With the changing educational landscape, knowing how to develop a marketing plan will no longer suffice. The students need to learn critical skills that will prepare them to face 21st-century issues. Skills that will allow them not only to be useful marketing planners for business landscapes that are commonly described as volatile, uncertain,

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complex, and ambiguous; but also to become responsible citizens.

Wagner (2008) summarized the skills that would enable students to contribute to the betterment of the organizations that they will end up working with. These skills are critical thinking and problem-solving, collaboration and leadership, agility and adaptability, initiative and entrepreneurialism, effective oral and written communication, accessing and analyzing information, and curiosity and imagination. Trilling and Fadel (2009) proposed the following skills that students should learn in the 21st-century; these are learning to learn and innovate, critical thinking and problem-solving, communication and collaboration, creativity and innovation, flexibility and adaptability, initiative and self-direction, productivity and accountability, and leadership and responsibility. In their website, Envisionexperience.com (2018) summarized the findings of Hanover Research on the six major educational frameworks regarding the critical skills students should have to prepare them for the future. The top essential areas for development are collaboration and teamwork, creativity, and critical thinking and problem-solving. Thus, instead of focusing only on the traditional marketing plan as the final output of a typical marketing management class, the course syllabus should also give top priority to the development of these skills.

This paper proposes a collaborative approach to conducting Marketing Management (MM) in the undergraduate program to achieve the skills indicated above. For the collaboration to happen, two other courses from different colleges were invited. Namely, BS Computer Science (CS) from the College of Science (CS) and BS Product Design (PD) of the College of Communication, Arts, and Design (CCAD). Traditionally, an MM course is handled by an instructor from the School of Management (SoM), as well as software engineering and design workshops are managed by instructors from the CS and PD, respectively. These three different courses from three different disciplines and colleges develop their own sets of learning outcomes and activities. Though students learn the basics of their discipline, their learning is not maximized because experience has shown that the strategies developed by management students look good on paper but are not tested since they don't know how to create the prototype.

On the other hand, CS and PD students develop products and services without a specific target market in mind and the purpose for creating such. With the world getting smaller and flatter due to technology, collaboration across the different discipline is no longer an option but a way of life to create value, and to prepare the 21st-century students to face a flat world (Friedman, 2005). Thinking of new ways to do things and working with people from different fields are essential to creating value-added products and services. In some sense, “collaboration equals innovation” (Dell, 2003).

This study aims to present a case of innovative experiential learning in teaching an advanced MM course by bringing in other students from other programs (collaborative learning). Instead of the traditional teacher-centric lecturing and use of case studies, this proposed approach is focused on student-centric learning (i.e., using real-life clients and working with students from different colleges). Instead of three outputs from three different programs, the final output will just be one project for each interdisciplinary team. From the authors' knowledge, no similar innovative experiential learning for MM has been presented.

The case study approach is the research method used in this study since the proposed collaborative program is exploratory in nature (Soy, 1997) and the study aims to obtain multiple perspectives of the proposed program (Cooper & Schindler, 2014). The case study method is also deemed appropriate to address the following research question: how were the critical skills enhanced by the experiential and collaborative learning approaches?

This paper is organized as follows: the next section reviews briefly the available learning strategies followed by the methodology of how the classes were organized and the activities set to reach the desired outcomes. The next section presents the results and discussion, and finally, the conclusion.

2. Review of related literature

2.1. Innovative experiential learning

According to the Finnish National Innovation Strategy, the need for innovation was brought about by ‘globalization, sustainable development, new technologies, and demographic changes in the population’ (Lehto, Kairisto-Mertanene, & Penttilä, 2011). These factors that are changing the world are affecting all countries, not only Finland. One just needs to search online for “innovation” and “education” to see how commissioners of education and all kinds of organizations are encouraging the academic institutions to incorporate innovation into their program curricula. Instead of focusing on the short-term outputs, the academe should see learning as a process. In the article of Kolb and Kolb (2009, pp. 42–68), they summarized the experiential learning theory into six propositions (p. 43–44):

1 Learning should be seen as a process, not in terms of outcomes.
2 Learning is a process of drawing out the students' beliefs and ideas to be examined, tested and refined.
3 Learning requires resolution of conflicts between opposing ideas, actions, feelings, and thinking.
4 Learning involves the total person - thinking, feeling, perceiving, and behaving.
5 Learning results from choices and decisions the students and teachers make.
6 Learning is the process of creating knowledge (social and personal).

In sum, experiential learning is using experience as the source of learning (Kolb, 2014). This is supported by an experiment conducted by Thomas Lord (2007, p. 10) on the effectivity of different methods of teaching. Lord (2007, p. 10) used Dale's (1969) cone of learning categories to examine the reliability of the link of the instruction method used in the classroom with the students' knowledge recall. Lord (2007, p. 10) concluded that students who were more involved in the activity had a higher recall rate

compared to those who just passively listened to or read the lectures. He also added that the group who taught one another had the best score in knowledge recall. Lord (2007, p. 10) concluded that the more involved the students were in the lesson, the more they will likely to remember the lesson.

There are many ways to implement an innovative learning experience. One such method is to create simulations in the classroom as a clinical setting for nursing students (Walters, Potetz, & Fedesco, 2017). The class were divided into groups of 7–8 members and were assigned roles to simulate the scenarios created by the medical-surgical faculty. The students switched roles for every new situation. Walters et al. (2017) results showed that at the end of the term the students performed better on written tests and had a more positive attitude towards the learning environment than those students in sections who didn't use simulation in the course. Li, Greenberg, and Nicholls (2007) adopted a computer network-based program to simulate a global industry. Graduate students in the Marketing Management course were asked to establish their own companies and assumed the decision-making role to decide what product to develop and how to market it. Their findings showed that the students perceived the simulation course to be superior to the traditional lecture-based curriculum.

Another method is to carry out a practice-based activity. Leal-Rodríguez and Albort-Morant (2018) required their business students to spend 15–20 h interviewing and observing their assigned middle-level managers of real companies. They used partial least squares (PLS) path modeling to evaluate the reliability and validity of their constructs. Their results showed that there is a positive link between the students' involvement in experience-based learning methods and their academic achievements. Another favorite practice-based activity is inviting real clients to work with the students (e.g., business education, Parsons & Lepkowska-White, 2009; software engineering education, Chase, Oakes, & Ramsey, 2007; Flener, 2006). In the study of Parsons and Lepkowska-White (2009) on business students, their results showed that students who worked on projects for real-life clients were more motivated than those sections that only used cases and lectures as teaching methods. Though regarding effectivity, some students find theoretical projects to be equally or even more effective in some cases such as in motivation to learn, report preparation, and interpersonal skills. The results were likely affected by the negative attributes of the client-based approach such as being time-consuming and challenging.

The popularity of experiential learning may be due to today's working environment that expects graduates to not only have the necessary technical skill to do their jobs but also the interdisciplinary skills that go with it such as teamwork, communication, problem-solving, and life-long learning abilities, to name a few. Other examples of experiential learning include field trips (Castleberry, 2007), immersion in business organizations (Inks & Avila, 2008), organize student-operated businesses (Daly, 2001), use learning teams (Bell, 2015), live case studies (Elam & Spotts, 2004), and the problem-oriented and project-based learning or PBL, which is mostly applied in engineering courses (Lehmann, Du & Thrane 2008).

2.2. Collaborative learning

When one searches for the words collaborative learning on the Internet, Google will suggest 19,900,000 results in less than a second (or about 0.35 s to be exact, searched on 19 April 2018).

Collaboration is nothing new. In fact, at the turn of the 21st-century, Thomas Friedman (2005) already suggested that cooperation is the only way to survive in a world that is defined by globalization and rapid technological advancement. The digital world presented opportunities that were not available before the Internet. For instance, business segments, such as accounting, sales, graphics, architectural design, and customer service, to name a few, are being outsourced to countries that cost the least. Going against the current flow of business is futile. Other factors of change are the need for sustainable developments and demographic changes in the population (Lehto et al., 2011).

No one field of specialization can handle all the effects that these factors of change are bringing. A marketing executive should have a knowledge of innovations that may enhance service quality to improve the level of customer satisfaction, and at the same time think of the “how” to develop that service and the costs attached to it. Or the need to have the ability to manage an interdisciplinary team with software developers, designers, and the like, and at the same time achieve the desired level of productivity. Vissers and Dankbaar (2002) argued that in developing new products, a cross-functional team, representing several disciplines such as operations, marketing, and finance, is preferred over just one department developing it. They further explained that the multi-disciplinary team is usually not a full-time assignment. Instead, the team is created to define, plan, and monitor the innovation. For students to be prepared to excel in an ever-changing business landscape, they should be exposed to the real-world setting — a multidisciplinary world. Thus, there is a need to start collaboration in the classrooms.

Collaborative learning is popularly defined as a learning mechanism in which learners engage in a common task whereby each individual depends on and is accountable to each other (Gokhale, 1995; Lallana, 2017). It involves the joint intellectual efforts of all parties involved (“Collaborative Learning,” 2018). Furthermore, Dillenbourg (1999, pp. 1–19) argued that collaborative learning is a situation where there is some interaction between the participants and that such interaction may not occur unless ways are developed to encourage the interaction to happen. Dillenbourg (1999, pp. 1–19) also suggested four factors to increase the likelihood of interaction: the grouping, the scenario based on roles, the interaction rules and the monitoring of the interaction. In a more recent article, Dillenbourg (2002) proposed that students be provided with a set of instructions as to how to form groups, how to interact, collaborate and solve the problem.

In collaborative learning, the primary role of the instructor is not to teach, but to facilitate learning (Ruiz, Mintzer, & Leipzig, 2006). Instead of telling the students what to do, the facilitator guides the students by asking questions that encourage students to look for the more appropriate answers (Gokhale, 1995). This learning approach requires students to learn together and from each other; thus, providing students a venue to become life-long learners (Blaschke, 2012). Furthermore, Jaccheri and Sindre (2007) suggested that learning with and from other disciplines will allow the students to apply the theories they've learned in their own

disciplines to new contexts. Examples of collaborative learning include teaching a subject with the combination of students coming from different disciplines, such as computer science and engineering (Giraldo, Collazos, Ochoa, Zapata, & de Clunie, 2010, pp. 97–101; Kirti, Sureka, & Varma, 2015). Most common collaboration is with real clients (Chase et al., 2007; Flener, 2006; Parsons & Lepkowska-White, 2009).

Lastly, article after article showed that the exposure of students to collaborative learning practices contributed positively to their overall learning. For example, the study of Cabrera et al. (2002) concluded that this practice positively influenced the student outcomes and openness to diversity. The results of Schellens and Valcke (2005) showed that the discussion of the students was task-oriented in nature and that the collaborative learning environment 'fostered higher phases of knowledge construction.' Cross (1998) concluded that learning with communities enhances student learning and in becoming responsible citizens. Andriessen, Baker & Suthers (2013) also suggested that students learn to argue productively in a collaborative learning set up.

Therefore, we hypothesized that introducing innovative experiential learning that is collaborative in nature will enhance students learning and elicit a positive response from the MM students in terms of the following outcomes:

a apply marketing theory and practice in real life situation;
b improve one's ability to identify opportunities and needs of the market;
c develop products and services based on identified needs;
d learn to work with an interdisciplinary team;
e enhance one's interpersonal skills;
f practice one's leadership skills;
g improve communication skills; and
h establish a culture of continuing search for personal improvement (lifelong learning)

Aside from the positive response that we expect from the students, the collaboration also aims for the students to propose solutions that do not only look good on paper but are also acceptable and implementable by the real-life clients.

3. Objective of the study

Collaborative learning is nothing new. In fact, Stahl, Koschmann, and Suthers (2006, pp. 409–426) recorded in their article that group learning has begun as early as the 1960's. Many of these published articles are focused on medical education utilizing computer-supported collaborative learning or simulation (Bleakley, 2006; DiazGranados, 2018; Donszelmann & Whitehead, 2017; Ferradji & Hedjazi, 2017; Ruiz et al., 2006; Walters et al., 2017), collaboration amongst students from two related disciplines, such as computer science and engineering (Giraldo et al., 2010, pp. 97–101; Kirti et al., 2015; Christov, Hoffman, 2018), or business students with real clients (Fitch, 2011; Toomey, Adkins, & Chappell, 2017; Tokke, 2017; Villavicienco et al., 2017; Aaron, 2018), to name a few.

Based on the preceding paragraph, it can be argued that collaborative learning is also a type of experiential learning. As defined earlier, experiential learning is learning by experience, while collaborative learning is learning by bringing in other parties in the learning experience.

We would like to see if the results of an experiential and interdisciplinary approach to teaching MM in the Philippine setting will improve the knowledge absorption and innovativeness of the students as stated in the previous literature. With the effort of the current Philippine government to improve the quality of teaching of its higher education, this approach is to help reach the goal of the Philippines to develop innovative Filipinos. As reported in the Philippine Development Plan, despite the numerous higher education institutions (HEIs) in the Philippines compared to its neighboring countries, the Philippines has fallen behind its neighbors concerning producing researchers, innovators, and solution providers (Philippine Development Plan 2017–2022). Tan (2011) proposed that this is likely due to the failure of government agencies to adequately regulate the HEIs, such as the hiring of qualified faculty and providing the proper facilities. This is despite the notable improvements concerning the percentage of faculty with postgraduate degrees from 2013 to 2017 (Macha, Mackie, & Magaziner, 2018) and the increase in the 2018 Philippine budget on education, which may include improving HEI facilities (Tan, 2017).

After a thorough search on Google Scholar, only one study comes slightly close to the proposed method of this current paper. In the case study of Van Horne, Dutot, Castellano, Sosa, and Ahmad (2017), a professor from the College of Art and Design collaborated with the College of Business professors to come up with an interior design course that integrated the concepts of entrepreneurship. The unit of analysis in their study was the faculty. The similarity of the study with this current paper is only on the participation of the faculty from the two colleges in creating a common platform for one of the courses (i.e., interior design); however, the unit of analysis in this current paper is the students, not the teachers.

Therefore, instead of merely lecturing, there is a need to level up the approach to teaching MM. A more experiential and collaborative in nature to exude the innovativeness of the Management students. Secondly, gone are the days that research papers are just filed in the library cabinets. The academic journals should be intentional to solve a specific problem of the society and that the outputs of the students should benefit the market. Lastly, in the age of technology and design, there is a need for the Management program to collaborate with other disciplines (i.e., CS and PD) to be relevant and competitive.

4. Methodology

4.1. The program

The purpose of the study is to introduce a new way of teaching MM to business students by inviting two complementary disciplines; namely, the computer science (CS) and production design (PD) programs. The selection of the collaborators is primarily due to the demands of the 21st-century business environment. For instance, innovation would often than not, require technology and design. Take for example the automated teller machines (ATM) of the banking industry. This service innovation was developed in the 1960's and has been improved through the years through the active collaboration of many groups of people — from bankers to software engineers and to designers (Bátiz-Lazo, 2015). Though there may be security issues, the ATM improved the quality of service that banks give to their consumers by removing the limitations of a typical bank (e.g., banking hours, central location). With ATMs, consumers can easily access their accounts any time and anywhere (i.e., site of the machines). This innovation allowed the banks to go where the people are likely to assemble at the least possible cost, making them more customer-centric. Furthermore, change is vital to any industry because as world-renowned Filipino furniture designer Kenneth Cobonpue commented, the market is always looking for something new (ABS-CBN News, 2017).

To prepare for the collaboration, we, the professors of the three courses, met five months before the offering of the collaborated course. The first thing that we set was the rationale for the collaboration. For the MM, the partnership will give a sense of reality to the research paper of the students and at the same time train them to manage an interdisciplinary group. For both the software engineering and design workshop, the collaboration will give direction to the projects that their students are developing.

The uniqueness of this collaboration is that each program will continue to follow their respective course syllabus; but at the end of the semester, each interdisciplinary team should develop one service innovation in the form of a software application. In short, the outputs of the students belonging to the three courses will only be one for every interdisciplinary group. These groups will be working with real-life clients to expose them to real-world issues when planning, implementing and evaluating service innovations. It is important to note that the proposed MM course is not an interdisciplinary course. To ensure that all the classes are still onboard, we set out milestones.

4.2. The client

The importance of Cebu to the Philippines cannot be understated. Lorenciana (2018a) reported that in 2017, the investment in the Central Visayas, where Cebu is located, is the 4th top investment destination in the Philippines. In a more recent news clip, Lorenciana (2018b) noted that big infrastructure projects line up for Cebu will make Central Visayas a 'major growth driver of the national economy.' Thus, the role of the University in the region is critical to prepare the students to face the challenges that these developments would bring.

Cebu is also known for its services and tourism sectors. In fact, more than 50% of the gross domestic product of the region are from these two sectors (Silva, 2017). In 2017, the Department of Tourism (DOT, 2018) reported that the foreign visits to the Philippines reached an all-time high of more than 6.6 million; and that Cebu, together with Boracay, is the top destination for the foreign tourists. For the local tourism in Central Visayas, DOT (Rocamora 2018) recorded around 6.9 million arrivals in 2017. DOT further explained that the surge in the arrivals to the region was likely brought about by two factors: (a) the increase of Filipinos traveling around the country and (b) Cebu (together with Bohol) being the choice venue for meetings and conferences. Rocamora (2018) also noted that the number of travelers around the island reached an all-time high in 2017.

Concerning the services industry such as Business and Knowledge Process Outsourcing (BPO and KPO), Postrado (2018) claimed that "Cebu is the largest business destination outside Metro Manila." Together with the in-flock of large businesses into Cebu are Filipinos living outside the Metropolitan and around the island to commute to Cebu for work.

Thus, it is vital that Cebu maintains a certain level of service quality in both its bus- and seaports to service the needs of the travelers (locals and tourists) around the region. For the reasons stated above, we chose to reach out to the public ports of Cebu for this collaboration. Namely, the Cebu Port Authority (CPA) and the Cebu South Bus Terminal (CSBT). To ensure the active participation of the public ports, our University signed a separate Memorandum of Agreement (MOA) with the representative of the ports.

4.3. The evaluation

There are eight objectives that we have set out to assess the proposed method. Using a Likert scale, students shall evaluate the program on the last day of the class using questions covering the eight desired outcomes. The rating is from 1 to 5, 1 means 'they think that the new method definitely did **not** accomplish this learning outcome' to 5, which means 'they think that the new method

Table 1
Likert Scale used for the evaluation.

1	2	3	4	5
I definitely do NOT agree with this statement	I somewhat do NOT agree with this statement	I cannot tell.	I somewhat agree with this statement	I definitely agree with this statement

definitely accomplished this learning outcome.' Table 1 lists the scale and its definition.

The eight statements are as follows:

a The course applied the (Marketing) theory and practices in real life situation.
b My ability to identify opportunity and needs of the market improved.
c The course taught me to develop/design products and services based on identified needs.
d I learned to work with an interdisciplinary team.
e I believe working in an interdisciplinary team enhanced my interpersonal skills.
f This course helped me to develop my leadership skill.
g This course helped me improve my communication skills.
h The course encouraged me to continue searching for ways to personally improve (lifelong learning).

Aside from the assessment of the students of the program, the following will also be observed to evaluate whether the proposed plan is an effective teaching method: (1) the willingness of the clients to adopt the innovation; (2) the performance ratings of the students by their peers; and (3) the results of the focus group discussions (FGDs) with the interdisciplinary groups and MM students.

5. Results and discussion

5.1. Results

In preparation for this collaboration, we focused on four things to increase the likelihood of positive interaction amongst the three courses. In his article, Dillenbourg (2002) proposed the students to be given instructions as to how to form groups, how to interact, collaborate and solve the problem. These four considerations are as follows:

5.1.1. The groupings of the interdisciplinary team

We acknowledged that the students from the three courses (i.e., Management, CS, and Design) have different cultures, preferences, study habits, and academic demands. The very nature of their disciplines train the students to excel in areas specific to their course competencies. For instance, Management students are geared towards doing research, analysis, and oral presentations; thus, their strengths lie in research, analysis and oral presentation. The CS students, on the other hand, focus on problem-solving and use technology to create solutions. The Design students, aside from the theories during their lectures, need do infuse 'art' in developing their prototypes. Aside from the peculiar cultures of the specific courses, the age and the personalities of the students are also factors that may affect how they interact in the interdisciplinary group. The MMs are already in their senior year, while the CS and PD students are in their junior years. Because of these differences, the students' perception of work, time and commitment may not be the same.

To help build team rapport amongst the students, we scheduled three Wednesdays where the interdisciplinary students will get to sit in class together. On the first Wednesday, we conducted a kick-off meeting at the start of the semester (August) to explain the rationale and learning objectives of the course. We also invited a third party to lead the 'get-to-know' activities for the students. Lastly, the kick-off meeting was also to manage everyone's expectations for the course. The other two Wednesdays were reserved for invited technopreneurs. We wanted the students to see the potential 'end' product of this collaboration — technopreneurs.

To initiate the groupings, we left to each course how they want to group their students. For the MM, we allowed the students to form their 4-member groups since they are in their senior year already and they know whom they can work well together. For the CS, the professor assigned the groupings (5 members per group), while no groupings were done for the PD since the PD students were very much fewer in number. In fact, each interdisciplinary team had only one to two PD members. A week after the kick-off meeting, we assigned the groups of students to ten interdisciplinary teams. So, a typical team consisted of 4 MM students, 5 CS students, and 1 or 2 PD students.

Another effort that we did to build the team is to ask the third party to conduct a team-building activity during the first month of the semester. The objectives of the event were to improve the confidence of all the students and to create a collective experience amongst the interdisciplinary teams so that they could (hopefully) work on their projects well together, given the short lead-time. The activity included getting-to-know-you games and a land expedition (camping and trekking). The interdisciplinary teams were housed in a location around 32 km from the university campus for three days and two nights. They were placed in different groups based on the assessment of the third party, which was against our advice. We wanted the interdisciplinary teams to be teamed up together, but since not all of the students attended the team-building, the third party decided to revamp and regroup according to those who were present. The newly formed teams were required to be together for the entire duration of the activity.

5.1.2. The interaction with the client and students

The ten interdisciplinary teams were divided into two groups to serve the two clients that we selected for this project, the CPA, and the CSBT. In different locations, but on the same date and time, the clients met the five teams to introduce their organization, share its mission and vision, challenges and needs for service innovations.

Since the collaboration is amongst disciplines that are very different from each other, the CS professor decided to use the Scrum software development process as a guide to developing their service innovation and to assign roles to the teams. Scrum is 'a simple set of roles, responsibilities, and meetings' (James, n.d.) to allow the teams to improve the innovations periodically until the project was

finished. Included in the Scrum process are sprints, or short meetings, for the teams to demonstrate a portion of the proposed innovation to the clients. These meetings are also venues for the clients to voice out their comments regarding the innovations. The CS professor was also the Scrum Master. She facilitated the meetings with her CS students, and occasionally with the entire interdisciplinary team to voice out their concerns.

For MM, we divided the semester into three segments. The first segment was more on lectures and instructions. Talks were on Marketing theories and practices such as target marketing, identification of needs and opportunities, evaluation of alternative courses of action, product development, costing, and implementation. The second segment was on 'how to' present the proposed project — both written and oral forms. The final portion, which is almost half of the semester, was dedicated for field work such as field research, meetings with the clients, working with the other disciplines, and preparations for the written and oral reports.

5.1.3. The collaboration

The students in each of the interdisciplinary team knew their respective roles. The MM students were tasked to do the initial research and identify the opportunities and needs to improve the quality of service of the public ports. It was made clear to all the students that they should expose one another to the practices of the each other's disciplines. For instance, the MM students invited the CS and PD students to go with them to the public ports to gather data by way of interviewing the passengers, the front-liners, the management, and even the contract workers such as janitors and baggage boys. Similarly, the MM students were actively participating with the CS and PD students in the crafting of the solutions to the identified need.

Open spaces were also made available for the students to meet after school. Furthermore, allowances were given to the students for their transportation, communications and supplies expenses related to the project. Since the MM class did not meet anymore when the third segment started, we made ourselves available for consultations, either online or face to face.

One complaint that was shared by all MM students was the lack of common time with the CS and PD students. Since the class schedules of the three courses were different, the MM students needed to exert more effort to coordinate their schedules with the CS and PD students compared to having group mates coming from management only. Because of this challenge, the nights and weekends of the MM students were mostly spent in meeting with the other students for the project.

5.1.4. The presentation

Table 2 shows the ten interdisciplinary projects that were developed by the teams. Five projects were for the seaport, and the other five were for the bus terminal. Each project was focused on the needs identified by the respective teams. For instance, under the CSBT group, Team Stambai observed that based on interviews, ocular inspection, and survey, the bus terminal is very crowded, lacks seats to accommodate the passengers waiting for their buses to arrive, and has a lot of unhappy customers. With further research and analysis, the team identified the primary cause of the state of the terminal: the buses do not arrive on schedule, worst, the buses don't arrive at all. Since the buses are privately owned, the terminal has no control over the availability of the buses. So the passengers tend to wait until their buses arrive. And the uncertainty of the buses is compounded by the number of trips that were supposedly scheduled during the day. Thus, creating traffic inside and at the perimeter of the terminal. Ergo, the team proposed an information system that will inform the passengers as to when their assigned buses will be at the terminal. With the bus tracking system, which the team named 'TRAK,' the passengers just need to be at the terminal half an hour to 45 min before the departure time. Consequently, this will lower the number of people waiting in the terminal and will also help improve the traffic inside and outside the terminal.

We scheduled the presentation one week before the end of the semester to give the teams a week to revise their draft to include the comments of the panel members, which consists of the representatives of the public ports, the professors, and the Technology Business Incubation (TBI) coordinator. One whole day was scheduled for the CPA proposals and another entire day was dedicated for the CSBT projects.

Eight out of the ten proposals were accepted by the public ports as viable projects, though the public ports representatives notified that they have some concerns regarding the budgetary items stated in the plans. The two projects that were not accepted by the public ports, namely, Export Management System (CPA) and the Bus Fee Payment and Monitoring System (CSBT), were due to the substandard quality of the software presented. Lastly, the TBI representative offered to support four projects that he believes has a commercial value, and in which TBI can assist and develop. The TBI representative chose only one proposal from the CPA group, which is the Directory and Passenger Assistance project; while he selected three projects from the CSBT group; namely, TRAK, the Loading Bay Monitoring, and the Baggage Loading System.

Table 2
The ten interdisciplinary projects.

Cebu Ports Authority		Cebu South Bus Terminal	
Team Name	Proposed Project	Team Name	Proposed Project
PrimeUP	Angkla: Berthing Management System	WayFinders	Directory and Passenger Assistance
CMD	Directory and Passenger Assistance	Stambai	TRAK: Bus Tracking System
Co7Lab	E-ttendance Log and Monitoring	HANI	Loading Bay Monitoring
Nueve	Export Management System	UpLift	Baggage Loading System
Parola	Porter Assistance and Management System	Echo	Bus Fee Payment and Monitoring System

Table 3
Evaluation of the 39 marketing management students on the new method used in frequency (and percentage).

Rating	Apply theory in real-life situation	Improve Problem-Solving Skills	Design and Develop Solutions	Learn to work with interdisciplinary team	Enhance interpersonal skills through interdisciplinary teams	Help develop leadership skill	Help improve communication skills	Lifelong Learning
1	1 (3%)	1 (3%)	0 (0%)	1 (3%)	1 (3%)	1 (3%)	0 (0%)	0 (0%)
2	0 (0%)	0 (0%)	1 (3%)	0 (0%)	0 (0%)	0 (0%)	1 (3%)	1 (3%)
3	0 (0%)	0 (0%)	1 (3%)	0 (0%)	1 (3%)	5 (13%)	0 (0%)	0 (0%)
4	10 (36%)	16 (41%)	13 (33%)	8 (21%)	11 (28%)	17 (44%)	13 (33%)	11 (28%)
5	28 (72%)	22 (56%)	24 (62%)	30 (77%)	26 (67%)	16 (41%)	25 (64%)	27 (69%)

Table 4
Comments of the 39 Marketing Management Students on the course.

Liked best about the course	# of respondents (%)	Liked least about the course	# of respondents (%)	Improvement: the course	# of respondents (%)
the learnings from working with the CS and PD students	29 (74%)	schedule (conflicts and different class schedule)	23 (59%)	better coordination of requirements amongst the professors	11 (28%)
the relevance of the course (application)	17 (44%)	lack of coordination between professors	7 (18%)	have more big group sessions that require attendance	9 (23%)
making new friends	15 (38%)	adjusting to personalities and work habits	6 (15%)	more team building	3 (11%)
the collaboration with the different courses	10 (26%)	time-consuming	4 (10%)	make the school the groups' client	3 (11%)
the team-building experience	6 (15%)	other students not meeting deadlines	2 (5%)		
the financial assistance	1 (3%)	no comment	4 (10%)		

The total number of comments is not equal to 39 because some students gave more than one answer, while others did not provide any comments.

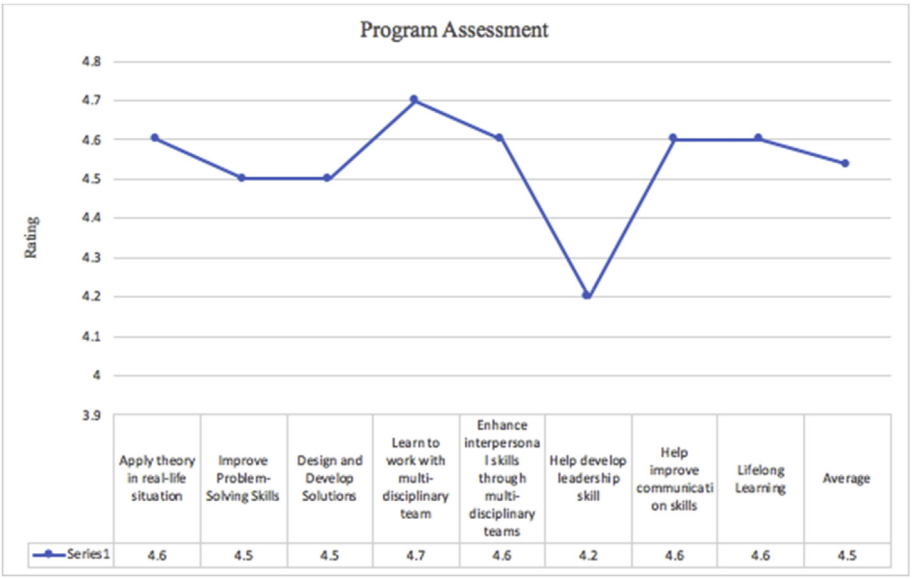

Fig. 1. Graphic representation of the evaluation of the 39 marketing management students.

5.2. Program assessment/evaluation

Table 3 and Fig. 1 show the evaluation of the 39 MM students regarding the new method used. Table 3 shows that majority of the MM students (95% of the respondents) found the new approach to be effective (with '4' or '5' ratings) in all the desired outcomes. Approximately 5% of the respondents or 2 MM students perceived that the collaboration did not meet the desired results of the course. Since we wanted an honest assessment of the program, we did not require the students to identify themselves when they evaluated the program. However, during the FGD of MM students (30 students or 77%), aside from the difficulty of meeting the team as often as they needed, some of the CS and PD students were neither attending the meetings nor submitting the agreed assignments. In fact, one of the teams (Echo) did not do well because out of the five CS students only one was working on the service innovation project. In that same team, the PD students assigned in the group did not attend any of the set meetings, mainly because of other coursework.

Amongst the eight outcomes, 'learning to work with interdisciplinary team' garnered the highest number of a'5' rating, followed by 'apply theory in a real-life situation,' then 'lifelong learning.' We are satisfied with these results as one of our purposes for collaborating with the other colleges is to create a setting for our students that reflect the real-life working environment. These results show that the method used taught the students to appreciate people who may not be similar to how they think, feel, and act. Based on their ratings, the course encouraged them to find ways to personally improve, which is an essential attribute of a student who is prepared to face a very competitive business landscape.

It is interesting to note, however, that the item that garnered the lowest number of a '5' rating is 'help develop leadership skills.' Based on the FGD, one of the challenges that the MM students faced was the creative differences between the CS and PD students. When they were designing the agreed proposed solution to the problem, the CS students would take charge of the overall design because they claimed that they were the ones doing the encoding. Since most of the development of the service innovation depended on the CS students, some of the groups allowed the CS students to take charge of the development of the service. However, problems arose during the presentation when four of the ten projects did not look as attractive as they should have been if the PD students were allowed to handle the design stage. When we asked the MM students for an explanation why they did not take the lead role as they were Management students, one of the reasons given was that since the CS and PD students did not see eye to eye when it comes to design, their primary role became peacemakers instead of leading the group. They did not want to look biased towards anyone, so instead of choosing sides (who should lead in the design), they decided just to keep the peace and allowed the natural course of CS students taking charge.

Overall, based on the program assessment, the average rating of the interdisciplinary approach to teaching Marketing Management is 4.5, which implies that the students perceived this method, even with its challenges, effective. Thus, the evaluation of the students supports our hypothesis that a collaborative, innovative experiential learning will accomplish all the set desired outcomes.

It is no surprise that based on the comments of the MM students the experiential learning is what they liked the most in the program. Learnings such as how to lead and communicate to students with different personalities, priorities, and study habits. Aside from these, they've also learned software applications as they worked with the CS and PD students. These findings are consistent with previous studies concluding that experiential learning will improve knowledge absorption of the students.

Another highlight of the program is the relevance of the course. The students liked the fact that they were able to apply the

classroom lectures to real-life, such as witnessing the development of a real product (the service innovation) to solve a real problem. Aside from this, they liked the experience of dealing with the real-life clients, target markets, and other third parties involved in the study. Making new friends and the collaboration with the different courses, the team-building, and the financial assistance were also the highlights of the program.

As for the factors that they liked the least, it is expected that the lack of common time is at the top of the list. 59% of the respondents said schedule issues were the most challenging to overcome since the class schedules of the three courses were all different. This is followed by the lack of coordination between the professors of the three courses (15%), and adjusting to the new team members' personality and work habits (15%). A small number of students also mentioned the course load (10%) and students from the other courses did not meet the set deadlines (5%).

Predictably, the suggestions to improve the course stemmed from what the students liked the least about the course. 28% of the MM students suggested for the professors handling the three courses to have better coordination regarding the requirements and scheduled presentations of each class. For instance, the CS professor required all students from the three courses to participate in the Scrum activities of the CS students, which was not initially an MM requirement. But because the CS students are dependent on the MM students when it comes to identifying the need of the targeted client, the MM students had to attend the Scrum activities. Furthermore, during the FGD, one of the students mentioned that the conflict between the CS and PD students was mainly due to their roles in the design phase, which was not explicitly set.

Another suggestion for the improvement of the course is to have more big group sessions requiring the attendance of all students (23%). Since the students have different study loads and time schedules, the MM students had difficulty getting all of their counterparts to attend their group meetings. The MM students (11%) also suggested having more team building activities and making their university the groups' clients to improve the school's quality of service.

Tables 5 and 6 summarize the comments of the students from the Computer Science Department and the Product Design Course, respectively.

The CS students affirmed that the best aspect of the program is the skills and knowledge that they get from their real-life experience working with real clients and other team members. Technical (67%) and communication (43%) are improved during the activity. The realism of the exercise also made an impact in the students' learning, i.e., real clients (20%), and relevant project output (14%).

Similarly, the CS students noted time as the least liked aspect of the program highlighting that duration of the program is short (49%) and that the schedules of the participating courses do not match, leaving the teams with little time to meet (45%). As a result, the students recommend a longer project duration (4%) and a synchronized schedule (4%).

Overall, the PD students liked the collaboration of the three courses because it reflected reality, i.e., dealing with real clients (47%) and coming up with real projects (18%). Roughly half enjoyed working with other colleges, but at the same time, there were a couple of PD students who liked working with the other courses the least. The dislike of working with non-PD students could have been due to the small number of PD students compared to the MM and CS students. As expected, the lack of time is also a concern of the PD students. As for the course improvement, they suggested that their faculty-in-charge should give clearer instructions as to the roles of the three courses to lessen misunderstandings with their groupmates and to facilitate learning that the PD students needed for the collaboration. As for the rest, the PD suggested ways to improve group dynamics and groupings such as choosing their own groups, more group activities, more time and having the same class schedules.

Table 7 summarizes how well each interdisciplinary team member performed in their respective teams in the area of attendance, punctuality, contributions, initiation of ideas, accepted responsibilities, delivered on promises, working attitude, organization, preparedness, and knowledgeable. The students were instructed to rate each other based on these dimensions, from 1 to 10, 10 being the highest. Out of the total number of students (105 students from the three courses), 92 students (88%) rated their respective group members. The mean score for all the teams is 8.98, which implies that, in general, all the students performed well.

Attendance (8.67), Initiates Ideas (8.83), and Punctuality (8.84) got the lowest mean scores. Two of the lowest rated dimensions are consistent with the comments of the MM students regarding the different schedules of the three courses. One MM student suggested to 'schedule more required big meetings' so that their counterparts will likely attend their group discussions. As for initiating of ideas, one MM student commented that she perceived MM students did not help much in the work of the CS and PD students because they were more concerned with accomplishing the Management requirements. One student also remarked that the MM students in their team sometimes feel inadequate when the discussion topics are on the creation of their proposed service innovation. This is understandable since the MM students do not have the technical knowledge that is needed to create the prototype of their innovation.

The highest scores are in the Accepts Responsibilities (9.27), Positive Work Attitude (9.22), and Knowledgeable about the project (9.10) dimensions. The peer evaluation results are consistent with program assessment results, which also provide strong support for the hypothesis of this case study.

5.3. Discussion

Based on the positive assessment of the program (Tables 3 and 4), it is then not surprising that most of the groups successfully presented service innovations that the clients approved (even though some of the projects still needed to be revised). The positive assessment of the program based on the learning outcomes (Tables 3 and 4) supports the hypothesis that an innovative experiential learning approach that is collaborative in nature will elicit a positive response from the MM students. Furthermore, the positive assessment of the program provides a strong support on the effectivity of the new approach to teach advance Marketing Management

Table 5
Comments of the 51 Computer Science Students on the collaborated course.

Liked best about the course	# of respondents (%)	Liked least about the course	# of respondents (%)	Improvement: the course	# of respondents (%)
Learning new technical skills, experiential learning	34 (67%)	Project development requires more time	25 (49%)	Longer project duration	4 (8%)
Being able to work with others	34 (67%)	Course or student schedules do not match	23 (45%)	Arrange schedule of students	4 (8%)
Improving communications skills	22 (43%)	Members commitment to team agreements	6 (12%)	Reference materials, supplemental lessons	3 (6%)
Real client, real project, and real challenges	20 (39%)	Stress from pressure	6 (12%)	Team member selections	3 (6%)
Product's usability	14 (27%)	How the teams are formed	6 (12%)	Keep doing the program	2 (4%)
Experiencing team work; being part of a team	13 (25%)	Problems among team members	6 (12%)	More teachers to facilitate	2 (4%)
Processes involved in product development	12 (24%)	Lack of prerequisite knowledge or skills	5 (10%)	More team building activities	2 (4%)
Integration of Courses	5 (10%)	Inaccessibility of members	4 (8%)	Stress timely submissions of deliverables	2 (4%)
Team-building activity	5 (10%)	Unclear instructions from faculty	4 (8%)	Team building group according to teams	2 (4%)
Financial assistance	2 (4%)	Project backlogs	4 (8%)	Allow teams to select clients	1 (2%)
		Unprecedented schedule changes	2 (4%)	Laboratory for coding	1 (2%)
		Project roles tend to overlap creating confusion	2 (4%)	More clients	1 (2%)
		Slow adaptation to product development process	1 (2%)		
		Has financial implications	1 (2%)		
		The tendency to focus on individual ore respective course requirements	1 (2%)		

Table 6
Comments of the 17 Product Design students on the collaborated course.

Liked best about the course	# of respondents (%)	Liked least about the course	# of respondents (%)	Improvement: the course	# of respondents (%)
collaborating with the other colleges	8 (47%)	misunderstanding with groupmates	4 (24%)	faculty to give clearer instructions, roles, and expectations	4 (24%)
dealing with real clients (real-life set up)	8 (47%)	the pressure due to the limited time	3 (18%)	teacher to facilitate learning	3 (18%)
real-world learning and insights	3 (18%)	time consuming	3 (18%)	allow the students to choose their own groups	2 (12%)
working on the design of the hardware and website (develop real project)	3 (18%)	some tasks are overlapping	2 (12%)	more time (2 semesters)	1 (6%)
making new friends from different backgrounds	3 (18%)	working with other people	2 (12%)	more group activities	1 (6%)
integration of the courses	2 (12%)	unnecessary topics covered didn't help the collaboration	1 (6%)	same time slot of the 3 courses	1 (6%)

Table 7
Summary of the Peer Evaluation of the ten interdisciplinary teams.

	Performance Dimensions										
Teams	Attendance	Punctuality	Contributes	Initiates Ideas	Accepts Responsibilities	Delivers	Positive Work Attitude	Organized	Prepared for the meeting	Knowledgeable	Average
SBT Directory and Passenger Assistance	9.13	9.17	9.36	9.36	9.69	9.69	9.63	9.50	9.56	9.32	9.44
TRAK: Bus Tracking System	9.27	9.57	9.64	9.43	9.92	9.55	9.85	9.67	9.52	9.52	9.59
Loading Bay Monitoring	8.98	9.24	9.35	9.22	9.53	9.40	9.26	9.42	9.35	9.58	9.33
Baggage Loading System	8.39	8.81	9.42	9.15	9.58	9.24	9.56	9.32	9.18	9.35	9.20
Bus Fee Payment and Monitoring System	8.52	8.81	8.50	8.38	8.96	8.59	9.13	8.64	8.73	8.88	8.71
Angkla: Berthing Management System	8.00	8.08	8.55	8.28	8.83	8.00	8.52	8.56	8.35	8.57	8.37
CPA Directory and Passenger Assistance	8.66	8.78	9.03	9.03	9.24	8.84	9.38	9.32	9.06	9.00	9.03
CPA E-ttendance Log and Monitoring	8.91	8.65	8.54	8.57	9.19	8.68	8.91	8.97	8.80	8.99	8.82
Export Management System	8.57	8.63	8.29	8.26	8.86	8.17	8.63	8.48	8.44	8.67	8.50
Porter Assistance System	8.31	8.61	8.61	8.58	8.94	8.81	9.30	8.98	8.68	9.12	8.79
Average	8.67	8.84	8.93	8.83	9.27	8.90	9.22	9.09	8.97	9.10	8.98

to enhance the critical skills.

The following paragraphs answer the research question posed earlier: how were the critical skills of collaboration and teamwork, creativity, and critical thinking and problem-solving enhanced by the experiential and collaborative learning approaches?

5.3.1. Collaboration and teamwork

The proposed experiential learning is in line with the argument of Saavedra (2012) to teach teamwork as an outcome of an activity. Her article stressed that students should not only learn from their teachers but also learn from and with their classmates. In this way, students would be able to develop the ability to work in teams. In the experiential learning, the MM students shared with us during the FGD that their ability to work in teams were put to the test with the new set up. They noted that they were very comfortable working with all MM students and knew how to deal with them. But with the interdisciplinary team, they had to depend on their CS and PD counterparts for output to submit their requirements to finish the project on time, and vice versa. However, despite the challenges they went through due to the schedule, academic load, and personalities, “learning from their peers” ranked first in the MM students’ list of most liked about the course. When asked why this is so, the top one answer was “it is because they learned more about how things work in the real world.” The MM students unanimously agreed that due to the adjustments that they had to do to finish the course, they are confident that their ability to collaborate and work in a team greatly improved. Aside from this, they learned to see things from the point of view of their counterparts. For instance, during the FGD with the TRAK Team, a student commented that once one member finishes his assigned task, he will offer to help other team members who are struggling with his output. Another one recognized that the diverse skills of the team helped in the completion of their project. The members all agreed that working in this project helped them developed the positive mentality of “I am not contributing enough, so I need to step up” and “what can I do to help.”

5.3.2. Creativity

It is a widespread belief that creativity brings about innovations that improve the quality of service providers give (e.g., ATMs and online banking to the banking industry, online booking for air-, sea-, land transportations, and tons of software solutions to make operations faster and more efficient). Sternberg & Lubart (1999) defined creativity as ‘the ability to produce work that is both novel and appropriate’ (p. 3). They further proposed that creativity is used to solve problems and create new products and services. Robinson (2001) also stressed the development of creativity requires ‘structure and intentionality from teachers and students’ from different disciplines (Saavedra 2012). For creativity to be enhanced, we encouraged the students to explore all possible solutions to their identified needs. We required the solution to be technologically based (for the Computer Science students) with a user-friendly interface (for the Product Design students) that end-users will be willing to use (for the Marketing Management students). We believe we were able to achieve this critical skill through the ‘design and develop solution’ learning objective that the MM students' rated 4.5 out of 5.0. In the program assessment, one of the best thing that the MM students liked about the experiential learning was creating products that are relevant to real-life clients. Another one noted that finding ways to meet the needs of the clients was the best thing about the course. Another student mentioned that what she liked best about the activity was when we rejected their initial solution. Because of the rejection, their group members became more involved in coming up with a solution to their identified problem; and as a result, their final output was one of the best solutions.

In this case study, creativity is not only about producing a new service or product, but for the MM students, it is also about strategies to deal with different personalities. During the FGD with the MM students, one student shared that she had to be creative in soliciting cooperation with her non-management counterparts because of differences in personalities and ways of working. She explained that at the start of the project the CS student on her team were shy and didn't participate much until they (the MM students) reached out to them to earn their trust. Some MM students also had to be creative to manage conflicts between the CS and PD students since both programs teach product and service design.

In sum, though not everyone in the MM program preferred the interdisciplinary team (1 out of the 30 students who joined the FGD), all of them agreed that their creativity was tested and enhanced by the collaboration with the CS and PD students.

5.3.3. Critical thinking and problem-solving

Lastly, critical thinking and problem-solving skills involve asking the right questions (Wagner, 2008). As Wagner (2008) put it, it is ‘continuously thinking of ways to improve products, processes, or services’ (p. 21). For this case study, the MM students were required to identify the needs and opportunities of the clients before they can propose a service innovation. These skills were enhanced when the MM students had to go to the research field to interview and ask questions not only directed to the representatives of the clients but also to the clients' stakeholders, such as the passengers of the public ports and third-party service providers. The positive effect of this experiential learning is also supported by the students' assessment of the programs when they perceived that the project enhanced their skills to identify needs and opportunities, and communication skills. Based on the program assessment, all of the MM students agreed that their learning was enhanced by the real-life client and working with the other colleges. As a number of MM students shared, they were more intentional in proposing solutions in this course because they had to consider the capacities and limitations of the CS and PD students. Furthermore, the acceptance of the eight projects out of ten is a strong support that the students were able to identify the appropriate needs and proposed solutions that are deemed acceptable by the clients.

Aside from learning these critical skills, the MM students also expressed satisfaction and enjoyment working with the CS and PD students. During the FGD with the MM students, only one student (out of the 30 students who participated in the FGD) preferred a homogeneous group over the interdisciplinary team. Her reason is that she believes an all Management team would have had a better output because Management students were more comfortable to work with. She further explains that the scheduling and the different

personalities were very challenging to handle. On the other hand, those who preferred the interdisciplinary team said that the heterogeneous group was more realistic because when they graduate from the university, they will be dealing with different kinds of people from different backgrounds and expertise. One said that this course was a preview of what is the reality. Another one also noted that the course was prepping them up for the real world. Another one said that the course was fulfilling because it is an application of all the theories that she has learned in her earlier years. One said that working on the project was satisfying because he can see the plans taking shape right before his eyes. Another on said the theories were becoming a reality. Another one said that the interdisciplinary team was more beneficial because she got to learn the CS and PD terms also such as scrum, sprints, color palate, and others. Another one appreciated it because he was learning something else outside Management. Around 30% of the FGD participants said working with other colleges was difficult especially concerning scheduling, but they still prefer the interdisciplinary team because of the additional learnings they got. Lastly, one said that the project was not just about paper works but also dealing with real-life people. She further explained that this project is more interesting because she was exposed to other disciplines. All the feedback of the MM students is in line with the conclusion of Bell (2015) that experiential learning activities will result in students having high levels of satisfaction and engagement.

6. Conclusion and recommendation

Our objectives to collaborate with the Computer Science and Product Design instructors, and CPA and CSBT were two-fold: for the MM students to apply the theories and practices that they've learned in their respective programs to real clients, and to learn to manage an interdisciplinary team in project development, similar to the real world. Because it is common knowledge that the real world does not exist in silos, unlike in the academic setting. For example, if a marketing management student decides to work in advertising, he or she will need to deal with company owners, who are likely to be demanding and at the same time with the creatives, who are likely to be melancholic and unstructured. These two groups of individuals have different goals, personalities, and ways of doing things.

The most popular teaching tool in Marketing Management is the use of case studies. However, experiential learning tends to be more effective because the students are given the opportunity to apply the classroom lectures as they make real decisions and face the consequences of these decisions (McCarthy & McCarthy, 2006). Furthermore, Panitz (1999) defined collaborative learning as a personal philosophy, and not just a learning technique. We hope that this experimental project would instill in their minds to keep learning not only from their supervisors but also from their peers, suppliers, clients, stakeholders, and even competitors.

Thus, if we want to build the next generation of innovators, we have to remove anything that will inhibit the creativity of the students. Moreover, we have to be more intentional in designing the activities of our courses so that students will learn the skills that they need to strive in the 21st-century workplace.

6.1. Recommendation

Since this is a new approach to teaching advance Marketing Management, it is expected that there will be areas that need to be improved. Such as better coordination between the faculty of the three programs and better team building approach.

1 Better coordination between faculty of the three programs

The top two least liked about the course of the MM students were the lack of common time to meet and the seeming lack of coordination amongst the instructors of the three programs. The coordination could have improved if the three courses had precisely the same schedule so that it would be easier for the three instructors to schedule a big class where the students can meet and discuss their projects (e.g., no lecture while the student attendance is required). This would also be a venue for the students to plan their meetings and follow up on the assignments.

As for the lack of coordination of the instructors, some of the confusions would have been avoided if the PD instructor who will be running the program was coordinating with us since day 1. Unfortunately, though we [with the three programs representatives] met five months before running this program, the PD instructor that we were meeting with was not the same person that actually handled the course with us. Confusions such as who will lead the design phase would have been resolved before starting the course.

Another area for improvement is for the three instructors to precisely align the individual course requirements and the schedule of submissions. Although it was clear for all of us that we will only have one output (i.e., the service innovation), each program had its course requirements that the students need to accomplish. It escaped our minds that since our MM students belong in an interdisciplinary team, their output in our specific course requirement will also affect the production of the CS and PD students in their respective course requirements and vice versa. For instance, the CS students were using Scrum to manage their work assignment, and of which the MM students were given a role as the product owner. So every time there is a sprint schedule, the MM students were required to be present so that they get to hear the improvements that they need to do based on the clients' comments. In another case, the MM students were required to submit the description of the proposed innovation to the identified need, but for the CS and PD, they were not yet required to provide their outputs. So the MM students had to pressure the CS and PD students to help them with the description of the proposed innovation.

2 More sustainable team building approach

We contracted a professional group to handle the team building of the three programs to fast-track the formation of the team since the students only had 4–5 months to complete the project. We requested the third party to group the students by their assigned interdisciplinary teams to provide them with a shared experience to help build their respective teams. Unfortunately, only around 65% of the students attended this activity due to the financial requirements of the activity. Because of the low turnout, the third party decided to mix up the group and create new teams against our instructions. Although all of the students enjoyed meeting new friends, the mental and physical challenges, and the lessons learned on being a dependable team member throughout the activities (we asked them to submit their reflection papers), one participant commented that he felt the activity did not achieve its primary purpose. He further suggested that grouping the students according to their assigned interdisciplinary teams would have quickly given the interdisciplinary team a head start in building rapport with each other.

The best scenario would have been to require all the students to be present and actively participate with the rest of their group mates. However, in this particular case, 95% of the students that did not join the activity dropped out from the list because of financial issues. We submitted a grant proposal to one of the government agencies, but it was turned down. Financial assistance extended to the students will definitely help improve the attendance of the students to the team building activities.

Another recommendation is to provide activities to 'strengthen' the interdisciplinary teams. The building is one thing, but for the team to overcome the storming stage, the teams need to be strengthened. For instance, during the FGD with the MM students, one group said that it was challenging to get the CS and PD students to participate in the discussion during their first 2 months as a group. One also commented that the PD student assigned in their group hardly gave any ideas. Because of this, they had to double time in the last two months of the semester before the final submission. This caused some conflicts in one group and poor performance in two groups. A couple of students suggested that team building activities should also be conducted during the semester to strengthen the teams. We wanted to do this, but the financial requirements of the activity constrained us.

To end, despite the challenges, the new approach to teaching advanced Marketing Management was successful. The students enjoyed learning, and the majority of them performed well together with the other colleges.

Ethical considerations

From the very start of the semester, we informed the students that the experiential learning method is still in the experimental stage. Furthermore, we explicitly stated in the course syllabus that the students are required to submit their evaluation of the program at the end of the semester. Thirdly, during the FGD, we informed them that we were taking note of their replies and we may use them in the case analysis. Lastly, anonymity was respected by not mentioning any of the names of the students in this case study.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ijme.2019.100309.

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