

# Developing Reflective Practice and Trans-disciplinary Knowledge in a Cross-cultural Learning Environment Using CAPSIM

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## **Abstract**

This paper explains the use of a specific computer-based simulation program, CAPSIM, as an experiential learning model to embed the development of reflective practice and the application of trans-disciplinary knowledge to solve complex business problems. The learning environment involved teams of students from different cultural backgrounds from two

separate universities enrolled in a common management course. Findings indicate that opportunity presented by the simulated business program to reflect, assess, and arrive at decisions can challenge assumptions and beliefs about process and practice. Further, the environment stimulates motivation and results in deeper learning not only about the concepts and materials being studied but also enables individual learners to grow personally. Cultural approaches and mode of engagement are also highlighted as variables of interest.

### **Developing Reflective Practice and Trans-disciplinary Knowledge**

Experiential learning is the process of learning through experience and is more specifically defined as “learning through reflection on doing.” It is distinct from rote or didactic learning or push learning in which the learner plays a comparatively passive role. It aligns with the principles of learning analytics that allow the measurement, collection, analysis, and reporting of data about learners and their contexts for purposes of understanding and optimizing learning and the environments in which it occurs (Chatti et al., 2014).

Learning that is considered “experiential” contains the following elements: reflection, critical analysis, and synthesis; opportunities for students to take initiative, make decisions, and be accountable for the results; opportunities for students to engage intellectually, creatively, emotionally, socially, physically, and, more importantly, culturally; and a designed learning experience that includes the possibility to learn from natural consequences, mistakes, and successes.

To best prepare students for a complex and rapidly changing professional environment, the exemplar described in this paper provided teams of students from two separate universities in the United States and Australia with an opportunity to engage in a capstone management course that incorporated a business simulation assessment using CAPSIM. CAPSIM is an interactive online program that affords students the chance to apply what they’ve learned across all disciplines of business by running a company of their own for five years (five competition rounds). The student management teams are the decision makers who must balance competing needs and demands and understand how the individual parts of

the business impact the entire organization in a competitive marketplace. Each student management team is assigned \$40M to run its own company. Students work in teams of up to five to decide how they will assign roles, develop assumptions, and implement business decisions involving product portfolio, pricing and cost management, sales mix and marketing, financing, risk management, and ethical practice—all underpinned by the desire to be profitable and manage cash flows.

The simulation is run as a competition with teams able to view the results of others including computer teams provided by CAPSIM for benchmarking purposes. Students reflect on their actions, learn from mistakes, and take appropriate action to improve the outcome for their company in each round. Students get the “experience without the real-world risk” (CAPSIM, n.d.). This allows them to develop a trans-disciplinary contextual appreciation of business beyond their immediate academic environment, reflect by doing, and learn from mistakes to build confidence so they are better prepared to step into a business career.

This paper proceeds to explain how the initiative in this course (a) contributes to research in the area of experiential learning; (b) provides a strategic, competitive, engaging learning experience for students; and (c) encourages the development of reflective practice in students to link trans-disciplinary knowledge in a cross-cultural business environment.

### **Developing Essential Skills Using Business Simulations**

According to Armer (2011), “practice makes perfect,” but finding a way to allow students to attain some level of proficiency in business or management without actually being in a business is difficult. By incorporating the CAPSIM simulation into the course, students work in teams and are challenged to apply their business skills and knowledge and to see firsthand the cross-functional impacts of their decisions in a replicated real-life business scenario. Nkhoma et al. (2014) suggested that real-time continuous feedback given during the simulation makes the learning process and engagement with the course more enjoyable. Further, it empowers students to apply a hands-on approach to make informed change by reflecting on what they did (both individually and as a team) and what happened to find better solutions to the problems being presented in the

next round. Argyris and Schon (1996) coined the term “double-loop learning” to refer to this process.

Good course design usually starts with clear high-level learning objectives (Whetton, 2007). In this course, skills in teamwork and reflective practice are key learning objectives. Ramsey (2005) linked the two skills together when discussing the narrative learning cycle. In this form of reflective practice, multiple voices share their experiences, resulting in a jointly created learning journey and leading to learning in performance. Embedding the CAPSIM business simulation activity into the course ensures the development of both teamwork and reflective practice skills in a cross-functional business arena.

Hedberg (2009) suggested that when reflective inquiry is to drive learning, the reflective learning objective or focus must be defined upfront and offered three choices: subject, personal, and critical. Reflection that results in subject learning gives students insights into the subject matter concepts, theories, or frameworks and answers the question, “What am I learning about the subject being studied?” Personal reflective learning builds on the importance of self-understanding and self-awareness to provide insight about how individual beliefs and assumptions influence approach to the subject and affect behaviors. It answers the question, “What am I learning about myself as I learn about the subject?” Critical reflection encourages students to actively participate in what they learn, grappling with questions of meaning and power (Freire, 1985) and questioning assumptions, beliefs, and critically accepted wisdom.

In the management learning space Morgan (2009) agreed that the benefits of reflective practice are threefold: The first is to re-define the understanding of professional knowledge; the second to develop personal self-awareness; and the third is to evaluate the appropriateness of actions. Understanding how to engage in reflective practice requires rigorous and active thought and training so that reflection can add to management learning (Mintzberg, 2004). Developing a reflective capacity amongst learners through a carefully chosen and designed reflective learning application is key within the capstone unit.

Students are encouraged to adopt a holistic cross-disciplinary perspective to their learning to develop subject and professional knowledge, personal self-awareness, and social awareness of the implications of their decisions and actions. The simulation exercise removes students from their norm—provoking them, inducing them to employ many aspects of

their business knowledge to make decisions that will ensure profitable outcomes for their company. They take risks and make mistakes, all with “real” consequences. In doing so, students have an opportunity to visualize business in different ways and facilitate the integration of their learning across disciplines in their degree program.

Anderson (2005) suggested that in many business courses computer-based simulations are becoming a popular pedagogical technique but there has not been a great deal of research about how these simulation games impact student outcomes. The exemplar developed in this course allows students to build individual skills in reflective practice and cultural diversity as they examine team dynamics and simulation performance as part of their learning journey. Results showed that the outcome of the simulation game was influenced by team cohesion, which was affected by mode of operation, differing perceptions due to cultural background and extent of experience in business, and level of emotional intelligence.

### **Embedding Simulations into a Course**

Anderson (2005) suggested that instructors should thoughtfully consider the learning objectives and outcomes they want students to experience when structuring student teams to participate in simulated learning using technology such as CAPSIM. Pavlovich, Collins, and Jones (2009) emphasized that developing reflective practice in students is about course design and assessment. Teamwork, especially cross-disciplinary learning, is the key to the simulation experience as these skills evolve over the life of the case study. Students are expected to engage and reflect with other team members in a cross-disciplinary case study environment and are assessed on their results. For that reason, embedding simulation activities and assessments such as CAPSIM into a capstone course is appropriate as students are able to apply knowledge and skills learned throughout their degree program as they engage. In addition, the team interaction involved in this project-based learning experience prepares students for the real-world dynamics of the workplace and, in this instance, the global workplace.

The online nature of the activity allows teams to choose how they engage and collaborate. What influenced the outcome was the composition of the team in terms of cultural backgrounds because of differing

cultural perceptions. This would seem to support the finding by Khalsa (2010) who suggested that online learning teams have generated attention to the social and cultural characteristics that influence global interactions.

### Tips for Success

Doyle and Brown (2000) documented the benefits and challenges of using a business simulation to teach applied skills involving student teams from multiple countries in different locations. Even without the complication of teams from different countries there are several important factors to be considered when embedding online simulations into courses.

- Identify learning goals upfront and ensure that the key skills to be developed are embedded in activities and able to be showcased through assessment.
- Compare and contrast the teaching materials currently available to assist in project-based learning activity and realign materials where necessary.
- Effectively identify and train faculty and staff on the fundamental steps necessary to launch and execute project-based learning, especially business simulated project-based learning.
- Garner sufficient technical and IT support at each site. A key focus is the effective use of IT resources to support instruction and learning outcomes.
- Give consideration to how teams are formed bearing in mind location, team collaboration, and cultural differences and backgrounds.
- Ensure an engaged game administrator is available to compile decisions and disseminate results to participants. Understand how to guide students through cultural, strategic, and organizational issues.
- Provide teaching and training to allow students to understand the value of reflection and reflective practice to move to a deeper level of understanding.

### Conclusion

Similar to Doyle and Brown (2000), this experiment found strong support for experiential learning/teaching strategies that actively involve students in the process especially when those strategies accurately simulate the skills to be learned. A student commented, "Learning that inclusiveness and building of ideas and actions in steps, not jumping to solutions, was the most valuable aspect." Further, the diversity created by using teams from different cultures allowed each to see differing motivations and approaches, broadening the learning experience.

Lang and McNaught (2013) reiterated that capstone subjects that link students approaching graduation with significant experiential learning and relevant industry placements have the potential to be very valuable to students. This is particularly evident if they are able to critically reflect on the experience. The comments of one student seemed to sum up the outcome: "normally team projects are a real chore to complete, but the CAPSIM simulation was very interesting and rewarding both personally and for the team...seeing Digby (their company) really take off made us feel accomplished with our effort."

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