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ABSTRACT

Curricular development is critical for preparing students in a coordinated fashion for life after graduation – especially when their roles will involve cross-border business decisions. The design of specific courses in any curriculum must be purposeful in terms of what is taught, how it is taught, and how all the course components fit together. For a supply chain management course targeted at international business students, one key purpose is to understand how competitiveness is developed across the extended enterprise, rather than within the confines of individual companies. This “winning together” view helps foster capabilities for connectedness and cooperation in international business environments typically characterized by geographic dispersion and cultural dissimilarities. The objective of this paper is to examine how *integrating* fundamental pedagogical theories (student-centeredness, diversity, reflection, self-direction, experiential learning) in course design can influence the outcomes of a semester-long practice-oriented international supply chain course. The course espouses the winning together view while probing in-depth core supply chain themes, with the aim of producing cohorts of undergraduates that have developed the intuition, aptitude, and methods for co-creating value across business boundaries in cross-border situations. This paper’s contribution is in demonstrating the innovativeness of blending multiple pedagogical tools and experiences in a single semester, rather than an entire program of study. The observed positive student learning outcomes are consistent with the integrated course design model. Replicating such course design over a program of study, will multiply the resulting positive outcomes for students, hence preparing them better as prospective global managers.

Keywords: International Business, Global Supply Chains, Course Design, Integration

1. INTRODUCTION

The field of international supply chain management is evolving in an interesting way; some fundamental concepts remain largely unchanged (like how incentive alignment reduces costs), while others change rapidly (how information system interoperability affects visibility in globally dispersed supply chains). McKinnon et al. (2017) note how critical talent development is in such dynamic industry scenarios, not to mention the demand for international business (IB) graduates to function professionally under increased complexity and economic interdependence (Ortiz, 2004). Therefore, courses need to be designed with a view to developing a combination of skills and competencies that will give prospective supply chain practitioners an advantage in their post-graduation roles. Gammelgaard and Larson (2001) distinguish between general context-independent tools and rules (skills) and experience-based and context-dependent knowledge (competencies), implying that the methods for developing both must be integrated thoughtfully. Thus, in designing courses that seek to develop talent for dynamic industries, it is useful to consider pedagogical models that combine experiential learning with case-based courses to improve the transfer of concepts (Kopczak & Fransoo, 2000); or models that combine case-based teaching with problem-based learning to create intense learning experiences (Gudmundsson & Nijhuis, 2001); or models that actively involve industry in education (Vorst, 1996). LeClair (2018) discusses four main components of course design: purpose, content, pedagogy and structure. Determining the purpose of the course facilitates the selection of content to cover; then details can be specified about how the course is taught, and how all the course components fit together. In this paper, we examine the processes and outcomes of a course design aimed at developing in students the intuition, aptitude, and methods for co-creating value

across business boundaries in cross-border situations. The relevant content for this undergraduate International Supply Chain Management Course (ISCMC) was derived from identifying major topics that have been addressed by supply chain research (Kouvelis, Chambers & Wang, 2006; Sun & Song, 2018) as a way of connecting theory with practice. The pedagogical choices reflected a careful integration of fundamental theories comprising student-centeredness (Cornelius-White, 2007; Rodgers, Lyon & Tausch, 2013), diversity (Sheets, 2009; Brandauer & Hovmand, 2013), reflection (Rodgers, 2002; Lew & Schmidt, 2011) and self-direction (Knowles, 1975; Grow, 1991); while also emphasizing the experiential and immersive components that are critical to IB education (Kolb, 2014; Aggarwal & Goodell, 2015a). These fundamental theories, and their application to the ISCMC design were examined jointly using the integrated course design model (Fink, 2013) as a framework. Fink's (2013) model is appropriate for this study because of its focus on "significant learning experiences" and the incorporation of "backward design" principles (Wiggins & McTighe, 2011; Wiggins, Wiggins & McTighe, 2005). Essentially, for a course with a definite but compressed developmental goal, there should be a clear process for determining a priori what design is likely to achieve the expected outcomes. Consequently, the core question in this paper is "to what extent does the reliance on theory in the design and execution of a practice-oriented international supply chain course result in positive student learning outcomes?" Notwithstanding the effects of individual instructor characteristics, the outcomes of a course whose design is directly informed by established pedagogical principles serves to corroborate theory. Course design competencies are important for educators in a dynamic international business environment, and such corroboration encourages a more deliberate design approach.

The inspiration for the ISCMC was demand from successive cohorts of IB majors that had taken an International Operations Management course (IOMC). The module on Managing Supply Chains in the IOMC comprised an overview of how value is created and distributed across the extended enterprise. Key Supply Chain Management (SCM) principles were taught using a case and/or simulation, along with a selected guest speaker to emphasize industry perspectives. The illustrative context for this module was often food supply chains to highlight material flow and information flow issues that were familiar to students, and to indicate how internationally connected even “local” supply chains were – for example fish sourced from Southern American seas and ordered by restaurant guests in Florida cities; or the input sources for the millions of turkeys that end up a part of Thanksgiving dinners. Students appreciated the content and wanted more, but there was no space in the IOMC schedule to include additional content. The ISCMC was designed with the dual objectives of having students: (a) understand the core supply chain frameworks and (b) develop entry-level competencies in applying SCM models in cross-border business scenarios.

Registration was open to students who had completed the IOMC, since knowledge of operations was deemed critical for facilitating coverage and depth of analysis in the ISCMC. For example, the IOMC had in-depth coverage of global operations, process and capacity analysis, inventory models, information systems, quality management (including international standards) and ethics, all of which are necessary foundations for the intense focus on integration in the ISCMC.

Incidentally, setting this prerequisite also meant that students in the class were IB juniors or seniors. It may be useful to note that the same Department of Business has a Supply Chain

Management course that is required for Business Management majors, but this is not a substitute for the ISCMC, based on the design and the preparation that is assumed from the IOMC.

The students were made aware that they were electing to take a more challenging course than the IOMC, so they made the opt-in decision thoughtfully. Each class had some combination of students from Austria, Brazil, Canada, Germany, India, Jamaica, Nepal, Netherlands, Peru, Russia, Spain, Portugal, Ukraine, the United Kingdom, Venezuela, and various states across the US. The scope of diversity permitted the observation of established relationships among culture, cognition, teaching, and learning in line with diversity pedagogy theory (Sheets, 2009; Brandauer & Hovmand, 2013). Over the 16-week semester, students are assigned 10 chapters from a textbook, 5 articles, 5 case studies, 4 field trips, 3 simulations, 2 problem sets, 1 book review, and 1 term project. All these were assessed using various methods including 10 reading summaries, 8 quizzes, 5 discussion forums, 2 presentations and 1 final examination. Through the field trips and guest speaker, students are able to interact directly with, and learn from, up to 10 senior executives in one semester – which Paul and Mukhopadhyay (2005) recognize as a useful experiential learning technique, providing students with insights into a range of industries. The breadth of teaching methods, modes of instruction, and assessment methods allows for comprehensive evaluation of student learning outcomes, while accommodating multiple learning styles (Drake, Luchs & Mawhinney, 2015; Aggarwal & Goodell, 2015b; Brown-Jeffy & Cooper, 2011). Data from the last 7 years (4 years for ISCMC) in the Business Department show the average class GPA as 2.78 (sd 0.21) for Business Statistics, 3.01 (sd 0.24) for IOMC, and 3.24 (sd 0.28) for ISCMC. Thus, even with the progressively challenging nature of the courses listed, students still achieved higher performance in the ISCMC. The ISCMC has had multi-year

success, with iterations based on instructor reflection, student feedback and input from industry leaders associated with the course.

The major contribution of this paper is in the innovativeness of blending multiple pedagogical tools and experiences in a single semester, rather than an entire program of study. This study also demonstrates that when international travel prospects are limited due to financial, scheduling, or residency status reasons, a carefully designed local course can achieve significant mindset and skillset changes for IB majors. The paper roughly follows LeClair's (2018) process steps, the first of which is specifying the purpose of the course, as this introduction has done. In the rest of this paper, I then provide a detailed background of the course content and structure, describe the connection between course design and existing pedagogy in relation to the integrated course design model (Fink, 2013). Next, I discuss how well the different course modules worked, what insights emerged, and propose what next steps may be considered by other colleagues seeking to design similar internationally-focused courses in the decision sciences. The [full syllabus](#) is linked for transparency in the appendix.

2. COURSE CONTENT

The larger context for this ISCMC is that it is offered in a small liberal arts college in Central Florida, with undergraduate enrollment of just over 2000 in the day program. The nature of the College's overarching mission implies that even practice-oriented courses have a critical thinking focus. This course embraces not only critical thinking, but creative thinking and practical thinking (Fink, 2013) as well. The value of having students think in a multi-layered, analytical manner is in better preparation for problem-solving in scenarios yet unknown to

industry. Thus, the course objective of developing in students the intuition, aptitude, and methods for co-creating value across business boundaries in cross-border situations, is aligned with this College background. To select content relevant to the stated purpose (LeClair, 2018) in this defined learning environment, the author consulted review articles on supply chain research (e.g. Kouvelis, Chambers & Wang, 2006; Sun & Song, 2018), drew on experience from industry training programs in multiple countries, and reviewed a list of 12 categories of important supply chain issues based on Johnson and Pyke's (2000) analysis of syllabi of numerous supply chain courses. As referenced earlier, different aspects of the field of SCM are evolving at different rates. So, the design decision was made to provide students with content that provides a big picture appreciation of SCM frameworks (Vollman et al, 2000), so that for any topic covered, they can understand what levers are important for resolving trade-offs, and apply the appropriate analytical tools. This decision also meant that even though Johnson and Pyke's (2002) categories are relatively older, they are still relevant to the extent that addressing core content like Supply Chain Design helps build a framework for engaging supply chain complexity in other topics like network design, international logistics, and risk management. Integrating the content from a recent textbook, case classics, and current emerging industry news allows for sufficiently broad and nuanced coverage of a dynamic subject area. Anecdotally, after reviewing the syllabus, one of the supply chain professionals associated with the course remarked, "*this is exactly the content I wish I had when I was a student*".

Details are provided under the course structure section, but the major themes covered were Supply Chain Frameworks (including fit and alignment), Supply Chain Performance (including the blending of multiple outcomes), Inventory Management (including aggregation and Little's

law applications), Logistics and Transportation (including network design), Sourcing and Supplier Relationships (including international sourcing and risk management), and Leadership and Transformation in Supply Chains. Other areas like sustainability, new product development and location are covered under the main topics such as Transformation or Supplier Sourcing. *All* these content areas are covered with an international lens. For example, the discussion of strategic fit in one year included the 2018 chicken supply challenges faced by KFC in the UK (Wood, 2018), and the extent to which the characteristics of competing distributors (Bidvest Logistics and DHL) were aligned to the needs of the franchises. Overall, this ISCMC covers significant content and methods in preparing our IB students for problem-solving and professional practice. We now discuss *how* learning the selected content was facilitated.

3. COURSE STRUCTURE

A range of pedagogical theories as noted before provide the framework for the ISCMC design. The focus on developing industry-relevant skills and competencies implies an active learning approach (Bonwell & Eison, 1991; Prince, 2004; Rotgans & Schmidt, 2011). Active learning, with its characteristic student involvement, supports the development of skills like critical thinking, meta-cognitive learning, synthesis and integration (Johnson, Johnson & Smith 1991). In that regard, the theories of student-centeredness, diversity, reflection, self-direction, and experiential learning are important pedagogical choices. For example, self-directed learning that builds the confidence of students and their mastery of core material and methods, is best developed incrementally (Vygotsky, 1978). This means the instructor needs to be strategic about how the course is structured so that students have the needed practice from the beginning of the semester. Similar design decisions are derived from the other mentioned theories. With multiple

pedagogical dimensions, the design could appear disjointed unless there is an overall framework to integrate all the perspectives. Coherence in this course design is achieved by adopting the integrated course design model (Fink, 2013). The choice of an intensive hands-on, discussion-based, problem-solving format informed the preference for small class sizes in the ISCMC. The targeted enrollment for this course was 12 students, which was considered appropriate for the level of group work, the number of deliverables and the associated grading load. This target number is not uncharacteristic of our College with an average class size of 17; our required classes in the Department of Business are capped at 22. In this elective course there were 13 students in the first run, 11 in both the second and third (except one student was auditing the third class so we actually had 12), and 9 in the fourth iteration.

The course is structured into modules (3-5 classes on a particular sub-theme). This design choice was to allow for focus on a particular area, while incorporating lessons from related areas. The module format also provided the flexibility to delve deeper into a particular area when needed (for example based on current events), and then adjust to cover the desired ground in following classes in that module. By way of overview, the ISCMC typically begins with a passionate but sufficiently broad introduction aimed at getting students excited about this challenging course, setting expectations for outstanding effort, and elucidating what advantages might accrue to their careers. I then provide a clear roadmap to help students grasp how all the modules fit together. I also point them to a range of complementary resources, including video lessons. This start to the course is important because such “explanation strategies” are important for reducing student resistance in the active learning environment (Tharayil, et al, 2018; Finelli et al, 2018), as are the “facilitation strategies” subsequently adopted throughout the semester.

Table 1: Overview of modules in ISCMC

Module	Content Areas	Tools	Comments
1: SC Planning	SC objectives, strategic fit and alignment, core frameworks	Core readings; Text exercises; Simulation	Current industry issues are paired with textbook readings and two articles “What is the right supply chain for your product?” and "Aligning Incentives in Supply Chains”. The haptic version of the Beer Game simulation and its debrief help to tie the lessons together in this module. Students understand the frameworks of material and information flow, and SC surplus.
	Coordination, including options for managing the bullwhip effect		
2: SC Performance	Drivers of performance and aligning these drivers with outcomes and metrics. The connection between this module and SC planning is highlighted (and this pattern continues through the semester)	Core readings; Case study; Field Trip	Focus on SC Outcomes from the text is needed to understand what to look out for both in the case and in the field trip. Analyzing the 7-11 Japan case is immediately followed by a field trip to observe the 7-11 Distribution Center operations in Lakeland, FL. Students make a stronger connection with the case (and the nearby 7/11 location) and are enabled to compare international distribution system choices.
3: Managing Inventory	Cycle stock including economies of scale	Text exercises; Case studies; Simulation	Simulation 2 also involves team-based exchanges around <i>flows</i> and availability of product in the fashion industry. It helps to reinforce lessons from the Sport Obermeyer case and the CRU Computer Rentals case – both classics that support deep quantitative analysis for decision-making.
	Safety stock including supply uncertainty, aggregation and replenishment		
	Product availability including optimal levels		
4: Geopolitical environment	Book Review: "The Travels of a T-Shirt in the Global Economy" or "The Sushi Economy"	One of 2 assigned books selected	Student-led discussion of takeaways prior to submitting the review. The team-based reflection is an important pedagogical tool for changing mindsets. The coverage on globalization and power dynamics in world trade provide a framework for discussing geopolitical risks and policies that must be managed by businesses exploring and/or exploiting international market opportunities.
5: Sourcing & Supplier Relations	Supplier selection, outsourcing, and incentives	Core readings; Case study; Guest speaker	Focus on relationship management, product development, input sourcing, and risk mitigation. Examine partnership development (including contracts, incentives, planning horizons) between Laura Ashley and FedEx. Discuss sourcing practices and challenges at high-profile Central Florida company.
6: Logistics & Transportation	Transportation infrastructure and policies, transportation network design, tailored transportation	Core readings; Text exercises; field trips	Trip to Nissan Parts Distribution Center and trip to Port Canaveral help expand lessons on transportation networks, 3PL partnerships, cargo types, and transportation flow changes based on weather and other disruptions. Readings also help integrate the collaborative dimension of these alliances.
7: Leadership & Transformation in SCs	Input for SC design, sustainability, application of SC principles in not-for-profit contexts	Core readings; Case study; field trip	The focus here is about what we can do in a resource-constrained setting, given what we have learned. The context is not-for-profit supply chains (food bank; housing development), and the practical limitations are applied to doing cross-border business where systems and resources are not setup for the ideal SCM performance models. Students learn that change is possible.

The modules that follow this introductory class are described in Table 1. All the deliverables (quizzes, reading and case summaries, book reviews, discussion forums, problem sets, term project) are graded, and sequenced to reinforce the topics being treated. These assessments with their deadlines are available to students from the beginning of the semester. On occasion, some students would complete a case discussion ahead of schedule, but for the analytical problem sets the material was covered completely before any students submitted their attempts. This observation is an important indication in the absence of pre- and post-tests, that specific learning in this course was necessary for student achievement. The essential building blocks of the ISCMC were carefully integrated as shown in Table 1, to meet the stated course objectives. In the next section I discuss specific lessons emerging from the execution of the course design as it pertains to the integration of course materials, experiential learning, and assessments.

4. EXECUTION AND INSIGHTS

Flawless execution of a course design is partly a function of instructor characteristics. I approach this course with a passion to make a difference in student lives as recommended by Polick *et al* (2010). To maintain high levels of engagement in class discussions, students were required to submit reading summaries for cases and articles before the class in which these were discussed. I also ensured that each student spoke in *every* class. When I ask follow up questions, I wait for a response, so they are unable to squirm their way out of answering. Rather, they had sufficient variety of learning opportunities such that participation was not tedious in this active learning setting (Shekhar et al, 2015). Consistency in relentlessly challenging the robustness and applicability of their assumptions does encourage students to take responsibility for reading critically to meet in-class discussion expectations.

Articles and Cases

The case method is an effective student-centered teaching strategy that supports the integration of theory and practice. From an educational perspective, this tool enhances critical and higher-order thinking. Five cases were assigned for this course, of which 3 made the list of core cases as specified by Johnson and Pyke (2000). Five articles were also assigned to reinforce the theoretical frameworks that underpin context-specific analyses in cases; thus, advancing both context-independent and context-dependent knowledge. The articles and cases are listed in the Appendix. Additional foundational reading was incentivized with few extra credit points (4 points compared with 120 points in the term project), but not required. Other current readings were encouraged by posting a link on Blackboard to the Supply Chain Management Review journal. We also discuss interesting emerging issues on occasion (like SC implications of Brexit) along with Wall Street Journal articles, dealing with current SCM issues. We discuss all these “extras” in class to supplement the article and case classics. Thus, the classics broaden the scope of instruction and help accommodate multiple current applications thoughtfully.

For the assigned readings, students submit a 1-page summary in which they are required to: (a) identify the main lesson in the article, (b) connect the lesson with relevant insights related to the theme of the module, and (c) describe a scenario outside the article that illustrates the main lesson (12 points). The choice of this rather loose assessment structure allows the instructor to understand what thoughts students actually had while reading. This way, it is easier to correct erroneous conceptualizations, and guide them more appropriately during the in-class discussions. The case summaries have a similar loose structure, but with particular emphasis on an extension – a demonstration of how key lessons from the case are applicable in another business situation

outside of the case. This requirement challenges students to take a position and make a connection, thus employing the pedagogical tool of learning through reflection (Rodgers, 2002; Lew & Schmidt, 2011; Nesbit, 2012). The reflection helps students to identify associations between current business examples and the discussion of case classics. Such connections support the higher education priorities of self-direction and life-long learning (Bolhius, 2003). The other reason for the loose structure of the submitted summaries, as opposed to having students answer specific assignment questions, was to help them think on their feet. As one student noted: *“The one thing I will take as substantial in my [College] career was the quickness and ability to problem-solve that we had in this course. While being put in a position to determine what solutions were adequate for case problems as well as the situations we encountered in field trips, we developed a propensity to think on our feet that is remarkable”*. In-class case discussions were fast-paced and structured, so without reading carefully, students would not have the needed content and context appreciation to resolve the unavoidable complexities encountered in the analyses.

Textbook

The first cohort of the ISCMC was not required to purchase a textbook, though one was recommended for supporting readings. This decision was based on the positioning of the course for high-performing students, several of whom were quite ready for graduate-level work. However, feedback from this cohort indicated a preference for the more linear structure of a textbook based on their predominant learning styles. I adopted “Supply Chain Management, Strategy, Planning and Operations” by Chopra and Meindl (2016) as the core text for the next iteration. The 7th Edition (Chopra, 2018) was used in the latest iteration. Given the level at which

the material in the textbook was pitched, its selection aligned with the stated course objectives, and provided an opportunity for students to explore additional concepts for their continued professional development. The selected chapters were carefully integrated with other course material, as Table 1 shows. For example, the foundational material on Supply Chain Drivers in Module 2 was linked to the “Outcome-driven Supply Chains” article, the 7/11 Japan case study, and the 7/11 Florida distribution center field trip. The international dimension of studying in detail how one company operates in Japan, and then contrasting that with firsthand observation of how it operates in the US provides tremendous global perspectives to challenge existing mental models (Ormrod, 2017). To ensure that students had read the assigned chapters, I also designed corresponding quizzes and administered these through Blackboard. The quizzes had two attempts for 10 multiple-choice questions, and a firm deadline. The second cohort had 5 such quizzes in the first part of the semester. My expectation was that the practice of answering questions about chapter content would be sustained beyond the half-point in the semester. However, student feedback suggested that the quizzes were needed to maintain their momentum and engagement with the textbook. I added 3 more in the second half of the semester for the subsequent cohorts, for a total of 8 textbook-based quizzes.

Problem sets

The analytical skills required for prospective supply chain professionals necessitated the design of one problem set for each half of the semester, to supplement the in-class computations; and through practice, to help students better grasp the utility of the models we were addressing in class. Some students requested more quantitative analysis in class because these end-of-topic problems were challenging. However, since prior preparation was assumed through the IOMC

prerequisite, they were challenged to be more self-directed, and encouraged to apply technological resources (such as goalseek functions) to facilitate the achievement of mastery. The problem sets had two attempts, and the solutions were discussed in class after the due date. Student feedback usually described the quantitative analyses as challenging, but spending more class time on these would compromise the intended breadth of coverage. Other workable options are still being explored, since IB students may benefit from an additional preparatory course in business analytics.

Field Trips

The field trips reflect a prioritizing of experiential learning in the course design. Tours of selected businesses, and engagement with key managers at these locations, are significant highlights of the ISCMC. Without prompting tour guides, they would discuss details of concepts we have covered in class, and indicate how they have resolved the practical challenges encountered in their lines of work. Similar to (Drake et al, 2015) these trips provide practical demonstration of the principles students are taught in class. Students are required to research the companies before each trip, and to respond to a discussion forum prompt after the trip. The discussion forums are designed to achieve the benefits of collaborative reflection (Rodgers, 2002). This conscious reflective activity (Dewey, 1933) allows students to reconstruct their experiences in ways that enhance learning. I play an active role in the discussion forums for the purpose of extending the lessons they have learned, situating their observations within the covered frameworks, and tackling any residual queries that may be on the minds of students after a trip. In this way, their experiences can be translated into deep learning (Kolb & Fry, 1975; Svinicki & McKeachie, 2011). Furthermore, the class diversity previously referenced

accentuates the role of culture in the teaching and learning process. Students observe and interpret things differently through their own lenses, but facilitating open and thoughtful discussion allows for the fertile diffusion of ideas and constructs. If the class diversity is managed purposefully, it can become a key resource for students in their development of cross-cultural competencies that complement their technical skills (Ramburuth & Welch, 2005). In this regard, through affirming diversity in class, important relationships among culture, cognition, teaching, and learning can be observed in line with diversity pedagogy theory (Sheets, 2009).

The first field trip is to a 7/11 distribution center which serves the entire state of Florida as previously mentioned. We learn firsthand about product aggregation, cross-docking, inventory categorization, route management, distribution models, and performance metrics. Analysis of the Seven-Eleven Japan case precedes the first field trip. The combination of case with field trip draws students immediately into the practical value of the theoretical frameworks we cover in class as they evaluate international distribution system choices. The next trip is to a Parts Distribution Center of Nissan, where the distribution to dealerships is done through a partnership with DHL. This is an opportunity to listen to managers from both companies, to observe the unfolding operations, and to understand the processes by which a German-based logistics company delivers Japanese auto parts, to American dealerships. Students appreciate the role and rules of outsourcing, and the extent to which technology enhances the order-fulfillment process. In the spirit of integration, these lessons are related to the Laura Ashley case discussion as Table 1 shows. The third field trip is to the cargo development division of Port Canaveral. We have presentations by port authority officials, then visit with 2 of the 3 main terminal operators. Students observe the international flow of bulk cargo, and connect that to our discussion of

transportation modes and networks. As a way of linking this third trip with the second, the students are challenged to think about why auto parts for the Nissan Parts Distribution Center that are imported directly into the US from Japan are landed at the Port of Savannah 304 miles away, instead of Port Canaveral which is 57 miles away. This trip is an important eye-opener, to be followed by the final trip to the Ticketing and Transportation Center at Disney World to learn about coordination, technology, teamwork and supply chain transformation. In managing the movement of local and international visitors at Disney World, a “command center” has been developed to coordinate the modes of transport (bus, rail, boat etc.) and improve efficiency. Students get to hear from the General Manager of Transportation Operations, and then observe the work of team members in the command center. The preparation, observation, interaction, and reflection work together to strengthen the immersive attributes of these field trips.

Simulations

Jean Piaget’s (2008) contributions to the theory of cognitive constructivism suggest that students learn by doing, rather than by being told, and this is of significant importance for the active learning approach adopted in the ISCMC. Additionally, Vygotsky’s (1978) theory of social constructivism underscores the collaborative aspects of the learning process. In this regard, the selection of specific simulations in the ISCMC reflects a student-centered teaching focus. The simulations are summarized in Table 2. Notice the column for customization, where changes were made as appropriate in line with the ISCMC purpose (as in Sparling, 2002); notice also the insights provided in the column for learning outcomes. When discussing the challenges of coordination in debriefing Simulation 1, for example, students are encouraged to consider how more extensive these challenges are across borders and cultural differences.

Table 2: Summary of adopted Simulations

Brief Description	Comments on Game Play	Customization applied	Major Learning Outcomes
SIM 1: Beer Game available from Systems Dynamics Society at https://www.systemdynamics.org/beer-game			
Understanding how structure of a SC Design affects industry practices at different stages of the SC. Goal is to minimize total costs as retailers, wholesalers, distributors and factory manage flows of product and information to satisfy customer demand.	Board version is used because of specific advantages over the online version in a small class setting: (a) setup preparation is more demanding, but board game promotes team bonding early in the semester; (b) engages broader range of visual, auditory, and motor skills to provide an animated immersive experience	Pairing students at the various stages in the SC forces more critical thinking about ordering decisions as they debate partners to reach consensus about order quantities in each of several rounds of play. Game debrief was moved to the subsequent class to allow for better reflection.	Competitive game pressures catalyze the search for solutions. During debrief, students review their order profiles and inventory levels compared with peers. Deep reflection in a discussion format (Boud, Keogh & Walker, 2013) allows for lessons learned to be extended beyond options for managing bullwhip effect, to larger systems dynamics issues associated with SC design.
SIM 2: Prom Dress Game made available by Prof Kai Hoberg, Kuhne Logistics University (https://www.the-klu.org/faculty-research/resident-faculty/kai-hoberg/)			
Coordination of team effort to fulfill orders for prom dresses, based on demand forecasts, changes in market conditions, and later observation of actual customer demand.	Useful opportunity to debrief after concluding each of 4 game rounds. Students have the chance to think critically about what they did, why it worked well or not, and what tools they have for solving the problems encountered; then anticipate what might happen in subsequent rounds, which is valuable in scenario analysis	New spreadsheet to automate the cost calculations, so that students can focus more on game play and reduce setup times for subsequent rounds. Innovation for creating lesson on synergy: after 4th round, students are combined into one team and challenged to beat the combined performance of individual teams in any previous round.	Students understand how to solve order-fulfillment challenges related to demand forecasting and variability, capacity management, product design, and postponement. Sequencing SIM2 for module on product availability increases appreciation for interaction among design, planning and operations in a given SC. Computer-mediated reporting reinforces lessons on information systems in SCM.
SIM 3: Global Supply Chain Simulation Harvard Business Publishing product by Prof. Janice Hammond (http://academic.hbsp.harvard.edu/gscm)			
Designing and managing new mobile phone supply chain with geographically dispersed supplier base and different cost and flexibility characteristics. Balance competing product development priorities while contracting with global suppliers for the production of 2 phone models.	Introduce SIM and play 1 st round in class. Students play subsequent rounds on their own. Simulation is debriefed in detail the following class. Actual student decisions are evaluated dynamically, allowing them to receive feedback, reflect deeply on their own choices and refine their decision processes throughout the play period.	An assessment is tied to performance relative to other players, using each player's best outcomes. Winning student teams are rewarded in SIM1 and 2, but in SIM3 the rewards are based on individual achievement.	Lessons on human dimensions of managing conflicting leadership priorities while achieving stated performance metrics (Joshi, Kathuria & Porth, 2003; Kroes & Ghosh, 2010). Assessment helps to develop the competitive aspects of SCM in a collaborative environment, thereby highlighting concept of co-competition in SCs (Wilhelm, 2011; Walley, 2007; Nalebuff, Brandenburger & Maulana, 1996)

Including such international dimensions allows students to stretch their thoughts in exploring SC solutions that work across borders – as discussed earlier, we embrace critical, creative, as well as practical thinking in this course.

Term Project

The term project ties in the principles of self-directed learning (Knowles, 1975; Towle & Cottrell, 1996; Bolhuis, 2003; Brookfield, 2009) as a pathway to lifelong learning - which is important for the business professionals the ISCMC is trying to develop. This project is a team-directed multi-week assignment involving fieldwork in a selected supply chain based on their shared interests. The project brief requires students to explain the mission of a selected international company that they negotiate access to, and situate the company within its supply chain. They describe the core operations of the selected company, and explore the existence of strategic alignment. These steps prepare the teams to obtain relevant data to understand and map out the supply chain flows, identify areas of improvement, and make specific recommendations for redesigning the supply chain. They present their findings in class, receive feedback, and then submit their paper for a grade. Students have interviewed leaders and sourced relevant data from organizations like Disney, Starbucks, Nordstrom, Zara, Automotive Lighting, BMW, Sephora, Clean the World and others; and come up with specific areas of improvement for these elite companies. Projects are graded by peers during presentations, and by the instructor for submitted reports, on: (a) Extent to which team followed a thoughtful process for identifying some core supply chain issues; (b) Appropriateness of data sourced for answering stated questions, and robustness of data analysis; (c) Extent to which team considered important tradeoffs in arriving at recommendations; and how they resolved the trade-offs; (d) Extent to which the project

provides learning opportunities for other students based on the content and the analytical process (i.e. how did team articulate key lessons they learned?); (e) How willing relevant business leaders might be to pay for the insights produced by the project (including the appeal of the executive summary). An important effect of the term project is the increased confidence students experience following the awareness that they have developed industry-relevant competencies.

Other Components

Technology was a big part of the lessons in the various modules. Technology was viewed as a cross-functional driver of SC performance, and an enabler of communication and supply chain visibility. The students observed differences in performance between two distribution centers, that they attributed to the level of technology integration. We were able to discuss strategic fit, the incremental value of technology investments, and the role of incentives in engineering a culture that supported the drivers of supply chain performance in specific cross-border situations.

The student-led book review allowed for the free expression of their considered opinions and better development of their arguments before submitting the work for a grade. Students made poignant remarks about undocumented trade and sweat shops; China loosening restrictions on foreign-owned restaurants; transparency as a tool to increase supply chain alignment and efficiency – which the governments of Japan and Canada adopted; external alignment and trust building between buyers and sellers; trust-based systems to diversify risk; and coordinating supply chain flows when external forces like weather and climate impact fish migration paths.

After the reviews were submitted, links to podcasts on National Public Radio¹ discussing both books were posted on Blackboard to provide additional perspectives. SC managers need to understand the complexities in their task environment, institutional environment, and external environment, and the book review helped students along that path, as their submissions indicate.

5. RESULTS

Some outcomes have already been discussed so far. However, this section highlights other results that speak to the realization of ISCMC objectives. The course has had multi-year success, with meaningful iterations based on reflection and feedback from both students and industry leaders. These iterations speak to the focus on student-centered learning. For such a detailed and challenging course, the average final grade over 4 consecutive years was a B as shown in Table 3 below (average course GPA 3.24).

Table 3: Final Scores by year for ISCMC

Year	N	Mean (%)	Std Error	Lower 95%	Upper 95%
2016	13	85.26	1.47	82.07	88.46
2017	11	84.56	2.34	79.34	89.78
2018	11	81.59	4.37	71.86	91.33
2019	9	91.15	2.68	84.97	97.32
Overall	44	85.37	1.46	82.43	88.31

The 2019 cohort had the highest achievement. It is unclear whether this outcome was due to the smaller class size relative to other cohorts. The 2018 scores are the lowest because they include two failing grades (the students dropped the class the last week of the semester), and the large

¹ <https://www.npr.org/2005/04/27/4621936/behind-shanghais-boom-is-a-simple-t-shirt> and

<https://www.npr.org/books/titles/138298760/the-sushi-economy-globalization-and-the-making-of-a-modern-delicacy>

standard error corroborates this. Omitting those two grades, raises the mean to 87.17 percent (CI: 80.73-93.59%) to take second position in performance.

Table 4 presents official student evaluation data regarding interest generated for the topic of ISCM and learning outcomes (on a 1-5 scale). Of special note are the ratings on “engagement”, “performance”, “knowledge” and “interest”. Obviously, the small sample size limits extensive comparative analysis, but the progression on the “performance” item is particularly insightful in terms of continuous improvement. The 2017 cohort had the highest overall ratings on the engagement and outcomes scales, though their mean grade performance was relatively lower. The 2016 cohort provided the lowest ratings, even though in Table 3, it appears that they performed better than two other cohorts. Feedback had shown they were anxious about the final examination, and this may have affected their perception of performance in this class.

Deslauriers et al, (2019) find that students may interpret the increased cognitive effort associated with active learning as poorer learning experience; and it may negatively affect their motivation and engagement. So, various authors (Yadav et al., 2011; Bentley et al. 2011; Tharayil et al, 2018) call for “facilitation strategies” incorporating feedback and support throughout the active learning process. Deslauriers et al, (2019) call for preparing and coaching students early in the semester about the benefits of active learning to minimize the frustration they may feel from the increased cognitive effort. This is a change I implemented after the first ISCMC iteration, to help students be more confident about their level of achievement. However, the facilitation strategies do not imply backing down on rigor. Even though the level of quantitative analysis was an area of complaint for all cohorts, we actually progressively required more over the period of study, not less, because this aspect of the training is critical for industry-readiness.

Table 4: Data from Student Evaluations

	2016	2017	2018	2019
ENGAGEMENT SCALE				
Engagement - You were drawn into the learning experience	4.30	4.83	4.57	4.86
Challenge - Course required you to work at your full potential	4.60	4.67	4.86	4.57
Participation - Degree to which you actively contributed while in class	4.40	5.00	4.43	4.71
Preparation - Attended class having completed assigned readings & homework	4.40	4.67	5.00	4.86
Performance - Your overall level of achievement in this class	4.20	4.67	4.71	4.86
Enjoyment - Learning in this class was enjoyable	4.40	5.00	4.43	4.71
OUTCOMES SCALE				
Knowledge - Increased your understanding of the topic	4.60	5.00	4.71	4.71
Interest - Sparked a desire to learn more about the topic	4.50	4.83	4.57	4.71
Skills - Taught you specific skills relevant to the field	4.40	5.00	4.67	4.71
Critical Thought - Ability to evaluate information and form conclusions	4.40	5.00	4.57	4.71
Perception - Course caused you to think about the world in a different way	4.40	4.83	4.50	4.57

Other unanticipated problems emerging during the first iteration resulted from design imperfections like not assigning a textbook, and not knowing exactly how industry professionals would complement the subject matter. These were corrected as indicated earlier with the integration of textbook and chapter quizzes. Explaining the content and coverage to field trip hosts and guest speakers, allowed these industry professionals to adapt better to the course objectives and engage more actively with the students. Field trips were important highlights of this course, as one student said: *“I have learned so much content in this class, and not through memorization or through exams. I learned through reading, participating in class, and mostly through the field trips, where we were able to apply textbook material to real life”*. Thus, experience from the first cohort was informative for the instructor in preparing students for the selected off-campus experiences such that the components of the course design are better integrated to achieve improved outcomes.

The data over 4 iterations, support the usefulness of the IOMC as a prerequisite for the achievement of the ISCMC goals. Of the 44 students in 4 cohorts, 29 had been taught by the same instructor in the IOMC, so it was possible to compare their performance in both courses. However, two of these students did not complete the course, so their final grades were excluded. Of the remaining 27 students, we run two regression models with and without 2 outliers (one student with very low scores in IOMC and very high scores in ISCMC, and the reverse situation for another student). The strong positive relationship between performance in the two classes is clear from Table 5. This observed relationship speaks to the importance of prior preparation for such an intensive practice-oriented course. These results are supported by the following student comment: *“I learned significantly more than I expected. As someone who really enjoyed operations, this class was very useful and expands on the information discussed in that class”*. In applying these findings to an entire program of study, it appears that the coordination of design across different courses will contribute positively to student learning outcomes.

Table 5: Analysis of Student Performance

(a) Relationship between IOMC performance and ISCMC performance			
	Full dataset (N=27)	Reduced dataset (N=25)	
Mean IOMC grade (%)	85.334	85.991	
Stdev IOMC grade	9.663	9.527	
Mean ISCMC grade (%)	88.045	88.401	
Stdev ISCMC grade	6.737	6.369	
Covariance	39.618	45.063	
Adjusted R-Square	0.345	0.532	
(b) Comparative performance of students by indicated groups			
T-test	Difference	t-ratio	p-value
Male – Female	-1.675	-0.7071	0.242
Senior - Junior	1.080	0.4831	0.684
International - Domestic	2.972	1.2529	0.891

Other comparative analyses shown in Table 5 did not indicate significant differences when the students were segmented by gender, class standing, and foreignness. On average, female students

performed better than male, seniors performed better than juniors (as expected), and international students performed better than domestic. However, none of these differences were significant, based on t-tests of differences in mean. The international-domestic analysis was further spilt into regions (Asia, Europe, North America and South America). An ANOVA test yielded an F-ratio of 2.3772 with a p-value of 0.0851. Thus, the data fail to show any significant differences by region, even though students from Europe had higher relative performance. These findings are critical for IB education as it pertains to diversity pedagogy and student achievement. Given suitable preparation in the prerequisite course, if the differences in student characteristics are harnessed effectively, the performance gains in the focal course should be realized across student groups. Clearly, no subgroup was disadvantaged by the course structure and execution.

In terms of textual data from evaluations and other sources, a few representative examples are appropriate here. Firstly, we refer to the term projects which were important for demonstrating how much students had learned by the end of the ISCMC. In one of the projects, a team reported: *“The major issue we found with the supply chain of Starbucks is the fact that their cups are shipped along with coffee, which makes the lead times and schedule completely wrong for plastic and paper cups. The cost of storage capacity and on-hand inventory levels wouldn’t be needed if the cups were shipped in directly from the production facility on a monthly basis. Shipping the cups with the coffee also incurred extra costs because the trucks would be able to fit more coffee in them on a daily basis if the cups were put on a separate truck on a different schedule”*. It was clear that the team had understood how trade-offs between costs, inventory levels and lead times are resolved in specific situations. This concept was emphasized in class and reinforced through observing the shared transportation of perishable and non-perishable items at one of the

distribution centers. The partnership between Starbucks and Penske was also highlighted in the referenced project as a manifestation of similar alliance principles between Laura Ashley and Federal Express that were analyzed in detail earlier in the semester. As another student said: *“this course helped me develop the ability to understand a complex supply chain ranging from small to large companies and increased my ability to make recommendations to a company”*.

Secondly, the ISCMC required significant effort on the part of both students and instructor, but it appears the current iteration works very well. Especially inspiring is the fact that several students considered SCM as a career path by the end of the class, as evidenced by comments like: *“I want to go into operations/supply chain management as my career so everything in this class was of interest to me ..”*; or *“I have loved this class and hope to go into a supply chain career”*; or *“I feel that I truly learned things that I can apply in a later career. It makes me want to get into supply chains”*. Recent graduates have also shared stories that speak to impacts beyond the limited single semesters we are able to evaluate. One was admitted into a Masters in SCM program at a reputable Dutch University, and is *“very much looking forward to learning more about the exciting topics within SCM”*. Another graduate currently employed as Area Manager for a leading global retailer wrote: *“The ISCM class sparked my interest in Supply Chain and ultimately played a large role in my decision to begin working in Operations after graduation. I learned valuable information about supply chain steps, pull vs. push supply chain strategies, SCOR model, six sigma, etc. that directly relate to my current job as Area Manager. Learning all these things was greatly aided by the many field trips, group projects and case studies we completed throughout the semester”*. Yet another graduate, currently VP Operations for a Trucking company, relates how: *“the field trips to places like Port Canaveral and the 7/11 &*

Nissan distribution centers, along with the in-class curriculum involving truck load capacity and profit margins have helped me guide our drivers in the right direction when it comes to finding a carrier or switching carriers when they are unable to make enough income to sustain their business. I have had countless heart to heart conversations with drivers who were ready to give up, who are now thriving in this industry”. The practical recall of course lessons and applications two and three years after the fact is not insignificant. Consistent with McKeachie (2007) being deliberate about course design and delivery appears to make a difference.

6. CONCLUSION

The ISCMC was conceived as a pedagogical response to student demand for an international supply chain management course at a small liberal arts college in Central Florida. The course emphasized the view that competitiveness is developed across the extended enterprise, rather than within the confines of individual companies alone. This view is especially important for IB majors who are being prepared for roles involving interconnected business situations for different countries. Thus, the course design comprised immersive industry experiences to support in-depth coverage of core supply chain themes, with the aim of producing cohorts of undergraduates that have developed the intuition, aptitude, and methods for co-creating value across business boundaries in cross-border situations. This paper set out to examine how *integrating* fundamental pedagogical theories (student-centeredness, diversity, reflection, self-direction, experiential learning) in course design influences learning outcomes. The paper clarified decisions that were taken in designing and executing the ISCMC, and the refinements that were adopted based on reflection and feedback. It also reported a range of observable outcomes from 4 successful iterations. The main contribution of this paper is in demonstrating

the innovativeness of blending multiple pedagogical tools and experiences in a single semester, rather than an entire program of study. The hybridization of essential core and experiential elements in this course design is not trivial. Essentially, instructors do not always have to compromise content coverage for experiences or problem-solving (or vice versa); careful integration not only minimizes the pedagogical trade-offs, but creates synergies between the tools employed (Fink, 2013). Replicating such course design over a program of study will multiply the observed positive outcomes for students, hence preparing them better for life after graduation. On occasion, some students have had travel restrictions that cannot be easily resolved, even though they desire the full experience of an IB degree. This study demonstrates that when international travel prospects are constrained for whatever reason, a carefully designed local course can achieve significant mindset and skillset changes for IB majors.

We conclude with a few practical pointers for instructors wishing to adopt and customize the course design. Firstly, this study is a contemporaneous demonstration of the association between course design and learning outcomes; and should spur instructors to confidently exploit the benefits of theory-based design. Secondly, instructors must be passionate enough to do all the extra work that is required. Practicing the relationship management we teach about, is essential for a course with 4 field trips and a guest speaker – successful engagement with these industry professionals cannot be limited to the semester in which the course is taught. Thirdly, the selection of partner companies may take time, but the key issue in their inclusion is how connected their processes are to the module the field trip is being sequenced with. Lively and talkative managers with some historical background to their evolving supply chain issues also appear to make better field trip facilitators. Fourthly, instructors need the courage to demand

quantitative proficiency. The complaints are a small price to pay for the lifelong impacts of developing analytical competencies. Fifthly, using a point system allowed me to allocate sufficient points to whatever I needed my students to focus on – for example for additional quizzes to support text readings. Even the highly motivated students made it clear that without quizzes, they may prioritize other things instead of reading the textbook or writing a case extension. Course evaluations and redacted letters from graduates have been shared with the editors, and are available on request for full transparency. A core course with a larger class size will require design modifications mostly related to the increased load of coordinating the high number of course components for several students without losing the nurturing environment. Furthermore, in institutions (e.g. in Europe) where end-of-semester performance is emphasized, rather than continuous assessment, instructors will need to be creative about establishing an active learning environment that progressively develops the desired skills and competencies during one semester. However, making allowance for local institutional adjustments, faculty that approach the education of IB Majors in the fashion outlined in this paper are likely to achieve both short- and long-term benefits for students.

APPENDIX – COURSE SYLLABUS

Header: [Catalog title of course and Course Number]

Logo of College

DEPARTMENT OF BUSINESS

International Supply Chain Management

[Course Number]

When we meet: [Days and times] **Where we meet:** [Location] **Student Consultation Hours** [Day & time]

An appointment will give you priority. I will also provide other consultation slots as may be necessary.

[COMMENT: Office hours are generally walk in but I encourage appointments to help build a work ethic]

Instructor's contact information

Office: [Room Number and Department]

Phone: [Office phone] (*Save this number so you can call if needed*)

Email: [xxx@xxx.edu]

Here is a summary of important information for this course. You don't need to read it all at the same time but do make time to read everything soon. The links below will take you to specific information you need. Happy reading!

[COMMENT: hyperlinks on the roadmap take students to appropriate sections to help improve reading]

ROADMAP

[What this course is about](#)

[Topics we will cover](#)

[Materials you will need for this class](#)

[What you can expect in the learning environment](#)

[How you will be graded](#)

[What we will cover each week](#)

[How \[the College\] views Honor and Integrity](#)

[What to do if you have a disability](#)

[Title IX](#)

1.1 What the course is about (FOCUS)

This course is about winning together - creating and distributing value across the extended enterprise. [Course number] provides in-depth coverage of supply chain management: from inventory and sourcing, through logistics, sustainability, and supply management models. Students will acquire the tools for coordinating business activities in ways that align incentives across the supply chain.

1.2 What the course is about (BIG PICTURE)

Business is truly global these days. Several US companies unknowingly depend on suppliers of the suppliers of their supplier. The practices of these businesses at lower supply tiers may provide an advantage or constitute a headache for US companies. How do companies today achieve visibility and accountability in international supply chains? How do manufacturing or service businesses negotiate successfully with suppliers, especially across borders? What models of customer- and supplier- relationship management allow businesses to be successful in a connected world? [Course number] equips students to think and act beyond the confines of individual organizations. Essentially, the course enhances the preparedness of students by providing the tools for appreciating and managing the operational complexities of international sourcing.

1.3 What the course is about (COVERAGE)

Our objective is to understand the core supply chain frameworks and to develop entry-level proficiency in the application of supply chain management models. We will cover

- Supply Chain Performance
- Inventory Models
- Logistics and Transportation
- Sourcing and Supplier Relationships
- Leadership, Sustainability and Transformations

1.4 Credit Hour Statement

[College] offers four-credit-hour courses In this course, the additional outside-of-class expectations include reading and writing assignments (for cases and articles), quizzes, extended simulations, fieldwork for a major group projects, preparation for group presentations, and field trips with preparatory research and discussion forum entries. You will average close to 9 hours outside class each week to be successful in this course. Please plan your time accordingly.

2. Materials you will need

2.1 Our main text is Chopra, S. & Meindl, P., 2016. *Supply Chain Management, Strategy, Planning and Operations*, 6ed., Pearson Education Limited, Essex, England. You only need the paperback (Global Edition, ISBN: 978-1292093567), which you can [PURCHASE](#) for less than \$40. The hard cover edition is ISBN 978-0133800203 if you are interested.

2.2 You are also required to purchase ONE of the following two titles:

(a) Rivoli, P. (2014). *The Travels of a T-Shirt in the Global Economy: An Economist Examines the Markets, Power, and Politics of World Trade*. John Wiley & Sons. [HERE](#) for about \$12

(b) Issenberg, S. (2008). *The Sushi Economy: Globalization and the making of a modern delicacy*. Penguin. [HERE](#) for about \$12

There will be a book discussion in class, after which you will post your own review.

2.3 We will run three **simulations** this semester. You will not need to pay for those. The third simulation will cost you \$15 and is included in your Harvard Coursepack.

2.4 There will be 5 **case studies**, which you will need to purchase from the Harvard Coursepack (instructions are posted on Bb). The cases and simulation in your coursepack will cost \$40.50.

2.5 You will also have 5 assigned readings. You will be able to access these **articles** directly from Blackboard or download them using the OLIN Library e-resources. There are three other readings for extra credit, which you can access from the Olin portal. Your total spend should be about \$90.

2.6 **Socrative**: In order to provide real-time and sometimes anonymous feedback on certain aspects of the topics we will treat, you will need to sign in to <http://b.socrative.com/login/student/> on your computer or search for “Socrative Student” in your App Store. Keep the link bookmarked.

[COMMENT: I use Socrative to get a sense of how well students have grasped the material, typically during the penultimate session in each module]

3. Our Learning Environment

Together, we will create an environment in which we all feel safe to learn and try new things. Our learning space should challenge us to our highest potential. I will teach you and respect your opinion. You will learn from me and from each other. Ask questions freely and contribute positively to the **learning experience**.

Your contributions will not only be individual but also **team-based**. I will assign the teams but you will have a say. When individuals are invested in the success of the team they have a great, shared experience and reduce the incidence of social loafing.

Field trips are an important part of this course. These trips will be on the terms of the hosting companies, so you will be required to make arrangements in advance so that you can participate fully. Field trips will typically be either in the morning or afternoon on a Friday. Please consult the schedule.

You are responsible for all work covered in class, and for prompt submission of assignments regardless of your having an excused absence. You will inform me ahead of time with the relevant documentation if you need to be absent from class activities for any reason. If you have an emergency, call my office phone [Office number] and leave a message **BEFORE** the class activity otherwise I will be unable to make any concessions.

To minimize distraction in our shared class environment, I will expect you to use your preferred electronic device to take notes and look up additional information rather than other uses **not directly related** to [Course number]. I will also expect you to dress in a way that does not overtly distract other members of the class; and that reflects your status as an upper-class business student. You may bring beverages to class if they have a lid, and if you do not drink in a way that distracts others. You should have finished eating before class starts. You are required to be punctual to all class meetings and activities. Coming late and leaving early is distracting to other students.

4. Course Grading

There are 9 components to this course offering a total of 640 points. Details are provided on the next page. You need 595 points to make an A, and 531 for a B. Every point counts!

Course component	Number of units	Points per unit	Total Points possible
Article summaries	5	10	50
Case extensions	5	12	60
Quizzes	8	12, 10	90
Book review	1	40	40
Simulation assignment	1	40	40
Reflection papers	6	10	60
Problem set	2	40	80
Group Project	1	120	120
Final Exam	1	100	100

4.1 Article Summaries (50 points at stake)

You will need to submit 1-page summaries for 5 assigned readings on Bb by the beginning of class on the dates indicated. Each summary will be worth 10 points.

4.2 Case Extensions (60 points at stake)

You will need to submit 1½-page summaries of the main issues in 5 assigned cases. The summaries will include a case extension connecting the core issues in the case with course material covered and with another relevant example. The paper will be due on Bb by the beginning of class on indicated dates, and will be worth 12 points.

4.3 Quizzes (60 points at stake)

There will be 8 quizzes based on material covered in each of the chapters. I encourage you to take the first attempt before we discuss the material in class. Your second attempt must be completed by the noted deadlines: **March 9** and **April 24**, 2018.

4.4 Book Review (40 points at stake)

We will have a book discussion led by students reading either of the two required books (The Travels of a T-Shirt in the Global Economy, and The Sushi Economy). One review will be on **Tuesday March 20**, and the other will be on **Thursday March 22**, 2018. You will then submit your 2-page review on Bb by 11:59pm on **Friday March 23**, 2018. 30 points will come from your submission and 10 points will come from a peer evaluation of your command of the concepts discussed.

4.5 Simulation assignment (40 points at stake)

We will introduce the Global Supply Chain Simulation at the end of class on Tuesday March 6. Your challenge will be to play the other rounds on your own and complete the assignment by 11:59pm on **Wednesday, March 7**. We will debrief the simulation the next day.

4.6 Reflections (60 points at stake)

Based on your observations from each industry tour and from the visit of a guest speaker you will be expected to express some thoughtful perspectives on a Blackboard Forum. You will need to prepare for the trips by reading up

available materials online and then connecting these to your observations on the tour. (Note: You will need to sign and submit the Field Trip Informed Consent Form 2 weeks prior to each trip.) The sixth reflection will review key aspects of your experiences during the entire course.

4.7 Problem Set (80 points at stake)

You will have till 11:59pm on Thursday, **March 29** and Monday **April 16** to submit two set of problems based on material covered mostly in the first half of the semester. Give it your best effort.

4.8 Group Project (120 points at stake)

There will be one group project involving some fieldwork. You will be assigned to teams, and you will research a supply chain of your choice (medical, agribusiness, pharmaceutical, fashion, real estate etc.). Your challenge will be to source detailed information that will allow you to propose specific improvements to the supply chain design. Details will be posted on Bb and discussed in class. Your in-class presentation on **April 26, 2018** will count for 20 points. The paper will be due by 11:59pm on **Monday April 30, 2018** and will count for 100 points.

4.9 Final Exam (100 points at stake)

The final is a comprehensive 2-hour exam covering work done over the entire semester. You will be required to think like a manager in solving the problems presented. The exam is scheduled for **Friday May 4, 2018** from **8:00-10:00am**

INSERTION FOR PURPOSES OF THIS PAPER:

The five cases assigned for this course were: Seven-Eleven Japan Co. (Kellog 5-403-757), CRU Computer Rentals (KEL 017), Sport Obermeyer, Ltd. (HBS 9-695-022), Laura Ashley and Federal Express Strategic Alliance (HBS 9-693-050), and Brazos Valley Food Bank: Fostering Partnerships, Feeding Hope (IVEY W14787). These are all listed appropriately in the reference section.

The five articles assigned to reinforce the theoretical frameworks were: 1. “What is the right supply chain for your product?” (Fisher, 1997); 2. “Outcome-driven supply chains” (Melnyk, Davis, Spekman & Sandor, 2010); 3. “Collaboration: the key to value creation in supply chain management” (Horvath, 2001); 4. “Aligning Incentives in Supply Chains” (Narayanan & Raman, 2004); and 5. “Design for Supply Chain: Spreading the Word Across HP” (Cargille & Fry, 2006). Additional reading was encouraged, but not required, including: “The challenge of internal misalignment” (Van Hoek & Mitchell, 2006); “The use and abuse of power in supply chains” (Munson, Rosenblatt & Rosenblatt, 1999); and “SMB? You can transform your supply chain too” (Norek, Gass & Jorgenson, 2007).

5. Schedule for Spring 2018

The course schedule is tentative, and subject to reasonable changes based on the instructor's continuous evaluation of the course progression. Consult Blackboard regularly for latest updates.

<i>[Course Number]: International Supply Chain Management - Spring 2018</i>				
Week	Date	Topic	Chapter	Notes
1	18-Jan	Introduction to Managing SCs	C&M-1	
2	23-Jan	SC planning - objectives, fit, framework	C&M-2,10	R1: The Right SC
	25-Jan			Simulation 1
3	30-Jan	SC Performance - drivers, metrics	C&M-3	R2: Outcome driven SC
	1-Feb			C1: 7/11 Japan
4	6-Feb	Managing Inventory - cycle stock	C&M-11	FT1 1pm Fr 02/09 Rf1 8am 02/12
	8-Feb			
5	13-Feb	Managing Inventory - product availability	C&M-12,13	
	15-Feb			C2: CRU Computer Rentals
6	20-Feb	Simulation 3 - Activity		Simulation 2
	22-Feb			
7	27-Feb	Simulation 3 - Debrief		C3: Sport Obermeyer
	1-Mar			Due Wed 3/7
8	6-Mar	Spring Break (Mar 10 - Mar 18)		Quiz 1-5 due 03/09
	8-Mar			
9	13-Mar	Book Review		
	15-Mar			BR due 3/23
10	20-Mar	Logistics and Transportation	C&M-14	R3: Collaboration PS1: Th 03/29
	22-Mar			FT2 2pm Fr 03/30 Rf2 8am 04/02
11	27-Mar	Sourcing and Supplier Relations	C&M-15	
	29-Mar			FT3 10am Fr 04/06 Rf3 8am 04/09
12	3-Apr	Leadership and Transformation in SCs	C&M-17	R4: Aligning Incentives
	5-Apr			C4: Laura Ashley PS2: Mon 04/19
13	10-Apr	Special SC Projects (team preparation)		Guest Speaker Rf4 Tu 04/17
	12-Apr			C5: Brazos Valley Food Bank
14	17-Apr	Projects Presentations		FT4 9am Fr 04/20 Rf4 8am 04/23
	19-Apr			R5 Quiz 6-8 due 04/24
15	20-Apr	Final Exam: 8:00-10:00am		Rf5: Fri 04/27
	24-Apr			PR Due: Tu 05/01
16	1-May			
17	4-May			

6. The Academic Honor Code

7. Students with disabilities

8. Title IX

9. Recording Devices

REFERENCES

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