

SUSTAINING ENGAGEMENT AND LEARNING IN A PANDEMIC

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ABSTRACT

Based on learning and engagement theory, this paper compares evidence of (a) observed in-class participation / interaction skills (cognitive), emotional (affective), and performance physical (behavioral) engagement among competing simulation team members prior to and during the Coronavirus COVID-19 Pandemic. Remote online (via Zoom) engagement measures monitored include observed levels of improved attendance, in-class focus and energy, relevant questions raised, discussion quality, decision support package usage, end-of-period scaffolding, initial, intermediate, and final debriefing despite initial Zoom-related challenges encountered. Outside-class engagement measures monitored include two-way communication, bi-weekly online decision entry, results retrieval, and graphics package usage, weekly writing assignments, individual report, team presentation, server log statistics of daily, weekly, and semester team activity, website tracking, prior to and during the COVID-19 pandemic.

INTRODUCTION

With the outbreak of the Coronavirus COVID-19 pandemic in Spring 2020, and the institution of CDC recommended social distancing guidelines, educational institutions switched from traditional on-campus classroom instruction to remote online learning during and after Spring Break. The quality and integrity of online courses and degree programs have been the subject of skepticism among business college faculty (Wilkes et al. 2006, Tanner et al. 2009, Totaro et al. 2005). Online instruction shortcomings perceived by faculty include the lack of instructor-student and student-student interaction, absence of structured classroom environment, tendency of students to teach themselves the course material, the difficulty of teaching quantitative courses online, and the challenges associated with administering exams online (Tanner et al. 2009). The transition from traditional classroom learning to remote online learning during the pandemic presented the opportunity to (a) assess the perceived shortcomings of online instruction and (b) monitor and track student engagement metrics both prior to and after the transition from traditional classroom learning to remote online learning.

Student engagement is considered an important predictor of student achievement (Handelsman et al. 2005). Engaged students are good learners and effective teaching stimulates and sustains student engagement (Pintrich & DeGroot 1990, Skinner & Belmont 1993). In addition, Skinner and Belmont (1993) found a reciprocal relationship between student engagement and teacher involvement. A recent study integrated two alternative student engagement classifications and specified a model of academic engagement based on a review of learning and engagement theory (Palia 2020). The primary antecedents of academic achievement include (a) the learning environment that is, in turn, influenced by autonomy, relatedness, and competence (National Research Council 2003), and (b) the demands of the work situation, the range of decision making freedom to face those demands, and the amount of support provided (Karasek 1979). In addition, academic engagement is influenced by the perceived competence by students in their ability to accomplish some behavior. However, role overload, the degree to which individuals are overtaxed as a result of (a) being under time pressure, and (b) having too many commitments and responsibilities, can act as a barrier to academic achievement (Jones et al. 2007).

This paper compares evidence of sustained (a) observed in-class participation/interaction skills (cognitive), emotional (affective), and performance physical (behavioral) engagement among competing simulation team members prior to and during the COVID-19 pandemic. Remote online (via Zoom) engagement measures monitored include observed levels of (a) improved attendance, (b) in-class focus and energy, (c) relevant questions raised, (d) discussion quality, (e) decision support package usage, (f) end-of-period scaffolding, and (g) phased initial, intermediate, and final simulation debriefing (Palia 2019), despite Zoom-related learning and teaching challenges encountered. Out-of-class engagement measures include (a) timely bi-weekly online decision entry prior to preset decision deadlines and subsequent results retrieval, (b) graphics package usage, (c) timely submission of weekly writing assignments, (d) server log statistics of daily, weekly, and semester team activity, (e) website tracking of visitor activity, page-views, marketing dss package downloads, prior to and during the Coronavirus pandemic, and (f) quality individual report submission and team presentation.

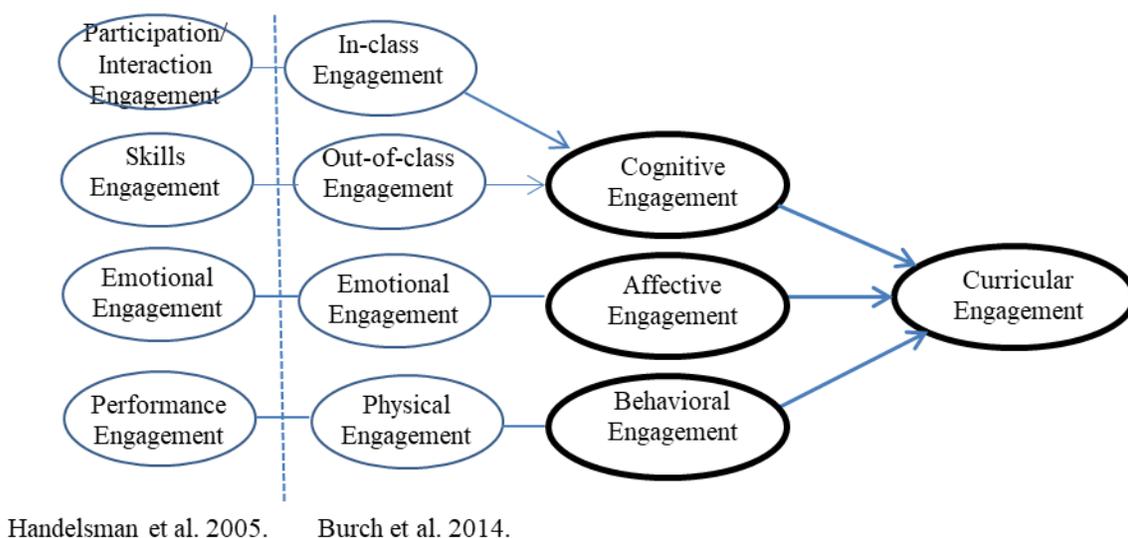
First, this study (a) reviews the academic engagement and experiential learning literature, (b) presents two alternative student engagement classifications relative to a model of academic engagement, (c) describes the academic course engagement setting, (d) presents the course schedule and (e) describes the four simulation debriefing phases used both prior to, and subsequent to the Coronavirus COVID-19 pandemic outbreak during Spring Break 2020. Next, this paper presents observed in-class and outside-class evidence of different forms of academic engagement based on the literature. Then, both in-class and outside-class academic engagement metrics (a) in total for Spring 2020 (b) by simulation phase, and (c) pre-COVID-19 v post-COVID-19 pandemic outbreak, are presented. These metrics are based on daily monitoring of (a) server log, (b) graphic package usage, (c) downloads of

marketing dss packages, (d) downloads of articles on marketing concepts and usage of marketing dss packages, and (e) tracking of the course website. The study concludes with insights derived and suggestions for future research, and development of academic engagement metrics.

LITERATURE REVIEW

Handelsman et al (2005) and Burch et al (2014) specified two alternative student engagement classifications (see exhibit 1). This paper provides evidence of sustained (a) observed participation/interaction in-class cognitive engagement, (b) monitored skills out-of-class cognitive engagement, (c) emotional affective engagement, and (d) performance/physical behavioral engagement among competing simulation team members.

EXHIBIT 1



First, in the Handelsman et al (2005) student engagement classification, “Participation/Interaction Engagement” refers to participation in class & interactions with professor and students. It includes (a) raising hand in class, (b) asking questions to improve understanding, (c) having fun in class, (d) participating actively in small group discussions, (e) going to prof’s office hours to ask questions, clarifying concepts, and reviewing assignments, and (f) helping fellow students, and is consistent with active collaborative learning. Second, “Skills Engagement” refers to engagement through practicing skills. It includes (a) studying on a regular basis, (b) putting forth effort, (c) doing homework, (d) staying up on readings, (e) looking over class notes, (f) desiring to learn material, and is consistent with using general learning strategies. Third, “Emotional Engagement” refers to emotional involvement with the material. It includes (a) making course material relevant to life, (b) applying course material in life, (c) making course interesting, (d) thinking about material outside-class, (e) desiring to learn material, and is consistent with Affective Engagement. Fourth, “Performance Engagement” refers to engagement through levels of performance in class. It includes (a) getting a good grade, (b) doing well on tests, (c) being confident of learning and doing well in class, and is similar to setting performance goals (Handelsman et al., 2005).

Next, in the Burch et al (2014) student engagement classification, “Cognitive In-class Engagement” includes (a) paying attention to, (b) concentrating on, and (c) focusing attention on, class discussion & activities. “Cognitive Out-of-class Engagement” includes (a) summarizing in-class learning and course materials, (b) reviewing notes after class, and (c) discussing ideas from readings and class discussion with friends & family outside-class. “Emotional Engagement” includes (a) feeling that course helps with speaking clearly and effectively, (b) reaching conclusions based on analysis of information (numbers, graphs, statistics) provided. Finally, “Physical Engagement” includes (a) trying hard to perform well in class, (b) exerting full effort toward course/class, and (c) devoting a lot of energy toward class/course (Burch et al., 2014).

ACADEMIC ENGAGEMENT

Young (2010) reviews the definition and measurement of academic engagement and investigates environmental antecedents that foster or discourage each of the dimensions of engagement. Curricular engagement represents engagement towards targets or objects related to teaching and learning pedagogies, while extra-curricular engagement refers to engagement towards targets or objects outside the classroom, such as student clubs, athletics, and musical events. Curricular engagement refers to the intensity and emotional quality of students’ involvement in nurturing and carrying out learning activities (Skinner, 1991). This definition recognizes both the affective (emotional) and behavioral components of engagement.

The “Learning Environment” affects engagement through decisions on (a) how material is presented, (b) which learning activities are used, and (c) what kinds of feedback are provided. Effective engagement needs to address underlying psychological variables such as the needs for (a) autonomy, (b) relatedness, and (c) competence (National Research Council, 2003). The “Demand Control Support Model” postulates that psychological strain results from the joint effects of (a) the demands of the work situation, (b) the range of the decision-making freedom to face those demands, and (c) the amount of support provided (Karasek, 1979). Job demands are psychological stressors such as (a) time pressure, (b) heavy work load, (c) ambiguity, and (d) role conflict. Job control concerns individual’s potential control over work tasks and is composed of (a) decision authority, and (b) skill discretion. It is affected by the degree of (a) autonomy, (b) flexibility and (c) discretion in choosing the timing and methods for performing the tasks as well as the variety and creativity in skill usage. “Perceived Competence” refers to student confidence in their ability to accomplish some behavior. Finally, “Role Overload” is the degree to which individuals are overtaxed as a result of (a) being under time pressure, and (b) having too many commitments and responsibilities (Jones et al., 2007)

Affective engagement refers to students’ emotional reactions to the learning task, the content, and/or the learning context (Skinner & Belmont, 1993), as well as identification with school (Voelkl, 1997) and the liking or disliking of school (Epstein & McPartland, 1976). Behavioral engagement represents the effort, attention and persistence of performing various learning activity behaviors such as class discussion, debate, role-playing, and short written exercises (Young, 2010).

A third component of engagement includes students’ use of cognitive and self-regulatory strategies to monitor and guide learning (Pintrich & De Groot, 1990). This cognitive engagement accounts for the mental effort and psychological investment directed toward comprehending and mastering the academic task (Wehlage et al., 1989). Accordingly, engagement is a multidimensional concept with affective, behavioral and cognitive components. Fredricks et al. (2004) review the engagement literature and suggest that the antecedents and outcomes of engagement need to be specified.

ENGAGEMENT AND EXPERIENTIAL LEARNING

Active student engagement is fostered through experiential learning. Experiential learning involves learning through experience via cognitive and affective involvement of the whole person (Hoover, 1974). It is the result of cognitive, affective and behavioral engagement (Hoover & Whitehead, 1975). In addition, it is “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience” (Kolb, 1984). Experiential learning is an active form of learning that requires student engagement and leads to student learning outcomes (Burch et al., 2014).

Experiential learning theory (Kolb, 1984) proposes that experiential learning has six main characteristics. First, learning is best conceived as a process, not in terms of outcomes. Second, learning is a continuous process grounded in experience. Third, learning requires the resolution of conflicts between opposed modes of adaptation to the world (learning is by its very nature full of tension). Fourth, learning is a holistic process of adaptation to the world. Fifth, learning involves transactions between the person and the environment. Sixth, learning is the process of creating knowledge that is the result of transaction between social knowledge and personal knowledge (Kolb, 1984). Further, in order to transform experience into knowledge, it is necessary to (a) involve the whole person (intellect, feelings, and senses) in learning, (b) use relevant life and learning experience, and (c) reflect on the learning experience (Kolb, 1984; Magnuson & Good, 2017). Experiential learning requires self-initiative, an intention to learn, and an active phase of learning (Moon, 2004). In experiential learning, the individual is encouraged to (a) directly involve themselves in the experience, (b) reflect on their experience using analytical skills, (c) gain a better understanding of the new knowledge, and (d) retain the information for a longer time (Winsett et al., 2016).

Rahn (2009) suggests that student engagement is evident when there is a competitive team spirit, discussion and debate within the team. He asserts that the importance of student engagement in education is a function of the simulation and educational environment. In order to stimulate student engagement and augment experiential learning, instructors can provide students with goal oriented and engaging tools (Miller, 2013). Further engagement is strengthened when students are presented with focused goals, challenging tasks, an authentic and compelling story, and a degree of novelty. Students in simulation enhanced courses have identified goal setting, information processing, organization and interpersonal skills, sales forecasting, entrepreneurial skills, financial analysis, economic conceptualization, inventory management, mathematical modeling, hiring, training, motivation, enhanced creativity, communication skills, data analysis, strategic planning, and other skills as part of the learning experience (Wellington & Faria, 2006).

STUDENT ENGAGEMENT

Student engagement is viewed as a multidimensional meta-construct, consisting of three types of engagement – behavioral, emotional, and cognitive (Axelson & Flick, 2011). Yet, the observable part of engagement may not be a valid indicator of true student engagement. Students who appear to be curious about or interested in a subject or who display other outward signs of engagement may not acquire knowledge about the subject. Other students who do not display signs of physical engagement may still be learning (Winsett et al., 2016).

Engagement is a multi-dimensional phenomenon that includes behavioral and affective components. It includes “initiation of action, effort, and persistence in schoolwork, as well as ambient emotional states during learning activities” (Handelsman et al., 2005; Skinner et al., 1990). In addition, it “is grounded in the cognitive and affective systems of learners and readers” (Mosenthal, 1999; Handelsman et al., 2005; Hoover & Whitehead, 1975). Some scholars note that engagement has an interpersonal component,

given that interactions with teachers and other students can be an important part of the classroom experience (Connell & Wellborn, 1991; Deci, Cornell & Ryan, 1985; Guthrie & Anderson, 1999; Handelsman et al., 2005; Skinner & Belmont, 1993). In addition, social interaction patterns in the classroom can amplify or constrict students' intrinsic motivations, their use of self-regulated strategies, and their attainment of deep conceptual knowledge (Guthrie & Anderson, 1999; Handelsman et al., 2005; Winsett et al., 2016).

Social learning, also called "collaborative" or "cooperative" learning is defined as acquiring knowledge as a group (Bandura, 1977). It involves observing how others in the group act, observing consequences, and acting to modify individual behavior. The role models observed by learners are extremely influential in this process (Bandura, 1977). Students must be active learners first, in order to take advantage of social learning: both active learning and social learning are more student-driven than traditional college lectures (Perkins, 1999).

Winsett et al (2016) demonstrated a positive relationship between group experiential learning activities and student engagement. Their research supports the use of Social Learning Theory to facilitate classroom engagement. Individuals in a group setting observe others in the same group, noting specifically how they act and the resultant consequences associated with it, and then modify their own behavior, thus increasing their own level of engagement. Their research results reveal that group discussions drives physical engagement, group projects drive emotional engagement and having a variety of group work drives cognitive out of class engagement in addition to emotional engagement.

Student engagement can facilitate authentic learning and personal development outcome, and enhance the development of skills, habits and rituals that augment the capacity for continuous learning and personal development. In addition, student engagement factors such as level of academic challenge, active and collaborative learning, student-faculty interactions, and supportive campus climate are significantly correlated with GPAs (Carini et al., 2006; Luthans et al., 2016).

Geddes et al. (2015, 2017) draw on service-dominant logic (Vargo & Lusch, 2004, 2014) to conceptualize co-creative strategies in experiential learning. Co-creation of value in experiential education via the combination of diverse (a) course operant resources such as lectures, and/or in-class or out-of-class exercises, (b) teacher and administrator operant resources such as emotional energy and attitude, and (c) student willingness to apply or withhold their operand resources (such as notebook computers) can lead to a range of potential educational outcomes.

PROBLEM BASED LEARNING

Problem based learning (PBL) pedagogy, founded on the premise that answers flow from problems, prompts students to recognize their knowledge limitations and motivates them to learn. The learning process begins by presenting the learner with an engaging problem. As students explore the problem, they discover how course concepts provide the means for resolving the problem (Anderson & Lawton, 2004). PBL provides students with opportunities to (a) examine the experiment with what they already know; (b) discover what they need to learn; (c) develop the people skills they need for improving their performance in a team setting; (d) improve their writing and speaking abilities by learning to state and defend with sound arguments and evidence their own ideas, and (e) become more flexible in their approach to problems. It gives students the opportunity to identify the ideas and skills they need to work through the problems they confront (Spence, 2001). A PBL problem should (a) engage student interest, and (b) require students to develop and implement the principle concepts of the course in order to successfully solve the problem (Duch et al., 2001).

Business simulations engage students' interest and are preferred by students when compared to cases and lectures in order to learn course concepts (Wolfe, 1985; Washbush & Gosenpud, 1991). In addition, they have been used to apply course concepts (Anderson & Lawton, 1997; Green & Faria, 1995; Hemmasi & Graf, 1992; Miller et al., 1998; Schellenberger et al., 1989; Teach & Govahi, 1998; Wolfe, 1990). Simulations have been used to (a) present concepts, and (b) provide students with an opportunity to experiment with and apply those concepts (Keys and Wolfe, 1990). Consequently, simulations provide the opportunity to use PBL to illustrate and apply important concepts in business courses. Yet, instructors need to consider the scope of the simulation, the student level of preparation as they begin the course, and the objective in using the simulation prior to using a PBL approach (Anderson & Lawton, 2004, 2005).

EXPERIENTIAL LEARNING SETTING

Based on the above literature review of learning and engagement theory, this study reports on the learning activities, student engagement and student learning outcomes observed at various stages in a capstone marketing course during (a) the face-to-face in-class learning phase prior to Spring Break, and (b) the remote online learning phase subsequent to the full-fledged outbreak of the Coronavirus pandemic during Spring Break 2020. It provides evidence of participation/interaction in-class and skills outside-class cognitive engagement, emotional engagement and performance/physical behavioral engagement in both the face-to-face on campus and remote online phases of learning.

Phased (a) initial briefing during the 'Prepare to Compete' phase, (b) intermediate debriefing during the 'Compete' phase, (c) additional intermediate briefing during the 'Report and Present' phase, and (d) final debriefing during the 'Wrap-Up' phase stimulate participant engagement and enhance learning. Final simulation debriefing, the culmination of the participant learning experience, follows phased intermediate briefing using a problem-based learning approach on marketing concepts, performance determinants, and marketing decision support system (DSS) package usage. Competing participant teams use marketing decision

support packages to monitor and analyze team performance, identify and understand reasons for sub-par performance, make better-informed decisions, and formulate positioning strategy as well as strategic market planning.

MARKETING STRATEGIES (WRITING INTENSIVE) CAPSTONE COURSE

The undergraduate functional capstone writing-intensive Marketing Strategies course is a response to a call from the local business community to develop the analytical and communication skills of our graduates. The mission of the course is to learn and apply strategic market planning and marketing management skills to optimize overall company performance while maintaining cash in balance. The writing-intensive course designation stresses learning through writing and requires frequent writing with quality individual feedback. Phased debriefing reduces uncertainty, improves understanding of underlying performance determinants, builds confidence and engagement, and motivates teamwork to identify problems, take corrective action, and exercise marketing control.

At the end of the semester, each participant submits a quality 10-page (narrative) Strategic Market Plan report (30% of course grade) based on performance in the COMPETE marketing simulation (Faria, 2006), marketing DSS package usage, and external research. In addition, each company makes a one-hour long team presentation (10% of course grade) that is divided into two equal parts. The first 30-minute company report covers (a) the presentation agenda, (b) company and brand name justification, and logo explanation, (c) mission statement, (d) organizational structure selected with individual responsibilities, (e) performance analysis, (f) strategic, tactical and forecasting errors made and lessons learned, and (g) sales forecast model using multiple regression analysis with forecast made and forecast error experienced. The second 30-minute company marketing plan covers (a) strategic analysis based on the Aaker framework (Aaker, 2014; Aaker & Moorman, 2018), (b) positioning analysis and strategy using VALS psycho-geo-demographic segmentation data and product positioning maps based on simulation performance data, (c) strategic market plan via SBU portfolio analysis using the BCG growth share and growth gain matrices based on simulation performance data, (d) recommended evaluation and control mechanisms (reports required and marketing control measures and process), and (e) conclusion with research references. In addition, each team submits a team presentation handout (10% of course grade) with DSS packages and external references used.

COMPETE MARKETING SIMULATION

COMPETE (Faria, 2006) is a marketing simulation designed to provide students with marketing strategy development and decision-making experience. Competing student teams are placed in a complex, dynamic, and uncertain environment. The participants experience the excitement and uncertainty of competitive events and are motivated to be active seekers of knowledge. They learn the need for, and usefulness of, mastering an underlying set of decision-making principles.

Competing student teams plan, implement, and control a marketing program for three high-tech products in three regions Region 1 (R1), Region 2 (R2) and Region 3 (R3) within the United States. These three products are a Total Spectrum Television (TST), a Computerized DVD/Video Editor (CVE) and a Safe Shot Laser (SSL). The features and benefits of each product and the characteristics of consumers in each region are described in the student manual. Based on a marketing opportunity analysis, a mission statement is generated, specific and measurable company goals are set, and marketing strategies are formulated to achieve these goals. Constant monitoring and analysis of their own and competitive performance helps the teams better understand their markets and improve their decisions.

Each decision period (quarter), the competing teams make a total of 74 marketing decisions with regard to marketing their three brands in the three regional markets. These 74 decisions include nine pricing decisions, nine shipment decisions, three sales force size decisions, nine sales force time allocation decisions, one sales force salary decision, one sales force commission decision, twenty-seven advertising media decisions, nine advertising content decisions, three quality-improvement R&D decisions, and three cost-reduction R&D decisions. Successful planning, implementation, and control of their respective marketing programs require that each company constantly monitor trends in its own and competitive decision variables and resulting performance. The teams use the recently launched and upgraded COMPETE Portal, which has replaced the COMPETE Online Decision Entry System (CODES) (Palia et al., 2000) to enter their decisions, retrieve their results, and download and use a wide array of marketing DSS packages.

First, during each decision period, the competing teams receive cumulative team performance rankings on 18 performance measures (6 profitability, 3 product market share, 3 product quality index, 3 cost of production, and 3 efficiency measures) for their own company. However, they do not receive competitor rankings on cumulative profit, cumulative market share, end-of-period quality, end-of-period unit cost of production, or cumulative efficiency, based on which the cumulative rankings are determined. This confidential information is released to them (a) at the end of the four trial decision periods prior to the start of simulation competition, in order to facilitate preliminary cause-effect analyses and intermediate simulation debriefing, as well as to establish credibility in the ranking system, and (b) at the end of each year (4 quarterly decisions) of simulation competition for intermediate debriefing purposes.

Next, at the end of each year (four quarterly decision periods) of operations, the competing teams can access cumulative team performance rankings on the same 18 performance criteria for all competing companies. These annual reports are uploaded to the COMPETE Portal (server) and can be viewed and downloaded by all participants. They reveal the rankings of all competing teams on each of the 18 performance criteria as well as the overall and adjusted rankings for each of the competing firms. They do not reveal any confidential information on competitor performance measures based on which the cumulative rankings are determined.

Then, at the end of the 4 trial decision periods, the competing teams can access the cumulative End Game Performance Package which consists of 11 charts and 3 worksheets. Charts include (1) cumulative team performance ranking, (2) cumulative team performance ratios, (3) cumulative team profitability measures, (4) cumulative market share, (5) end-of-game quality, (6) end-of-game cost of production, (7) cumulative efficiency, (8) cumulative efficiency measures, (9) sales revenue by period, (10) advertising expense by period, and (11) salesforce by period.

Finally, at the end of competition (3 years of operation consisting of 12 quarterly decision periods), the simulation participants can access the End Game Performance Package to (a) analyze the simulation competition results, (b) prepare their individual strategic market plan reports, and (c) prepare their team presentation at the end of the semester.

In order to facilitate marketing control, the COMPETE simulation (Faria, 2006) is used together with web-based strategic market planning (Palia, 1991, 1995; Palia et al., 2002) and positioning (Palia et al., 2003; Palia & De Ryck, 2013) graphic packages, and a diverse array of Excel target profit pricing (Palia, 2008), competitor analysis (Palia & De Ryck, 2015), forecast error impact (Palia, 2011), marketing mix analysis, multiple regression analysis (Palia, 2004), ratios analysis, strategic business unit (SBU) analysis (Palia, 2009), portfolio normative consistency analysis (Palia, 2012), target portfolio analysis (Palia, 2017), cash flow analysis (Palia, 2010), profitability analysis (Palia & De Ryck, 2014), cumulative team performance (Palia, 2005), cost of production analysis (Palia & De Ryck, 2016), and marketing efficiency analysis (Palia, 2018) workbooks that auto-extract and present relevant data from the simulation results and facilitate subsequent analysis and decision-making. These marketing dss packages enable them to make better informed decisions such as target profit pricing, forecasting, market segmentation and positioning, market mix analysis, competitor analysis, forecast error impact analysis, ratios analysis, cash flow analysis, and strategic market planning, that are introduced to them progressively during the simulation competition.

The comprehensive Online Cumulative Simulation Team Performance Package provides feedback on competing participant team rankings on their cumulative company profitability, market share by product, quality by product, cost of production by product, and efficiency based on simulation results for each decision period (Palia, 2005). The End Game Performance package presents, in addition, graphic feedback on (a) cumulative profits, (b) profitability ratios (Earnings per Share, Return on Total Assets, Net Profit Margin, Sales-to-Asset Turnover, Return on Equity, and Retained Income), (c) market share, (d) sales volume, (e) quality, (f) cost of production, (g) efficiency (Sales-to-Advertising, Sales-to-Salesforce expense, and Sales to Promotional Expense) ratios tied to the simulation results (Palia, 2019).

PHASED DEBRIEFING PROCESS

Phased simulation debriefing based on insights derived from a review of the literature on experiential learning, business simulations and experiential exercises/games stimulates student engagement and enhances experiential learning (Palia, 2019). This augmented approach to debriefing draws on (a) Kolb's model of experiential learning (Kolb, 1984), (b) Bloom's taxonomy of educational objectives (Bloom, 1956), (c) Lederman's work on debriefing (Lederman, 1992), (d) Peters and Vissers classification model for debriefing simulation games (Peters & Vissers, 2004), (e) Argyris' Organizational Development Intervention Model (Argyris, 1970), (f) Hoover's treatise on recent trends in complexity avoidance and narcissism (Hoover, 2011), (g) Hoover et al. (2016) organizational approach to experiential learning (Hoover et al., 2016), and (h) Hogan and Pressley's work on scaffolding (Hogan and Pressley, 1997).

The comprehensive phased debriefing approach relies on the usage of dss packages that are directly tied to the course mission, learning objectives and outcomes, and the computer simulation decisions and results. The semester is divided into 4 phases of differing length. The first 3-week long "Prepare to Compete" phase, is followed by a 7-week long "Compete" phase," a 5-week long "Report and Present" phase, and a one-class period "Wrap-Up" phase. During the first three weeks of the semester, the competing participant teams are prepared to compete. They are given a comprehensive in-class introduction to (a) decisions, markets and products in the COMPETE marketing simulation, (b) eighteen cumulative team performance criteria, (c) simulation financial statements (income statement, three regional income contribution statements, balance sheet, and underlying cash flow analysis), (d) other simulation reports including market research reports and trade association bulletin, (e) determinants of profitability, market share, quality, cost of production and efficiency, (f) the importance of accurate forecasting, (f) the elements and dimensions of strategy, (g) alternative strategic thrusts, and (h) the strategic analysis framework (Aaker, 2014; Aaker & Moorman, 2018).

The competing teams enter four sets of quarterly trial decisions and access the quarterly simulation results via the online COMPETE Portal during the second and third week of the semester. The cumulative team results for each of the four quarterly trial decision periods include the team ranking on the eighteen performance criteria in the End Game Performance package. At the end of the four trial decision periods, they download their decisions, simulation results and access the End Game Performance package. During this 'Prepare to Compete' phase, based on the recommendation of prior participants, each competing team meets with the professor/administrator to go over their results, ask questions, and seek clarification of underlying concepts. In addition, the entire class is exposed to an example of the final team presentation at the end of the semester. The simulation is reset, with the company and product names submitted to the professor/administrator along with their company profit, market share, quality, cost of production, and efficiency goals, in preparation for the simulation competition.

During the next seven weeks of the semester, the competing participant teams enter the second 'Compete' phase. They make twelve sets of quarterly decisions over a three-year operating period, and access the simulation results. Topics covered during this seven-week period include market segmentation, positioning, values and lifestyle analysis, sales forecasting, sales forecast model building, and strategic market planning. Based on the suggestion of prior participants, they are shown relevant sections of prior team

presentations on each topic covered. In addition, they are progressively introduced to web-based product positioning map graphics package and Excel-based marketing DSS packages on (a) target profit pricing, (b) forecasting, (c) market segmentation and positioning, (d) market mix analysis, (e) competitor analysis, (f) forecast error impact analysis, (g) ratios analysis, (h) cash flow analysis, and (i) strategic market planning. These marketing DSS packages (a) auto-extract accurate, timely and relevant data from the simulation results, (b) facilitate analysis, and (c) enable them to make better informed decisions.

After several decision periods, stimulators such as increased production costs, increased sales force transfer expenses, and new competition are periodically introduced to affect the simulation parameters. The simulation message center is used to inform the competing teams about the stimulators before they take effect. Competing participant teams adjust their marketing strategies in response to the resulting changes in the marketing environment and/or simulation parameters. The teams are permitted to (a) work on their decisions, (b) ask questions, and (c) seek clarification during the last fifteen minutes of each class period. This intermediate simulation debriefing employs a problem-based learning scaffolding approach to help participants understand the underlying reasons for bankruptcy, low profitability, weak market share and other sub-par performance. Based on this enhanced understanding, participants take corrective action in order to improve team performance. At the end of competition, they access the End Game Performance package via the COMPETE Portal and correlate their strategies and decisions with the final results.

This progressive intermediate debriefing strategy enhances participant engagement, and heightens participant interest, motivation, confidence and understanding. Participants use (a) the online Product Positioning Map (PPM) graphics package to generate product positioning maps for each of their nine SBUs based on the simulation results for each decision period, and (b) the online Strategic Market Planning - Product Portfolio Analysis (PPA) graphics package to generate the Boston Consulting Group (BCG) Growth Share Matrix (GSM) and Growth Gain Matrix (GGM) for their own company and for each of their competitors based on the simulation results.

EMERGENCE OF COVID-19 PANDEMIC

During Spring 2020, both the first 3-week long “Prepare to Compete” phase and the following 7-week long “Compete” phase (except for the final decision) were completed in the on-campus classroom learning phase prior to the full-fledged emergence of the COVID-19 pandemic. The subsequent 5-week long “Report and Present” phase, and a one-class period “Wrap-Up phase,” (which includes submission of the Individual Strategic Market Plan (SMP) report during the final exam week) were both completed in the remote online learning phase subsequent to the full-fledged emergence of the COVID-19 pandemic during Spring Break. This timeline provided the opportunity to measure and compare student engagement prior to and subsequent to the COVID-19 pandemic outbreak.

Hands-On sessions enable simulation participants to use all the marketing dss packages to prepare their individual ‘Strategic Market Plan’ reports, team presentations and team presentation handouts. The professor/administrator demonstrates the relevant graphics and marketing dss packages, guides the participants, clarifies concepts, and answers questions from individual participants that often benefit the entire class. The individual ‘Strategic Market Plan’ report is a 10-page (narrative) report that covers the BCG strategic market planning process and includes the BCG product portfolio analysis (PPA) graphics, relevant Excel-based marketing dss packages, and external research references.

The comprehensive one-hour team presentation includes the company marketing report (thirty minutes) and proposed marketing plan (thirty minutes). The company marketing report includes the company and brand name justification, company mission, company organization, performance analysis, errors made and lessons learned, and a sales forecast model using multiple regression analysis. The proposed marketing plan includes a strategic analysis (customer, competitor, market, and environmental analyses; performance and portfolio analyses; and closing the strategic gap), positioning analysis, strategic market planning (BCG product portfolio analysis), and evaluation and control mechanisms.

During the one-hour team presentations, the professor periodically interrupts each presentation briefly to point out significant errors for the benefit of future teams and the entire class. After each team presentation, the team fields questions from their competitors as well as the administrator/professor. Questions frequently posed by the professor /administrator include (a) what the team would do differently if they were to restart the simulation experience, (b) how the team responded to the stimulator on increased production costs, the consequent results, and lessons learned, (c) how the team responded to the stimulator on increased salesforce expenses, the consequent results, and lessons learned, and (d) how the team responded to the stimulator on entry of new competition at lower prices, the consequent results, and lessons learned.

The final debriefing phase occurs during the last class period at the end of the semester and ends with the submission of the individual Strategic Market Plan (SMP) during the final exam week. A departmental Marketing Knowledge Assessment test is followed by performance feedback based on the End Game Performance package, the score earned by each of the competing participant teams, and a review of alternative responses to the simulation stimulators. The professor / administrator reviews (a) the elements of strategy, (b) the situation analysis, planning, implementation and control phases of the marketing strategy process, and (c) the skills and knowledge of foundation disciplines that facilitate effective marketing.

OBSERVED EVIDENCE BY ENGAGEMENT CLASSIFICATION

Academic engagement during the Spring 2020 semester was (a) observed by engagement classification, (b) monitored via the COMPETE Portal server log, and (c) tracked on the course website on a daily basis. Based on the Handelsman et al. (2005) student engagement classification, evidence of in-class and outside-class skills-, emotional-, participation- and performance-engagement were observed both prior to and during the COVID-19 pandemic.

SKILLS ENGAGEMENT EVIDENCE

In-class skills engagement evidence includes (a) learning to use online graphics package and strategic market planning concepts in order to improve team performance, (b) team responses to strategic problems (thinklets) posed in class, (c) access online handouts repository, (d) recording class sessions on use of dss packages, and (e) raising questions to clarify concepts and understand reasons for sub-par performance (see exhibit 2). Outside-class skills engagement evidence includes (a) use of online graphics and dss packages to improve team performance, (b) use of strategic market planning and positioning concepts to formulate marketing strategy, (c) setting goals, implementing marketing plan decisions, monitoring performance, and exercising marketing control, (d) submitting weekly writing assignments and decisions by pre-set deadlines, (e) accessing online handouts and readings, (f) accessing and reviewing recording of class sessions on google drive, (g) setting up and inviting professor to group Zoom sessions to discuss performance and clarify concepts (see exhibit 2).

EXHIBIT 2

Skills Engagement	In-Class Evidence	Outside-class Evidence
Engagement through practicing skills	Learn to use online graphics & dss packages to improve performance	Use online graphics & dss packages to improve performance
Study on regular basis	Learn strategic market planning concepts	Use strategic market planning concepts to formulate marketing strategy
Putting forth effort	Teams respond to problem thinklets	Set goals, formulate strategy, implement plan, monitor performance, and exercise marketing control
Doing homework		Submit weekly writing assignments and decisions by pre-set deadlines
Staying up on readings	Access online handouts and readings	24/7 access to online handouts/readings
Looking over class notes	Record class sessions – coverage of concepts and use of dss packages	Access recording of class sessions on google drive
Desiring to learn material	Frequent questions to clarify concepts	Set up and invite Professor to group Zoom sessions
General learning strategies	Take notes, record sessions, ask ?s	Follow course schedule, submit decisions by Tuesday / Friday @ 8 pm, submit wwas by Monday @ 11:59 pm

EMOTIONAL ENGAGEMENT EVIDENCE

In-class emotional engagement evidence (see exhibit 3) includes (a) self-motivated learners with clear learning objectives, yet hampered by significant role overload (see exhibit 4), that exhibit energy and interest in class, (b) questions on bankruptcy and sub-par profitability, (c) application of concepts to business world, and (d) interest in the competitive nature of the marketing simulation. Outside-class emotional engagement evidence includes (a) downloading articles on marketing concepts and dss packages, (b) use of graphics and dss packages, (c) improvement in company performance over time, (d) introduction of simulation stimulators, (e) setting up group meetings with professor via Zoom, (f) team decision entry by pre-set decision deadlines (see exhibits 3 and 4).

EXHIBIT 3

Emotional/Affective Engagement	In-Class Evidence	Outside-class Evidence
Emotional involvement with the material	Palpable energy & interest in class	Downloading articles & dss packages
Make course material relevant to life	Questions raised re bankruptcy & profit	Use of graphics & dss packages
Apply course material to life	Apply concepts to business world	Improve company performance
Make course interesting	Marketing simulation competition	Introduce stimulators (cost increase)
Think about material outside-class	Cover concepts, dss packages	Team decision entry
Really desiring to learn material	Participant objectives (see exhibits 7&8)	Setting up & inviting professor to group Office/Zoom meetings
Consistent with Affective Engagement		

EXHIBIT 4

Participant No.	Role Overload		Participant Objective
	Credits	Intern/Work	
1	12	10	Prepare myself for working in Marketing in the real world.
2	12	30	Develop mktg strategies for real world & group ethic.
3	13	12	New skills. More professionalism, job preparation.
4	12		Gain skills to create mktg strategies for startups & big co's
5	12	30	Learn marketing management & marketing strategies.
6	19	29	How to create marketing strategies & fully understand lessons..
7	12	15	What makes strategy effective/unique. How to measure success.
8	12		Gain better understanding of marketing.
9	15	25	Learn tactics / skills to analyze target market, operate, & adapt.
10	15	12	Learn skills for use in my future marketing career.
11	15		How to tackle marketing projects from different angles.
12	6		
13	15	30	Learn / gain stronger foundation & skill set for Mktg. Strategies..
14	9	32	Learning extensive marketing strategies.
15	18	20	Learn basic knowledge needed to perform at a marketing firm.
16	15	20	Gain in-depth understanding of marketing planning process.
17	9	25	Learn to use marketing in my job next year.
18	12	28	What is effective / not effective to create marketing campaigns,
19	15	10	Gain insight & practice on how to plan & implement mktg. strat.
20	10	15	Improve understanding of mktg & application to real life / work.
21	12	20	Knowledge that will carry me into real work force. Look forward.
22	12	14	To provide quality strategy for project proposals.
23	8	15	How to interpret and better design digital marketing.
24	9	26	In-depth analysis of data compiled to determine feasible strat.
25	12		Undergo simulated experience of what it is like in real world.
26	12	30	Understand & implement mktg strategies based on analysis
27	17	20	How to formulate & implement marketing plans.
28	21	10	Learn applicable skills beyond all of the theory learned so far.
29	13	15	Learn how to apply sustainable marketing strategies.
30	12	25	Real experience in developing marketing strategies.
Total Credits / Hours	386	518	
Avg. Credits / Hours	12.9	17.3	

PARTICIPATION / INTERACTION ENGAGEMENT EVIDENCE

In-class participation / interaction engagement evidence includes (a) participation in group thinklets, (b) questions raised, (c) clarification sought, (d) resolution of team problems, (e) diagnosis of team performance results, (f) participant objectives and role overload (see exhibit 4), and (g) group work on preparing team presentation of company report and proposed marketing plan. Outside-class participation / interaction engagement evidence include (a) group interaction to formulate strategy, (b) questions raised via e-mail and Zoom, (c) participation in team decision entry, and (d) integration of team decisions (see exhibit 5).

EXHIBIT 5

Participation/Interaction Engagement	In-Class Experience	Outside-class Experience
Participation in class & Interactions with prof & other students	Participation / interaction with team members (group thinklets) & professor	Interaction with group to formulate strategy and enter 74 team decisions
Raising hand in class	Yes	
Asking ?s to improve understanding	Questions raised / clarification needed	Via e-mail and Zoom
Having fun in class	Team problem resolution	Team formulates winning strategy
Participating actively in small group discussions	Group thinklets to resolve problems	Group participation in decision-making
Going to prof's off hours to review assignments	Diagnose past performance problems	Group meetings with prof. via Zoom
Helping fellow students	To improve team performance and presentation scores	To integrate/rationalize team decisions
Consistent with active & collaborative learning		

PERFORMANCE ENGAGEMENT EVIDENCE

In-class performance engagement evidence includes (a) feedback on problem thinklet responses, (b) commitment to grade objective, (c) enhanced simulation parameter quiz performance with self-created reference sheet, and (d) progressive introduction and use of graphics and dss packages to improve team performance. Outside-class performance engagement evidence include use of (a) team performance feedback every decision period, (b) industry performance feedback every year of operation, (c) end-game performance feedback at the end of four trial decisions, and (e) end-game performance package at the end of competition, (f) grades on individual SMP Report, team presentation, peer evaluation, and simulation performance, and (g) strategic market planning, positioning, forecasting and marketing management concepts to improve team performance (see exhibit 6).

EXHIBIT 6

Performance Engagement	In-Class Engagement	Outside-class Engagement
Engagement through levels of performance in class	Feedback on problem thinklet responses	Team performance feedback – simulation results each decision period
Getting a good grade	Commitment to grade expectation	Individual Report, Team Presentation, and Simulation Performance grades
Doing well on the tests	Quiz on simulation parameters can beaced with self-created reference sheet	
Being confident of learning and doing well in class	Progressive introduction of concepts and dss packages improves team performance	Understanding of concepts & use of graphics & dss packages improves team performance

ENGAGEMENT METRICS

Engagement metrics monitored on a daily basis include (a) team logins on the COMPETE Portal, (b) online product positioning map (PPM) graphics generated, and (c) online product portfolio analysis (PPA) graphics generated. In addition, engagement activity tracked daily on the course website include (a) page-views, (b) visitors, (c) sessions, (d) marketing dss package downloads, and (e) downloads of articles on marketing concepts and use of dss packages.

During Spring 2020, a total of 30 participants in eight teams (C1, C2, C3, C4, E1, E2, E3, and E4) in two industries (C and E) registered 2,923 server logins, and generated a total of 3,003 PPM and PPA graphics based on team performance data. These 3,003 graphics included 1,553 PPM graphs used together with sample VALS2 psycho-geo-demo-graphic segmentation data in product positioning analysis, and 1,450 PPA graphs used in strategic market planning.

At the individual participant level 1,569 visitors registered a total of 7,119 page-views in 2,403 sessions. These 7,119 page-views included 2,403 in-class page-views and 4,716 outside-class page-views. In addition, the 30 participants downloaded 17 marketing dss packages a total of 786 times (446 in-class, and 340 outside-class). Further the 30 participants downloaded 15 articles on marketing concepts, and dss packages a total of 164 times (26 in-class, and 138 outside-class).

ENGAGEMENT EVIDENCE BY SIMULATION DEBRIEFING PHASE

The in-class and outside-class engagement of 30 participants in two sections of the MKT 391 – Marketing Strategies course were monitored during the ‘Prepare to Compete’ and ‘Compete’ phases prior to the emergence of the Coronavirus (COVID-19) pandemic. During this period, classes met in classrooms on campus. After the COVID-19 pandemic outbreak during Spring Break, classes met online via Zoom during the ‘Report and Present’ and ‘Final Debriefing’ phases of the course.

The COMPETE server log monitored the number of team logins on a daily basis. An online product positioning map (PPM) graphics package log monitored the number of product positioning maps generated, both inside and outside-class. Finally, an online product portfolio analysis (PPA) graphics package log monitored the number of BCG Growth Share and Growth Gain Matrices graphic displays generated both inside and outside-class (see exhibit 7). Statcounter was used to track the number of website visitors, sessions, page-views, marketing dss package downloads, and ABSEL marketing dss article downloads, both inside

EXHIBIT 7

COMPETE PORTAL SERVER LOGINS

Phase	Start Date	COMPETE Portal Server Logins (by Team)								Online Graphics Package Downloads							
		C1 (4)	C2 (4)	C3 (3)	C4 (3)	E1 (3)	E2 (5)	E3 (4)	E4 (4)	Inside Class			Outside Class				
										PPMC	PPME	PPA	PPMC	PPME	PPA		
Pre-Startup	1/7/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Startup	1/14/2020	7	12	6	8	10	11	11	17	0	0	25	0	0	13		
Initial Brief	1/21/2020	67	96	66	62	88	100	91	88	0	5	0	57	26	0		
Intermediate	2/4/2020	188	248	151	142	153	191	164	140	63	80	86	343	295	313		
Report & Pres	3/25/2020	75	92	84	60	46	82	77	66	1	0	80	255	226	585		
Final Debrief	5/7/2020	36	30	20	17	14	39	33	35	0	0	0	123	79	348		
Grand Total		373	478	327	289	311	423	376	346	64	85	191	778	626	1259		
Total ==>		1467				1456				PPMC	PPME	PPA	PPMC	PPME	PPA		
Average =>		104.79				91.00				Inside Class			Outside Class				
		Industry C (n=14)				Industry E (n=16)				Online Graphics Package Downloads							
Total ==>		2923				n=14						n=16	n=30	n=14	n=16	n=30	
Average =>		97.43															

	Total	Avg.	n
Online PPMC	842	60.14	14
Online PPME	711	44.44	16
Online PPA	1450	48.33	30
Online Graphics	3003	100.1	30

Phase	Logins	Percent	Pre-/Post	Percent
Prepare to Compete	740	25%		
Compete	1377	47%	2117	72%
Report & Present	582	20%		
Final Debriefing	224	8%	806	28%
Total	2923	100%	2923	100%

Phase	PPM		PPA		Total	Total
	Inside	Outside	Inside	Outside		
Prepare to Compete	5	83	25	13	88	38
Compete	143	638	86	313	781	399
Report & Present	1	481	80	585	482	665
Final Debriefing	0	202	0	348	202	348
Total	149	1404	191	1259	1553	1450
Percent of Total	10%	90%	13%	87%		

Phase	PPM		PPA		Pre/Post-COVID	
	Total	Percent	Total	Percent	PPM	PPA
Prepare to Compete	88	6%	38	3%		
Times	781	50%	399	28%	56%	30%
Report & Present	482	31%	665	46%		
Final Debriefing	202	13%	348	24%	44%	70%
Total	1553	100%	1450	100%	100%	100%

and outside-class.

All 8 participant teams used the COMPETE Portal server throughout the Spring 2020 semester. Fourteen participants in 4 teams (C1, C2, C3 and C4) in industry C, and 16 participants in four teams (E1, E2, E3, and E4) in industry E registered 2923 team logins on the COMPETE Portal server for an average of 97.4 team logins by each of the 30 participants. The 30 participants in both industries C & E registered 740 team logins (25%) during the three-week 'Prepare to Compete' phase, 1377 team logins (47%) during the seven-week 'Compete' phase, 582 team logins (20%) during the five-week 'Report & Present' phase, and 224 team logins (8%) during the one-week 'Final Debriefing' phase. Thus, the 30 participants registered 2117 team logins (72%) during the ten-week 'Prepare to Compete' and 'Compete' phases prior to the emergence of the Coronavirus COVID-19 outbreak. They registered 806 team logins (28%) during the remaining six-week 'Report & Present' and 'Final Debriefing' phases during and after the emergence of the Coronavirus COVID-19 outbreak (see exhibit 7).

Participants generated online product positioning map (PPM) and product portfolio analysis (PPA) graphics, based on the simulation results, in order to assess their positioning strategy, strategic business unit (SBU) portfolio and to formulate a strategic market plan for their company. They generated 88 PPM graphics (5 in-class and 83 outside-class) during the 'Prepare to Compete' phase, 781 PPM graphics (143 in-class and 638 outside-class) during the 'Compete' phase, 482 PPM graphics (1 in-class and 481 outside-class) during the 'Report & Present' phase, and 202 PPM graphics (all 202 outside-class) during the 'Final Debriefing' phase. Thus, they generated a total of 869 PPM graphics (56%) during the ten-week 'Prepare to Compete' and 'Compete' phases prior to the emergence of the Coronavirus COVID-19 outbreak. They generated a total of 684 PPM graphics (44%) during the remaining six-week 'Report & Present' and 'Final Debriefing' phases after the emergence of the Coronavirus COVID-19 outbreak (see exhibit 7).

In addition, participants generated 38 online PPA graphics (25 in-class and 13 outside-class) during the 'Prepare to Compete' phase, 399 PPA graphics (86 in-class and 313 outside-class) during the 'Compete' phase, 665 PPA graphics (80 in-class and 585 outside-class) during the 'Report & Present' phase, and 348 PPA graphics (all 348 outside-class) during the 'Final Debriefing' phase. Thus, they generated a total of 437 PPA graphics (30%) during the ten-week 'Prepare to Compete' and 'Compete' phases prior to the emergence of the Coronavirus COVID-19 outbreak. However, they generated a total of 1013 PPA graphics (70%) during the remaining six-week 'Report & Present' and 'Final Debriefing' phases during and after the emergence of

EXHIBIT 8

"Prepare to Compete" Phase Before COVID-19 Outbreak									
Activity	Duration			In	Out	Page Views	Sessions	Visitors	New
Welcome e-mail + Prior participant recomm	1/7/2020	to	1/13/2020	0	30	30	16	14	11
Start-up Week	1/14/2020	to	1/20/2020	292	276	568	128	97	37
Trial Decisions TD1, TD2, ID3, and ID4	1/21/2020	to	2/3/2020	391	935	1326	435	273	50
Phase 1 - 'Prepare to Compete' Phase Total	1/7/2020	to	2/3/2020	683	1,241	1,924	579	384	98
"Compete" Phase Before COVID-19 Outbreak (Upto Spring Break)									
Activity	Duration			In	Out	Page Views	Sessions	Visitors	New
Pre-Spring Break (In-class On Campus Learn	2/4/2020	to	3/21/2020	1,248	1,194	2,442	894	583	74
Spring Break Hiatus	3/14/2020	to	3/22/2020	0	71	71	38	32	12
Post-Spring Break - (Remote Online Learnin	3/23/2020	to	3/24/2020	15	152	167	59	39	6
Phase 2 - 'Compete' Phase Total	2/4/2020	to	3/24/2020	1,263	1,417	2,680	991	654	92
Report & Present' Phase - After COVID-19 Outbreak - Remote Online Learning									
Activity	Duration			In	Out	Page Views	Sessions	Visitors	New
Pre-Hands On Sessions	3/25/2020	to	3/30/2020	0	260	260	85	58	14
Hands-On Sessions	3/31/2020	to	4/22/2020	296	616	912	271	195	45
Team Presentations	4/23/2020	to	5/6/2020	123	698	821	273	171	26
Phase 3 - 'Report & Present' Phase Total	3/25/2020	to	5/6/2020	419	1,574	1,993	629	424	85
"Final Debriefing" Phase - After COVID-19 Outbreak - Remote Online Learning									
Activity	Duration			In	Out	Page Views	Sessions	Visitors	New
Final Debriefing	5/7/2020	to	5/7/2020	38	70	108	36	21	3
Individual SMP Report	5/8/2020	to	5/14/2020	0	415	415	169	87	11
Phase 4 - 'Final Debrief' Phase Total	5/7/2020	to	5/14/2020	38	485	523	205	108	14

the Coronavirus COVID-19 outbreak.

The relatively low usage (30%) of the online PPA graphics during the first two phases prior to the emergence of the Coronavirus COVID-19 pandemic is due to the fact that the first online PPA graphic based on the simulation results is generated after the eighth decision period (2 out of a total of 3 years of competition). Generation of the online PPA graphic is only possible after the industry growth rates of each of the nine SBUs from year 1-2 is computed and presented on the Y-axes of both the growth share matrix (GSM) and growth gain matrix (GGM) plots. The relatively heavy usage (70%) of the online PPA graphics during the two phases after the emergence of the Coronavirus COVID-19 pandemic during Spring Break reflects the use of the PPA graphics in the weekly writing assignments, and preparation of the team presentation as well as the individual Strategic Market Plan (SMP) Report.

Statcounter website tracking statistics covered the ‘Prepare to Compete’ and ‘Compete’ phases prior to the emergence of the Coronavirus COVID-19 pandemic, as well as the ‘Report & Present’ and ‘Final Debriefing’ phases after the emergence of the pandemic. The statistics, broken down by activity and period during each of the four phases, include in-class (based on date and time of website visit) and outside-class page-views, total page-views, number of sessions, number of visitors, and number of new visitors (see exhibit 8).

‘PREPARE TO COMPETE’ PHASE PRIOR TO COVID-19 OUTBREAK

During the first ‘Prepare to Compete’ on-campus classroom learning phase, in the first three weeks of the Spring 2020 semester, prior to the full-fledged emergence of the Coronavirus (COVID-19) pandemic, 384 website visitors registered 1,924 page-views in 579 individual sessions. These 1,924 page-views consisted of 683 in-class page-views, and 1,241 outside-class page-views (see exhibit 9). During this first ‘Prepare to Compete’ phase the online product positioning map (PPM) and product portfolio analysis (PPA) graphics packages were demonstrated to the participants in class. The PPM graphics package was downloaded 5 times in class and 83 (57 + 26) times outside-class by 30 participants in both industry C and industry E of the MKT 391 course (see exhibit 7). The PPA graphics package, demonstrated by the professor / instructor, was downloaded 25 times in class and 13 times outside-class (see exhibit 7). The Manufacturing/Shipping Analysis package used to consider inventories, demand estimates, and safety cushion when deciding on shipments was downloaded 21 times in class and once outside-class during this phase of the competition (see exhibit 10).

Prior to the commencement of the Spring 2020 semester, participants receive two e-mails (a) welcoming them and introducing the course, and (b) sharing prior MKT 391 participant recommendations. During this week, 14 website visitors viewed 30 outside-class page-views in 16 sessions (see exhibit 9).

During the first “start-up” week of the semester, participants form four self-selected teams, register their teams with confidential team IDs and team passwords on the COMPETE portal and are given 24/7 access to all course materials and resources. The course schedule, syllabus, decision deadlines, and weekly writing intensive assignment deadlines are covered. In addition, the course website as well as the COMPETE portal navigation are demonstrated. During this “start-up” week, 97 website visitors viewed a total of 568 webpages (including 292 in-class page-views and 276 outside-class page-views) in 128 sessions (see exhibit 9).

EXHIBIT 9

"Prepare to Compete" Phase Before COVID-19 Outbreak									
Activity	Duration			In	Out	PageViews	Sessions	Visitors	New
Welcome e-mail + Prior participant recomm	1/7/2020	to	1/13/2020	0	30	30	16	14	11
Start-up Week	1/14/2020	to	1/20/2020	292	276	568	128	97	37
Trial Decisions TD1, TD2, TD3, and TD4	1/21/2020	to	2/3/2020	391	935	1326	435	273	50
Phase 1 - 'Prepare to Compete' Phase Total	1/7/2020	to	2/3/2020	683	1,241	1,924	579	384	98

The COMPETE simulation decisions, markets, and products are covered during the next two weeks of the ‘Prepare to Compete’ phase of the course. During this two-week period, the competing participant teams enter 4 bi-weekly Trial Decisions TD1, TD2, TD3, and TD4. The (a) financial statements, printout analysis of results, market research reports, are covered, (b) Aaker and Morrison text on Strategic Market Management is introduced, (c) COMPETE quiz is administered, and (d) teams submit their company and brand names and goals (profit, market share, quality, cost of production, and efficiency (sales-to-advertising ratio, sales-to-salesforce expense ratio, sales-to-promotional expense ratio). In addition, the participants submit their first two individual weekly writing assignments (WWAs) on “Company/Brand Name/Logo Justification” and “Market and Consumer Trends.” The simulation is reset with the company and brand names selected by the teams. During this two-week Trial Decision period, 273 website visitors viewed a total of 1,326 webpages (including 391 in-class page-views and 935 outside-class page-views) in 435 sessions (see exhibit 9).

Participants downloaded several marketing dss packages that enable them to make better informed decisions during the

‘Prepare to Compete’ phase of the simulation competition. The Cash Flow Analysis (Sources and Uses of Cash Analysis) package used to analyze the reasons for cash deficits and bankruptcy (defined as debt exceeding \$1 million) was downloaded 50 times in-class and once outside-class. Other dss packages downloaded during this phase of the competition include Profit Analysis (4 downloads), Manufacturing/Shipping Analysis (3 downloads), SBU Analysis (3 downloads), and Efficiency Analysis (1 download) (see exhibit 10).

EXHIBIT 10

Download Ranking		MKT 391 Spring 2020 Marketing Decision Support Package Downloads -- 'Prepare to Compete' Phase -- 1/14/20 to 2/3/20																		
		Forecast Error Impact Analysis	Manufacturing Shipping Analysis	Target Profit Pricing	Profit Analysis	Market Share Analysis	Quality Analysis	Cost Analysis	Efficiency Analysis	Competitor Analysis	Cash Flow Analysis	Multiple Regression Matrix	Profit Forecasting Analysis	Strategic Business Unit Analysis	Ratios Analysis	Target Portfolio Analysis	Marketing Mix Analysis	Normative Position of Brands Analysis	Articles	
Debriefing Phase -- Start Date																				
Startup -- 1/14/2020		Total Downloads	0	21	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
		In-Class Downloads	0	20	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
		Outside-Class Downloads	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Download Ranking			3		2						1		3							
Initial Debriefing -- 1/21/2020		Total Downloads	0	3	0	4	0	0	0	1	0	51	0	0	3	0	0	0	1	6
		In-Class Downloads	0	1	0	3	0	0	0	0	0	50	0	0	0	0	0	0	0	0
		Outside-Class Downloads	0	2	0	1	0	0	0	1	0	1	0	0	3	0	0	0	1	6

Further, participants downloaded 6 ABSEL papers that focus on the marketing dss packages and cover relevant marketing concepts. These included papers on Phased Simulation Debriefing, SMP Cash Flow Analysis, and Positioning (see exhibit 11).

EXHIBIT 11

MKT 391 Spring 2020 Article Downloads -- 'Prepare to Compete' Phase -- 1/14/20 to 2/3/20															Download Ranking	
2019	2010	2011	2015	2013	2014	2012	2009	2007	2008	2017	2016	2018	2020	Simulation Debriefing Phase -- Start Date		
Enhancing Experience Learning	Cash Flow Analysis	Forecast Error Impact	Competitor Analysis	Positioning Analysis	Multiple Regression	Profitability Analysis	PB & Trend Analysis	SBU Analysis	Proforma Analysis	Target Pricing	Portfolio Analysis	Production Efficiency	Student Engagement			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Total Downloads Startup -- 1/14/2020		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	In-Class Downloads		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Outside-Class Downloads		
1														Download Ranking		
2	1	0	0	1	0	0	1	0	0	0	0	0	1	Total Downloads Initial Debriefing -- 1/21/2020		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	In-Class Downloads		
2	1	0	0	1	0	0	1	0	0	0	0	0	1	Outside-Class Downloads		

‘COMPETE’ PHASE PRIOR TO COVID-19 OUTBREAK

The second ‘Compete’ on-campus classroom learning phase lasted over the next 7.5 weeks of the Spring 2020 semester. This phase consisted of six weeks prior to Spring Break, one week of Spring Break, and one-half week after Spring Break in the off-campus remote learning mode with the emergence and spread of the Coronavirus (COVID-19) pandemic. Competing participant teams entered 11 sets of 74 quarterly decisions on price, shipments, salesforce, advertising, and R&D prior to Spring Break and the final 12th period decision immediately following Spring Break. During this ‘Compete’ phase 654 website visitors registered 2,680 page-views in 991 individual sessions. These 2,680 page-views consisted of 1,263 in-class page-views, and 1,417 outside-class page-views (see exhibit 12).

The ‘Compete’ on-campus classroom learning phase consisted of three segments. These three segments are a six-week ‘Pre-Spring Break’ segment, a one week ‘Spring Break Hiatus’ segment, and a one-class period ‘Post-Spring Break’ remote online learning segment. Prior to Spring Break, participants were introduced to and used a wide array of marketing dss packages in Hands-On sessions. Topics covered in class include (a) Market Segmentation Analysis, (b) Positioning, (c) use of VALS psycho-geodemographic segmentation data in conjunction with the (d) Product Positioning Map (PPM) graphics package (which generates PPM graphic plots based on simulation price and quality data), (e) Strategic Market Planning concepts, (f) Product Portfolio Analysis using the BCG Growth Share Matrix and Growth Gain Matrix displays generated based on simulation performance data, (g) sales forecasting techniques, and (h) sales forecast model-building using multiple regression analysis. In addition, all participants submit 3 individual weekly writing assignments on (a) report introduction, (b) mission statement, and (c) positioning strategy. Further they made the first 11 (out of 12) quarterly decisions. During the pre-Spring Break in-class on campus learning phase, 583 visitors viewed 2,442 web pages in 894 individual sessions. These 2,442 page-views consisted of 1,248 in-class page-views, and 1,194 outside-class page-views (see exhibit 12).

In contrast, only 32 visitors viewed 71 web pages in 38 individual sessions during Spring Break. Following Spring Break, all classes moved from in-class on campus learning to remote online learning. Participant teams built a sales forecasting model for one of their 9 SBUs, and entered their final period 12 shipment decision based upon their demand forecast and period 11 ending

inventory. At the end of competition, participants can access the End Game Performance Package and can enhance their understanding of marketing by correlating their decisions, competitor decisions and performance results. The cumulative team results for each of the 12 quarterly decision periods include the team ranking on the eighteen performance criteria in the End Game Performance package. During this one-half week post-Spring Break remote online learning phase, 39 visitors viewed 167 web pages in 59 individual sessions. These 167 page-views consisted of 15 in-class page-views and 152 outside page-views (see exhibit 12).

EXHIBIT 12

"Compete" Phase Before COVID-19 Outbreak (Upto Spring Break)										
Activity	Duration			In	Out	PageViews	Sessions	Visitors	New	
Pre-Spring Break (In-class On Campus Learning)	2/4/2020	to	3/21/2020	1,248	1,194	2,442	894	583	74	
Spring Break Hiatus	3/14/2020	to	3/22/2020	0	71	71	38	32	12	
Post-Spring Break - (Remote Online Learning)	3/23/2020	to	3/24/2020	15	152	167	59	39	6	
Phase 2 - 'Compete' Phase Total	2/4/2020	to	3/24/2020	1,263	1,417	2,680	991	654	92	

Participants downloaded and used a large number of marketing dss packages to make better informed decisions during the 'Compete' phase of the simulation competition (see exhibit 13). These marketing dss packages included (a) Multiple Regression Analysis (55 downloads; 41 in-class and 14 outside-class), (b) SBU Analysis (54 downloads; 34 in-class and 20 outside-class), (c) Target Profit Pricing (54 downloads; 41 in-class and 13 outside-class), (d) Efficiency Analysis (48 downloads; 44 in-class and 4 outside-class), (e) Competitor Analysis (35 downloads; 25 in-class and 10 outside-class), (f) Profit Analysis (33 downloads; 30 in-class and 3 outside-class), (g) Marketing Mix Analysis (29 downloads; 23 in-class and 6 outside-class), (h) Forecast Error Impact Analysis (25 downloads; 20 in-class and 5 outside-class), (i) Cost Analysis (24 downloads; 20 in-class and 4 outside-class), (j) Profit Forecasting Analysis (24 downloads, 21 in-class and 3 outside-class), (k) Market Share Analysis (22 downloads; 21 in-class and 1 outside-class), (l) Ratios Analysis (16 downloads; 14 in-class and 2 outside-class), (m) Cash Flow Analysis (15 downloads; 7 in-class and 8 outside-class), (n) Manufacturing/Shipping Analysis (10 downloads; 0 in-class and 10 outside-class), (o) Normative Position of Brands Analysis (6 downloads; 2 in-class and 4 outside-class), and (p) Quality Analysis (5 downloads; 3 in-class and 2 outside-class).

EXHIBIT 13

MKT391 Spring 2020 Marketing Decision Support Package Downloads -- Intermediate Briefing -- 2/4/20 to 3/30/20																			
Download Ranking	8	14	2	6	11	16	9	4	5	13	1	9	2	12	7	15	Articles		
Debriefing Phase - Start Date	Forecast Error	Manufacturing Shipping	Target Profit	Profit Analysis	Market Share	Quality Analysis	Cost Analysis	Efficiency Analysis	Competitor Analysis	Cash Flow Analysis	Multiple Regression Matrix	Profit Forecasting Analysis	Strategic Business Unit Analysis	Ratios Analysis	Target Portfolio Analysis	Marketing Mix Analysis	Normative Position of Brands Analysis		
Intermediate Debriefing -- 2/4/2020	Impact Analysis	Analysis	Pricing		Analysis														
Total Downloads	25	10	54	33	22	5	24	48	35	15	55	24	54	16	0	29	6	21	
In-Class Downloads	20	0	41	30	21	3	20	44	25	7	41	21	34	14	0	23	2	11	
Outside-Class Downloads	5	10	13	3	1	2	4	4	10	8	14	3	20	2	0	6	4	10	

Further, participants downloaded 11 ABSEL papers that focus on marketing dss packages and cover relevant marketing concepts (21 downloads; 11 in-class and 10 outside-class). These included papers on Cash Flow Analysis, Competitor Analysis, Positioning Analysis, Multiple Regression Analysis, Normative Position of Brands (NPB & Trends) Analysis, SBU Analysis, Target Profit Pricing, Target Portfolio Analysis, Cost of Production Analysis, Efficiency Analysis and Sustained Student Engagement (see exhibit 14).

EXHIBIT 14

MKT391 Spring 2020 Article Downloads -- Intermediate Briefing -- 2/4/20 to 3/30/20															
2019	2010	2011	4	3	4	4	4	1	4	2	3	Download Ranking			
Enhancing SMP	Forecast	2015	2013	2004	2014	2012	2009	2007	2008	2017	2016	2018	2020		
Experiential Learning	Cash Flow Analysis	Error Impact	Competitor Analysis	Positioning Analysis	Multiple Regression	Profitability Analysis	PB & Trends Analysis	SBU Analysis	Proforma Analysis	Profit Pricing	Portfolio Analysis	Production Analysis	Efficiency Analysis	Student Engagement	
0	4	0	1	2	1	0	1	1	0	4	1	1	3	2	Total Downloads
0	1	0	0	0	0	0	0	1	0	3	0	1	3	2	In-Class Downloads
0	3	0	1	2	1	0	1	0	0	1	1	0	0	0	Outside-Class Downloads

'REPORT & PRESENT' PHASE AFTER COVID-19 OUTBREAK

The third 'Report & Present' remote online learning phase extended over the remaining 5 weeks of the Spring 2020 semester. Participants submitted their 2 individual weekly writing assignment on (a) Brand Portfolio Assessment, and (b) Competitor Brand Portfolio Assessment, based on the BCG Growth Share Matrix and Growth Gain Matrix graphic displays generated online

based on the simulation performance results. Later, they commenced work on their Individual Strategic Market Plan report and one-hour team presentation in six remote online hands-on sessions. Each hands-on session focused on one of the six steps of the BCG Strategic Market Planning procedure.

The remote hands-on sessions were followed by coverage of (a) the assumptions and limitations of the BCG Model, (b) introduction of the alternative GE/McKinsey Strategic Grid, (c) a comparison of the strengths and weaknesses of both approaches to Strategic Market Planning, (d) an introduction to the PIMS project, and (e) coverage of sample PIMS Project results. The next two weeks (4 class periods) were devoted to four peer-evaluated one-hour team presentations via Zoom. Each team presentation included the presentation agenda, company/brand name and logo justification, company mission, organization, performance analysis, errors made and lessons learned, sales forecast model with forecast accuracy, strategic analysis, positioning, strategic market planning, and evaluation and control mechanisms. The team presentations were followed by Q&A sessions and team debriefing by participants and the instructor. During this ‘Report & Present’ phase 424 website visitors registered 1,993 page-views in 629 individual sessions. These 1,993 page-views consisted of 419 in-class page-views, and 1,574 outside-class page-views (see exhibit

**“REPORT & PRESENT” PHASE – PAGE-VIEWS
EXHIBIT 15**

Report & Present' Phase - After COVID-19 Outbreak - Remote Online Learning									
Activity	Duration			In	Out	PageViews	Sessions	Visitors	New
Pre-Hands On Sessions	3/25/2020	to	3/30/2020	0	260	260	85	58	14
Hands-On Sessions	3/31/2020	to	4/22/2020	296	616	912	271	195	45
Team Presentations	4/23/2020	to	5/6/2020	123	698	821	273	171	26
Phase 3 - 'Report & Present' Phase Total	3/25/2020	to	5/6/2020	419	1,574	1,993	629	424	85

15).

The ‘Report & Present’ remote online learning phase consisted of three segments. These three segments are a one-week ‘Pre-Hands-On Sessions’ segment, a 3.5 week ‘Hands-On Sessions’ segment, and a two-week ‘Team Presentations’ segment.

The simulation competition ended during the first half of the week following Spring Break. A scheduled university holiday ended the first week. Prior to the 6 Hands-On Sessions via Zoom, participants submitted the seventh individual weekly writing assignment on Competitor Brand Portfolio Assessment. During the one-week ‘Pre-Hands-On Sessions’ segment, 58 website visitors registered 260 page-views in 85 individual sessions. These 260 page-views were all outside-class (see exhibit 15).

The 6 Hands-On sessions were followed by a session focused on the assumptions and limitations of the BCG model and a comparison of the BCG model and GE/McKinsey strategic grid. During the ‘Hands-On Sessions’ segment, 195 website visitors registered 912 page-views in 271 individual sessions. These 912 page-views consisted of 296 in-class page-views, and 615 outside-class page-views (see exhibit 15).

After the Hands-On Sessions, each competing participant team made a one-hour team presentation remotely online via Zoom during the next two weeks. Each one-hour team presentation follows a pre-set timeline and is peer graded by all other participant teams and the instructor. The team presentations are followed by Q&A with all class participants and instructor debriefing and feedback. Debriefing includes questions posed to the team on their responses to simulation stimulators such as increased cost of production, increases in salesforce transfer costs, and entry of new competitor. Instructor feedback is in the form of suggestions for improvement to following teams for their subsequent presentations. During this ‘Team Presentations’ segment, 171 website visitors registered 821 page-views in 273 individual sessions. These 821 page-views consisted of 123 in-class page-views, and 698 outside-class page-views (see exhibit 15).

Participants downloaded and used a large number of marketing dss packages during the ‘Report & Present’ phase of the simulation competition (see exhibit 16). These marketing dss packages included (a) Competitor Analysis (27 downloads; 2 in-class and 25 outside-class), (b) NPB & Trends Analysis (26 downloads; 6 in-class and 20 outside-class), (c) Profit Analysis (23 downloads; all 23 outside-class), (d) Strategic Business Unit Analysis (17 downloads; all 17 outside-class), (e) Market Share Analysis (16 downloads; all 16 outside-class), (f) Cost Analysis (15 downloads; all 15 outside-class), (g) Quality Analysis (13 downloads; 1 in-class and 12 outside-class), (h) Marketing Mix Analysis (12 downloads; all 12 outside-class), (i) Target Portfolio

EXHIBIT 16

Download Ranking	MKT391 Spring 2020 Marketing Decision Support Package Downloads -- Report & Present Phase --3/31/20 to 5/6/20																		
	11	16	16	3	5	7	6	9	1	13	11	15	4	14	9	8	2		
Report & Present Phase -- 3/31/2020	Forecast Error Impact Analysis	Manufacturing Shipping Analysis	Target Profit Pricing	Profit Analysis	Market Share Analysis	Quality Analysis	Cost Analysis	Efficiency Analysis	Competitor Analysis	Cash Flow Analysis	Multiple Regression Matrix	Profit Forecasting Analysis	Strategic Business Unit Analysis	Ratios Analysis	Target Portfolio Analysis	Marketing Mix Analysis	Normative Position of Brands Analysis	Articles	
Total Downloads	9	1	1	23	16	13	15	10	27	6	9	2	17	4	10	12	26	88	
In-Class Downloads	0	0	0	0	0	1	0	0	2	0	0	0	0	0	2	0	20	14	
Outside-Class Downloads	9	1	1	23	16	12	15	10	25	6	9	2	17	4	8	12	6	74	

Analysis (10 downloads; 2 in-class and 8 outside-class), (j) Efficiency Analysis (10 downloads, all 10 outside-class), (k) Multiple Regression Matrix (9 downloads; all 9 outside-class), (l) Forecast Error Impact Analysis (9 downloads; all 9 outside-class), (m) Cash Flow Analysis (6 downloads; all 6 outside-class), (n) Ratios Analysis (4 downloads; all 4 outside-class), (o) Profit Forecasting Analysis (2 downloads; 2 outside-class), and (p) Manufacturing / Shipping Analysis (1 download; 1 outside-class), and (q) Target Profit Pricing (1 download; 1 outside-class)..

Further, participants downloaded 88 ABSEL papers that focus on the marketing dss packages and cover relevant marketing concepts (88 downloads; 14 in-class and 74 outside-class). These included papers on NPB & Trends Analysis (23 downloads; 9 in-class and 14 outside-class), Target Portfolio Analysis (10 downloads; all 10 outside-class), Competitor Analysis (10 downloads; 1 in-class and 9 outside-class), Positioning Analysis (7 downloads; all 7 outside-class), Profitability Analysis (7 downloads; all 7 outside-

EXHIBIT 17

MKT 391 Spring 2020 Article Downloads -- Report & Present Phase -- 3/31/20 to 5/6/20																Download Ranking	
2019	2010	2011	2015	2013	2004	2014	2012	2009	2007	2008	2017	2016	2018	2020			
Enhancing	SMP	Forecast	Competitor	Positioning	Multiple	Profitability	PB & Trends	SBU	Proforma	Target	Target	Cost of	2018	Sustained			
Experiential	Cash Flow	Error	Analysis	Analysis	Regression	Analysis	Analysis	Analysis	Analysis	Profit	Portfolio	Production	Efficiency	Student	Report & Present Phase -- 3/31/2020		
Learning	Analysis	Impact	Analysis	Analysis	Regression	Analysis	Analysis	Analysis	Analysis	Pricing	Analysis	Analysis	Analysis	Engagement			
3	5	3	10	7	5	7	23	6	0	0	10	0	2	7	Total Downloads		
0	1	0	1	0	0	0	9	0	0	0	0	0	0	3	In-Class Downloads		
3	4	3	9	7	5	7	14	6	0	0	10	0	2	4	Outside-Class Downloads		

class), SBU Analysis (6 downloads; all 6 outside-class), SMP Cash Flow Analysis (5 downloads; all 5 outside-class), Multiple Regression Analysis (5 downloads; all 5 outside-class), Forecast Error Impact Analysis (3 downloads; all 3 outside-class), Enhancing Experiential Learning (3 downloads; all 3 outside-class), and Efficiency Analysis (2 downloads; 2 outside-class) (see exhibit 17).

‘FINAL DEBRIEFING’ PHASE AFTER COVID-19 OUTBREAK

The fourth ‘Final Debriefing’ remote online learning phase included the final class session of the Spring 2020 semester and the Final Exams week deadline for the individual Strategic Market Plan Report worth 30% of the course grade. The Final Debriefing one-class period included feedback to the teams on their team performance grade based on their cumulative team ranking on 18 performance criteria including 6 profit criteria, 3 market share criteria, 3 product quality criteria, 3 product unit cost of production criteria, and 3 efficiency criteria, adjusted for bankruptcy (based on excessive debt). The team performance grade feedback is followed by a review of the course structure and suggestions for improvement. The 75-minute class period ends with a review of the elements of strategy, the strategic market process, the eclectic nature of marketing, and the desired attributes of a successful marketing manager including a working knowledge of consumer behavior, statistics, economics, managerial science, logistics, accounting, finance and information technology.

The ‘Final Debriefing’ remote online learning phase consisted of two segments. These two segments are a one-class ‘Wrap-Up Debriefing’ segment, and a one-week ‘SMP Report’ segment. During the one-day ‘Wrap-up Debriefing’ segment, 21 website visitors registered 108 page-views in 36 individual sessions. These 108 page-views consisted of 38 in-class page-views and 70 outside-class page-views (see exhibit 18). In the Final Exam week during the ‘SMP Report’ segment, 87 website visitors registered 415 outside-class page-views in 169 individual sessions (see exhibit 18).

EXHIBIT 18

"Final Debriefing" Phase - After COVID-19 Outbreak - Remote Online Learning									
Activity	Duration		In	Out	Page Views	Sessions	Visitors	New	
Final Debriefing	5/7/2020	to 5/7/2020	38	70	108	36	21	3	
Individual SMP Report	5/8/2020	to 5/14/2020	0	415	415	169	87	11	
Phase 4 - 'Final Debrief' Phase Total	5/7/2020	to 5/14/2020	38	485	523	205	108	14	

On the last day of classes, each participant submits (a) a team presentation grading sheet with justification of scores on ten presentation attributes of the other team presentations, and (b) a peer evaluation grading sheet with justification of scores on ten attributes of team members, via e-mail. In addition, each team submits a team presentation handout including a copy of the team presentation, and an appendix including the underlying research, and marketing dss packages used via e-mail. Later, during the final exam week, each participant completes and submits their individual Strategic Market Plan (SMP) Report via e-mail. During this ‘Final Debriefing’ phase 108 website visitors registered 523 page-views in 205 individual sessions. These 523 page-views consisted of 38 in-class page-views, and 485 outside-class page-views (see exhibit 18).

During the ‘Final Debriefing’ remote online learning phase, participants downloaded several marketing dss packages that enable them to prepare and complete their individual SMP Report and team presentations. The Cash Flow Analysis (Sources and

Exhibit 19
 “Final Debriefing” Phase – Marketing DSS Package Downloads

MKT391 Spring 2020 Marketing Decision Support Package Downloads -- Final Debriefing & SMP Report -- 5/7/20 to 5/14/20																		
Download Ranking	Forecast Error Impact Analysis	Manufacturing Shipping Analysis	Target Profit Pricing	Profit Analysis	Market Share Analysis	Quality Analysis	Cost Analysis	Efficiency Analysis	Competitor Analysis	Cash Flow Analysis	Multiple Regression Matrix	Profit Forecasting Analysis	Strategic Business Unit Analysis	Ratios Analysis	Target Portfolio Analysis	Marketing Mix Analysis	Normative Position of Brands Analysis	Articles
Final Debriefing -- 5/7/2020																		
Total Downloads	0	0	0	0	0	0	0	0	5	16	0	0	0	0	10	3	11	48
In-Class Downloads	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Outside-Class Downloads	0	0	0	0	0	0	0	0	5	16	0	0	0	0	10	3	11	48

Uses of Cash Analysis) package used to analyze the reasons for cash deficits and bankruptcy (defined as debt short-term notes payable) exceeding \$1 million was downloaded 16 times outside-class. Other dss packages downloaded during this phase of the competition include NPB & Trends (11 downloads), Target Portfolio Analysis (10 downloads), Competitor Analysis (5 downloads), and Marketing Mix Analysis (3 downloads) (see exhibit 19).

EXHIBIT 20

MKT391 Spring 2020 Article Downloads -- Final Debriefing & SMP Report -- 5/7/20 to 5/14/20																Download Ranking
8	1		4	6		2	7	4	3							
2019	2010	2011								2008	2017	2016	2018	2020		
Enhancing SMP	Forecast Error	2015	2013	2004	2014	2012	2009	2007	Target Profit	Target Profit	Cost of Production	Efficiency Analysis	Sustained Student Engagement			
Experiential Learning	Cash Flow Analysis	Competitor Analysis	Positioning Analysis	Multiple Regression	Profitability Analysis	NPB & Trends Analysis	SBU Analysis	Proforma Analysis	Portfolio Pricing	Portfolio Analysis	Production Analysis	Efficiency Analysis	Student Engagement			
1	13	0	5	3	0	12	2	5	0	7	0	0	0	0		Total Downloads
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		In-Class Downloads
1	13	0	5	3	0	12	2	5	0	7	0	0	0	0		Outside-Class Downloads

Further, participants registered 48 downloads of ABSEL papers that focus on the marketing dss packages and cover relevant marketing concepts (see exhibit 20). These included papers on Cash Flow Analysis (13 downloads), NPB & Trends Analysis (12 downloads), Target Portfolio Analysis (7 downloads), Proforma Analysis (4 downloads), Competitor Analysis (4 downloads), Positioning Analysis (3 downloads), SBU Analysis (2 downloads), and Phased Simulation Debriefing (1 download).

PRE- & POST-COVID-19 PANDEMIC OUTBREAK ENGAGEMENT

The emergence of the Coronavirus COVID-19 pandemic outbreak during Spring Break 2020 enabled a comparison of student engagement during the 10-week on-campus classroom learning phase prior to Spring Break with student engagement during the 7-week remote online learning phase after Spring Break. In addition, this study enabled a comparison of student engagement metrics such as number of website visits, sessions, page-views, server logins, online PPM and PPA graphics package generated, downloads of marketing dss packages and articles on marketing concepts during the 10-week on-campus classroom learning phase prior to the emergence of the pandemic with the 7-week remote online learning phase.

EXHIBIT 21

Activity by Simulation Debriefing Phase								
Activity	Duration		In	Out	Page Views	% In	%Out	
Phase 1 - 'Prepare to Compete' Phase Total	1/7/2020	to 2/3/2020	683	1,241	1,924	35%	65%	
Phase 2 - 'Compete' Phase Total	2/4/2020	to 3/24/2020	1,263	1,417	2,680	47%	53%	
Phase 3 - 'Report & Present' Phase Total	3/25/2020	to 5/6/2020	419	1,574	1,993	21%	79%	
Phase 4 - 'Final Debrief' Phase Total	5/7/2020	to 5/14/2020	38	485	523	7%	93%	
All 4 Simulation Phases	1/7/2020	to 5/14/2020	2,403	4,717	7,120	34%	66%	
Activity	Duration		In	Out	Page Views			
Phase 1 - 'Prepare to Compete' Phase Total	1/7/2020	to 2/3/2020	28%	26%	27%			
Phase 2 - 'Compete' Phase Total	2/4/2020	to 3/24/2020	53%	30%	38%			
Phase 3 - 'Report & Present' Phase Total	3/25/2020	to 5/6/2020	17%	33%	28%			
Phase 4 - 'Final Debrief' Phase Total	5/7/2020	to 5/14/2020	2%	10%	7%			
All 4 Simulation Phases	1/7/2020	to 5/14/2020	2,403	4,717	7,120			

ENGAGEMENT METRICS BY SIMULATION DEBRIEFING PHASE

Phased simulation debriefing includes a 3-week 'Prepare to Compete' initial briefing phase, and a 7-week 'Compete' intermediate debriefing phase during the pre-COVID-19 pandemic outbreak period, followed by a 6-week 'Report & Present' phase, and a 1-week 'Final Debriefing' phase during the post-COVID-19 pandemic outbreak period. Statcounter webpage view statistics are monitored and tracked over all four simulation debriefing phases during both the pre- and post-COVID-19 pandemic outbreak periods.

The Spring 2020 semester grand total of 7,120 page-views consist of (a) 1,924 (27%) page-views during the first 3-week 'Prepare to Compete' phase, (b) 2,680 (38%) page-views during the second 7-week 'Compete' phase, (c) 1,993 (21%) page-views during the third 6-week 'Report & Present' phase, and (d) 523 (7%) page-views during the last 1-week 'Final Debriefing' phase (see exhibit 21). In addition, the 7,120 page-views, during the Spring 2020 semester, consist of 2,403 (34%) in-class page-views and 4,717 (68%) outside-class page-views (see exhibit 21).

Outside-class page-views exceed in-class page-views during each of the four debriefing phases during both the pre- and post-COVID-19 pandemic outbreak periods. Simulation participants registered a total of 1,924 page-views consisting of 683 (35%) in-class page-views and 1,241 (65%) outside-class page-views during the first 3-week 'Prepare to Compete' phase. They registered a total of 2,680 page-views consisting of 1,263 (47%) in-class page-views and 1,417 (53%) outside-class page-views during the second 7-week 'Compete' phase. After the emergence of the Coronavirus COVID-19 pandemic outbreak, they registered a total of 1,993 page-views consisting of 419 (21%) in-class page-views and 1,574 (79%) outside-class page-views during the third 6-week 'Report & Present' phase. Lastly, they registered a total of 523 page-views consisting of 38 (7%) in-class page-views and 485 (93%) outside-class page-views during the fourth 1-week 'Final Debriefing' phase (see exhibit 21).

In-class page-views peaked during the second 7-week 'Compete' phase as the online PPM and PPA graphics packages and several marketing dss packages were introduced to participants in class. An analysis of the 2,403 in-class page-views during Spring 2020 consist of (a) 683 (28%) in-class page-views during the first 3-week 'Prepare to Compete' phase, (b) 1,263 (47%) in-class page-views during the second 7-week 'Compete' phase, (c) 419 (21%) in-class page-views during the third 6-week 'Report & Present' phase, and (d) 38 (2%) in-class page-views during the last 1-week 'Final Debriefing' phase.

Outside-class page-views, on the other hand, peaked during the third 5-week 'Report & Present' phase of the simulation competition as participants used both the graphics packages and marketing dss packages to prepare their team presentations, and individual SMP Reports (see exhibit 21). An analysis of the 4,717 outside-class page-views during Spring 2020 consist of (a) 1,241 (26%) outside-class page-views during the first 3-week 'Prepare to Compete' phase, (b) 1,417 (30%) outside-class page-views during the second 7-week 'Compete' phase, (c) 1,574 (33%) outside-class page-views during the third 6-week 'Report & Present' phase, and (d) 485 (10%) outside-class page-views during the last 1-week 'Final Debriefing' phase.

ENGAGEMENT METRICS PRE- AND POST- COVID-19 PANDEMIC

The emergence of the Coronavirus COVID-19 Pandemic outbreak during Spring Break divided the Spring 2020 semester into a 10-week Pre-COVID-19 period, and a 7-week Post-COVID-19 period. The 10-week Pre-COVID-19 period consists of (a) the first 3-week 'Prepare to Compete' phase, and (b) the second 7-week 'Compete' phase. The 7-week Post-COVID-19 period consists of (a) the third 6-week 'Report & Present' phase, and (b) the last 1-week 'Final Debriefing' phase. Hence, simulation participants competed during the 10-week Pre-COVID-19 period, and reported on their performance and presented their strategic marketing plan during the 7-week Post-COVID-19 period.

Pre-COVID-19 page-views exceed Post-COVID-19 page-views during the Spring 2020 semester. In addition, outside-class page-views exceed in-class page-views. The Spring 2020 semester grand total of 7,120 page-views consist of (a) 4,604 (65%) page-views during the 10-week Pre-COVID-19 period, and (b) 2,516 (35%) page-views during the 7-week Post-COVID-19 period. In addition, the 7,120 page-views consist of 2,403 (34%) in-class page-views and 4,717 (66%) outside-class page-views (see exhibit 22).

Outside-class page-views exceed in-class page-views during both the Pre-COVID-19 outbreak and Post-COVID-19 outbreak periods. Simulation participants registered a total of 4,604 page-views consisting of 1,946 (42%) in-class page-views and 2,658 (58%) outside-class page-views during the 10-week Pre-COVID-19 outbreak period. They registered a total of 2,516 page-views consisting of 457 (18%) in-class page-views and 2,059 (82%) outside-class page-views during the 7-week Post-COVID-19 outbreak period (see exhibit 22).

Both in-class and outside-class page-views peaked during the 10-week pre-COVID-19 outbreak period. In addition, in-class page-views during the 10-week pre-COVID-19 outbreak period exceed in-class page-views during the 7-week post-COVID-19 outbreak period. The Spring 2020 total 2,403 in-class page-views consists of 1,946 (81%) in-class page-views during the 10-week pre-COVID-19 outbreak period and only 457 (19%) inside class page-views during the 7-week post-COVID-19 outbreak period (see exhibit 22).

Lastly, outside-class page-views during the 10-week pre-COVID-19 outbreak period exceed outside-class page-views during the 7-week post-COVID-19 outbreak period. The Spring 2020 total 4,717 outside-class page-views consists of 2,658 (56%) outside-class page-views during the 10-week pre-COVID-19 outbreak period and 2,059 (44%) outside-class page-views during the 7

EXHIBIT 22

Pre- and Post-COVID-19 Outbreak Activity									
Activity	Duration			In	Out	PageViews	% In	%Out	
Phases 1 & 2 - On Campus Before COVID-19	1/7/2020	to	3/24/2020	1,946	2,658	4,604	42%	58%	
Phases 3 & 4 - Remote After COVID-19 Out	3/25/2020	to	5/14/2020	457	2,059	2,516	18%	82%	
All 4 Simulation Phases	1/7/2020	to	5/14/2020	2,403	4,717	7,120	34%	66%	
Phases 1 & 2 - On Campus Before COVID-19	1/7/2020	to	3/24/2020	81%	56%	65%			
Phases 3 & 4 - Remote After COVID-19 Out	3/25/2020	to	5/14/2020	19%	44%	35%			

-week post-COVID-19 outbreak period. This implies that participants outside-class page-views were more evenly split between the pre-COVID-19 (56%) and post-COVID-19 outbreak (44%) periods as they worked on their team presentations and individual SMP reports (see exhibit 22).

CONCLUSION

Website tracking of in-class and out-of-class (a) page-views, (b) marketing decision support system (dss) package downloads, and (c) prior ABSEL marketing dss paper downloads on a daily basis at the individual participant level indicate sustained student engagement both prior to and subsequent to Spring Break. In addition, server log tracking of team logins on a daily basis, and in-class and outside-class generation of (a) product positioning map graphics and (b) strategic market planning (BCG Growth Share and Growth Gain Matrix) grid graphics packages on a daily basis clearly indicate continuing server usage during the semester.

The analyses of engagement metrics by (a) simulation phase and (b) pre- and post-COVID-19 pandemic outbreak periods indicate sustained engagement in-class and outside-class to varying degrees throughout the Spring 2020 semester. Based on the above analyses, the move from on-campus classroom learning to remote online learning after the Spring 2020 Break as a result of the Coronavirus COVID-19 pandemic did not adversely affect academic engagement, and did not compromise either the quality or integrity of remote online learning.

Based on a review of the engagement and experiential learning literature, this paper presents evidence of sustained (a) observed in-class skills (cognitive), emotional (affective), participation/interaction and performance (behavioral) engagement among competing simulation team members. Subjective and objective measures of in-class and out-of-class engagement at the individual-team- and class-levels are provided. In-class engagement measures include observed levels of (a) attendance, (b) classroom focus and energy, (c) questions raised, (d) discussion quality, (e) decision support package usage, (f) team discussion and responses to thinklets (problems posed in class) using a problem-based learning approach, (g) group discussion with the professor to address sub-par performance concerns during scaffolding sessions at the end of each class period, (h) co-creation of value using the operand resources (marketing decision support packages) and student knowledge, skills and notebook computers (operand resources). Out-of-class engagement measures include (a) bi-weekly online decision entry and results retrieval, (b) PPM and PPA graphics package usage, (c) weekly writing assignments, (d) server log statistics of daily, weekly, and semester team activity, and (e) website tracking of page-views, marketing dss package downloads, and downloads of articles on marketing concepts and marketing dss package usage.

Competing participant teams demonstrated heightened in-class engagement and motivation via regular attendance, palpable classroom energy level, questions, active discussion, and usage of decision support packages. Sustained outside-class team engagement, captured via the simulation server log, correlated with team performance. In addition, sustained outside-class student engagement was captured via website tracking of visitor activity on simulation and course webpages, and download activity monitored during the semester. Further, peer-evaluated one-hour team presentations that demonstrate usage of the decision support packages, seven individual weekly writing assignments on sections of the individual Strategic Market Plan, and the one-hour team presentation, foster engagement and learning.

Monitoring and tracking engagement metrics enables instructors to streamline the sequence, timing, and dovetailing of assignments with the coverage of marketing concepts, progressive introduction of online graphics packages, and marketing dss packages used by simulation participants at specific stages of the course. Continuing participant feedback provides instructors invaluable insights on the participant experience and fosters co-creation of significant value added.

The phased debriefing strategy enhances participant engagement early in the semester, and heightens interest, motivation, confidence and understanding among simulation participants. Given the significance of engagement, experiential learning and simulation debriefing, and the enhanced engagement and motivation of past and current participants that has resulted from recent use of the phased debriefing process, ABSEL may wish to improve the simulation debriefing process. A best-practices simulation

debriefing workshop may help in this regard. Alternative proposed debriefing processes can be tested and evaluated, and suggestions for improvement provided.

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