# Applying Complexity Theory to International Business Education Facilitated by Intercultural Virtual Exchange

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The collaboration of a Latin American university with a US university suggests a useful framework for developing team-based intercultural virtual exchange projects for teaching international business empirically. This study focuses on teamwork deliverables that imitate the international business environment and challenges that global businesspeople face, while connecting the framework of Complexity Theory and the importance of a holistic approach to international business education. These virtual projects proved to be valuable learning experiences for students and faculty, as well as an accelerated approach to the teaching of international and cultural competencies, highlighting the value and support to academia, organizations, and corporations in the era of complexity.

Keywords: experiential learning, international experiences as part of International business education, international business teaching tools, international virtual exchange, virtual cross-cultural team collaboration, Complexity Theory

#### **INTRODUCTION**

There is a considerable increase in interest and research linking Complexity Theory to business management. Among various sources for this complexity as it may relate to the business environment it is conceivable to attribute it to the enhanced competition, the incredible pace of technological innovations and the internationalization of firms (Vasconcelos & Ramirez, 2011). One of the most significant characteristics of Complexity Theory is the relationship among its elements, which results in unpredictable responses, and at the same time, in a self-organized system. This typical behavior of a Complex Adaptive System (CAS) leads some researchers to suggest a network-centric complex-system to explain, for example, the internationalization process of the firm (Chandra & Wilkinson, 2017). Based on this setting, it is crucial to think about the new role of higher education, and especially business schools in a complex environment, in order to not only educate, prepare and supply capable workforce, but mainly continue to observe, learn and understand the global business arena in order to support companies in their development and growth efforts.

Complexity can be defined as the degree of diversity in an environment, with elements, or agents, such as customers, suppliers, governments, regulatory agencies, employees and technology (Mason, 2007) interacting with one another, resulting in unpredictable actions and reactions and constantly

steering the system to the next level, and creating a new status. As a consequence of these interactions, the system evolves spontaneously into a self-organized structure, resulting in another important characteristic of a Complex Adaptive System, the emergence, which happens at the edge-of-chaos where it is still possible to find conditions to maintain the current status quo and find another ones capable to lead the system to creation and innovation, generating a new status quo (Manson, 2001).

Transporting these concepts to the international business educational environment, some researchers suggest that a school performs as a CAS, once it is a social system influenced by many external and internal factors which, in turn, generate unpredictable actions and reactions, as well as, stimulate the emergence of new status of the system, or better, of the educational institution. For these researchers, if there is an understanding of schools as social complex adaptive systems, it is easier for an educational organization to identify some of the challenges of starting and sustaining transformations in schools (Fidan & Balcı, 2017; Keshavarz, Nutbeam, Rowling and Khavarpour, 2010) and then, continue supporting industries to develop and expand their businesses.

In this context, the international virtual collaboration among academic institutions, and in this case busines schools, appears as the faster, cheaper and more inclusive and efficient platform to accelerate the adaptation of this kind of organization in an interculturally complex environment. It is possible to observe through virtual collaboration the main aspects of a Complex Adaptive System, such as the spontaneous responses among the participants, either students or professors, collaborating, solving problems, while embodying the unpredictable actions and reactions towards a self-organized structure and then, creating a new status quo of the organization. This translates in our experiment to the new state of the class and the working teams, representing the emergence of new conditions and the transformation to a new CAS. Based on this, there is an expectation that this platform may accelerate the transmission and acquisition of practical knowledge to the students, preparing them for the complex new global business environment.

#### **Complexity Theory: Application to International Business Education**

The business environment is facing one of the most rigorous and high-paced century in terms of changes, bringing higher levels of uncertainty, ambiguity and unpredictability. These settings are reinforced by the emergence of the industry 4.0 which "generated a context that required the management of complex adaptive systems and expanded, in the field of superior education, the need of reflection driven learning to deal with adaptiveness" (Belohlavek, 2018). Some researchers suggest that organizations must deal with higher levels of complex environments complying with some principles, which one of them is the interaction among its several agents, with continuous interpretation of the environment and simulating possible settings (Vasconcelos & Ramirez, 2011). For a business school, this principle is very important and is the core of successful cross-border interactions and projects. This can be considered the root for developing an understanding about the behaviors involved the processes of simulating global business processes and interactions. In order for business schools to remain relevant, prepare the talent cadre and help companies in their global explorations, business schools need to understand the strategic goals, potential outcomes as a result of the interactions such as financial, technological, economic, socio-demographics, and others. Since another layer of cross-cultural interactions is added to the international Business discipline, the mastery of the cultural competency and behavioral outcomes can be crucial to the process of simulating and interpretation.

This understanding would be very helpful, and could be one of the first ways, for educational organizations to develop the right talent and help prepare students to work for companies operating in a complex global system.

Based on the principle of interaction, it is possible to envision the need for developing networking competencies. Competencies associated and linked to the need to build systems that create value, through collaborative arrangements between its agents (Vasconcelos & Ramirez, 2011; Chandra & Wilkinson, 2017). This competence must include the "ability of dealing with the constant new elements to take part of the system, the capacity of keeping multidimensional relations and the capacity of renewing those relations through innovation" (Vasconcelos & Ramirez, 2011). Based on this need, intercultural virtual collaborations have the potential to be a source of teaching and learning, keeping and strengthening the

role of business schools as an important support for corporations in a complex fast changing global environment. The potential is derived from the intercultural virtual collaboration networks where diverse people from different backgrounds and cultures, collaborating across disciplines, organizations, and schools, with different realities, across time-zones, borders and language barriers, requiring the acquisition and development of the abilities for successful outcomes.

# FIGURE 1 COMPLEX ADAPTIVE SYSTEM MODEL (CAS)



Source: McElroy, 2000

Figure 1 shows a generic scheme that represents any Complex Adaptive Systems from a beehive up to a business school. Translating all the elements in Figure 1 into the educational environment, it is possible to observe how complex is the operation of any school, according to Table 1.

TABLE 1ELEMENTS OF AN EDUCATIONAL CAS

Internal agents	Professors, students, visitors, administrative workers, support services				
Rules system	The rules for internal agents				
External agents	Families of students and professors, support services, regulatory agencies, governments				
Effectors	Transport, communication modes and platforms, manipulation, culture, understandings				
Detectors	Attention, filtering, identification, observation, understandings				
Energy	Economic environment, pressure for growing, competitiveness, pressure for selling or buying, policies for inclusion, deadlines				
Information	Database, learning, cultural understandings				
Matter	Technology, financial resources, physical structure				

Source: Authors

The interaction of all of these elements results in outcomes that ricochet as feedback to the system leading into new behaviors, interactions, processes that are possible to control to some extent. Beyond these extents, the system runs by itself, in a self-organized structure, resulting in new outcomes which continuously reverberates the system. The interaction inside the system also accounts for the emergence of trends which, in turn, result in accelerating knowledge acquisition (Amagoh, 2008; Mason, 2007; McElroy, 2000).

Considering a program of international virtual collaboration among two or more business schools, there is a considerable increase in the complexity factors and levels, since each school represents a specific CAS, according to Figure 2. Also, considering that each CAS does not have a linear and predictable behavior or responses, it is possible to presume that the theoretical sum of the characteristics of each CAS is not linear and has a vast potential to amplify, in a considerable dimension, the unpredictability of the third new CAS. Therefore, this new unpredictability accounts for knowledge acquisition and learning which, in turn, stimulates the acceleration or improvement of the capacity to operate at the edge-of-chaos. Achieving this condition, an educational institution can recaptures and sustain its competitiveness in order to continue supporting companies in its complex system. In other words, the condition of operating at the edge-of-chaos strengthens the internationalization of teaching and learning, including the active knowledge of cross-cultural differences, which becomes actionable, visible and observable in virtual collaboration programs.

FIGURE 2 INTERCULTURAL VIRTUAL EXCHANGE COLLABORATION CAS



Brains, bacteria, immune systems, the Internet, countries, cultures, cities, beehives are all complex adaptive systems. A team is a complex adaptive system (CAS) since it consists of parts (people) that form a system (team), and the system shows complex behavior while it keeps adapting to a changing environment. Basically, intercultural virtual collaboration is constituted of students from two or more universities and countries that receive assignments from their respective professors in their respective educational institutions and countries. The explicit objective of this kind of collaboration is for the mixed teams to develop and work on their projects and deliverables, but the implicit, and perhaps the main objective, is to develop intercultural skills and acquire discipline knowledge through the assignments and

mainly through the unpredictable situations and behaviors motivated by cultural differences in, for example, using different technologies to develop the assignments and their interactions. We designed the assignments to combine different courses, all focused on international business, and with a multidisciplinary approach. The initial results point to the potential for developing competences regarding solving problems, and understanding as well as applying cultural differences by the students, which are the global skills acquisition.

#### The Need for Global Competence

The Asia society states that global competence refers to the knowledge and skills that students need in order to be successful and competitive in the 21st century ("What is Global Competence?", 2019). Globally competent students possess the knowledge and skills to undertake the following:

- Investigate the world. Globally competent students are aware, curious, and interested in learning about the world and how it works.
- Recognize perspectives. Globally competent students recognize that they have a particular perspective and that others may or may not share it.
- Communicate ideas. Globally competent students can effectively communicate, verbally and non-verbally, with diverse audiences.
- Take action. They possess the skills and knowledge to not just learn about the world but also to make a difference in the world.

The increasing degree of internationalization in many organizations across the world has necessitated developing new competencies for professionals entering the international arena, and specifically for this experiment, the business world. Global businesses constantly rely on cross-border collaboration through virtual teams to achieve a common goal (Pearlson & Saunders, 2006). This prominent characteristic of the contemporary corporate world requires the ability to operate in virtual environments with people from various cultural backgrounds to implement and deliver products and services across borders. Therefore, the need to develop these skills in the higher education field emerges from offering students a more practical and holistic perspective on new sociocultural and technological requirements (Rutkowski, Vogel, van Genuchten, & Saunders, 2008).

One way of addressing these needs while promoting active learning is through international collaboration via virtual classrooms, which have already been in place since the popularization of the internet (Harasim, Hiltz, Teles, & Turoff, 1995; Hiltz, 1994). In the traditional manner, students can learn theories, concepts, and constructs that are at the core of any academic discipline simply by referring to the required books and articles, watching lectures, and through memorization and exercises. However, a deeper understanding only emerges when such theoretical knowledge is confronted with a more tangible approach utilizing practical experiences and problem-solving; for example, the development of activities in teams. Thus, the constraints of the classical approach to education (lectures—exercise—examination) become evident—it oversimplifies learning experiences and does not promote a thorough comprehension (Pearlson & Saunders, 2006).

Universities offer courses in international business and similar curricula to prepare students for the globalizing world. Increasingly, international competence is considered an important skill to be acquired from undergraduate education. Since international exchange presents a challenge to many students, there is a need to develop and implement alternative means for incorporating international and cross-cultural experiences in the undergraduate classroom. There is a need worldwide need for culturally competent talent that can successfully function in a dynamic and multicultural global marketplace while possessing the understanding, skills, and experience that cannot be gained in a traditional classroom setting (Abrahamse et al., 2014).

Experiential learning is an important component of effective international business teaching, particularly when it offers students the opportunity to consider a highly contextual situation to which they are not normally exposed. Ramburuth and Daniel (2011) focused on case study teaching, while our project provides students with a full-fledged, multi-phase internationalization project collaboration across

two universities, that incorporates the efforts of an existing company to expand globally through the research phase, application and problem-solving.

International virtual teamwork exchange provides students a concrete experience that requires openmindedness and adaptability, reflective observation, abstract conceptualization, and active experimentation. Students had to reflect on and critically examine their experiences from multiple perspectives, use logic and reasoning to understand situations, form abstract concepts to be tested, and apply the knowledge gained to make and test predictions in new situations (Ramburuth & Daniel, 2011).

For companies to flourish, their perspectives should be globally oriented with the intent to cater to a global audience—not only in driving toward higher profits but in their operating principles. The success of tomorrow's economies depends on the development of a global mindset and strategies to bridge the widening gap between domestic and international opportunities. This need for a global mindset is reflected in the increased need to work in virtual multicultural teams across borders, time zones, and cultures (Pearl, 2013).

In response to the increasing demands of employers for globally-prepared graduates, several institutions of higher education have set strategic goals aimed at enhancing internationalization. Both employers and educators promote the importance of global and intercultural competence in ensuring success in the modern-day workforce (Gatlin-Watts, Carson, Horton, Maxwell & Maltby, 2007).

#### The Importance of Graduating Globally Competent Human Capital

It is paradoxical how certain higher education institutions offer courses in international business or management in their curriculum without emphasizing the skills of cultural competence, global teamwork, and international project management neglecting the hands-on experiences. Students enter the workplace without practical skills, thereby making the path to an international career much longer. In an internationalization course, it is integral that students gather first-hand experience in cross-cultural communication and problem-solving challenges that managers and leaders confront on a regular basis when venturing across borders.

A global economy requires leaders who possess cross-cultural knowledge gained through hands-on experience. Not only are these individuals better team players, but they also find it easier to embrace change and effortlessly transfer both ideas and business processes from one culture to another. These attributes lead to greater innovation and competitiveness. Since a country's language expresses and represents its culture, being well-versed in several languages gives a person insight into a country's values and thus into its business practices. Cultural fluency is thus one of the most valuable skills and in most cases, its benefits surpass those of language fluency (Pearl, 2013).

As an approach aimed at the internationalization of higher education, internationalization at home (IaH) extends beyond the mobility of a minority of students and focuses on the delivery of an internationally-focused curriculum that encourages intercultural communication among all students. The post-graduate degree in international development offered at Nottingham Trent University, the United Kingdom has implemented this approach and looks beyond both mobility and curriculum to apply IaH directly to student employability and embracing intercultural competence as a key professional skill (Watkins & Smith, 2018).

#### METHODOLOGY

The planning process took three months and involved several virtual meetings between both professors from the Latin American and USA universities. The first challenge was to agree on the theme for the joint project. After reaching a consensus, the remaining details related to scope, deliverables, schedule synchronization, and a joint grading rubric system were thoroughly discussed, developed and agreed on. Students from both countries were separated into teams. Each team was composed of students from the Latin American university, as well as North American University students, some of which were foreign students at the university and others, from different ethnic and cultural backgrounds themselves, although from North America.

They had to introduce themselves to their teams by video, explore and agree on the best method of contact with each other as a team, and choose a company for which they would be planning an international expansion. The next step was to agree on two countries for which the international expansion of the chosen company seemed feasible and justify their choices. Based on this framework, students had to perform an analysis of the macro and microenvironment, in order to identify the constraints for their internationalization strategy in each one of those markets, as well as compare and contrast. Each step was documented and served as building blocks to compose the final paper, delivered as a partial but major requisite to pass the course. Additionally, they had to record a PowerPoint presentation summarizing their final project proposal.

# TABLE 2

# MEASURES OF STUDENTS' DEVELOPMENT PRE- AND POST VIRTUAL EXCHANGE

Question	Mean before	Mean after	P- value
(Q1) If I see someone I know, I usually stop and talk to them	4.67	5.02	0.019
(Q2) I enjoy presenting to a group of friends	4.13	4.83	0.000
(Q3) I tend to start conversations with strangers such as people in the checkout line at the store or beside me on an airplane	3.14	3.65	0.013
(Q4) I know how to gain insight from another person to get a job done	4.61	5.02	0.005
(Q5) When trying to solve a problem, I can often foresee several long-term consequences of my actions	4.50	4.78	0.041
(Q6) I always see many possible solutions to the problems I face	4.51	4.74	0.071
(Q7) I am confident that I can get used to the unusual conditions of living in another culture	4.49	4.75	0.074
(Q8) I am sure I would be able to handle all of the stresses of adjusting to a culture that is new to me	4.44	4.74	0.049
(Q9) I feel irritated when people of different ethnic or cultural backgrounds speak their native language around me	1.73	2.05	0.062
(Q10) It is easy for me to understand what it would feel like to be a person from a different culture	4.08	4.38	0.075
(Q11) I feel impatient when communicating with people of different ethnicities or cultures, regardless of how well they can communicate	2.18	2.71	0.005

Source: Research data

All in all, it is interesting to note that some of the competencies discussed in the literature are actually developed in students who go through virtual exchange activities in the same way as a regular exchange (Jarvenpaa, 1999 ; Maznevski & Chudoba 2000). This provides quantitative evidence to support the

linking that virtual exchange can, in many ways, develop cultural competence in a manner similar to a regular exchange. Further research is required to locate and define other aspects of cultural competence that can be improved with virtual exchange, as well as to identify other aspects of learnership that can be enhanced with such an experience.

Innovative, action-oriented, and informative pedagogy is required to enhance the development of cultural competencies among higher education students using new strategies, tactics, and communication technologies. Our research methodology combines tools of both quantitative and qualitative analyses, and the results demonstrate the need for an international virtual learning exchange as a driver for the development of intercultural learning activities that provide students an opportunity to successfully and productively interact and engage with peers in other countries. However, it is necessary to bear in mind the strengths and weaknesses of such an exchange to take into account the cultural perspectives and constraints of participating across borders, as well as the available learning environments and the ways in which learning process design and organization can vary depending on the conceptual, procedural, and learning objectives required by an educational model based on competencies.

A well-designed process that considers potential challenges such as initial connection and engagement on the part of the students may require culturally competent instructors who are well-experienced and well-versed in overseeing, mentoring, and anticipating potential breakdowns in communication and are able to help students get back on track. Moreover, several individual traits can help certain students engage more; these include skills such as language fluency and cultural openness and being fast adaptors in general.

Since the effects of intercultural virtual exchange and the international business teaching experiences are only beginning to be understood, academic research is necessary to better comprehend the impacts of such activities on students' skills and competences, as well as to help develop proper teaching practices that optimize the process, results, and the effort demands and requirements. The professors developed joint grading and rubrics while projecting the same message, standards, and teaching pedagogy in both universities and classrooms.

We designed an intercultural virtual collaboration exchange with the following course learning objectives that were achieved using the intercultural virtual exchange experience:

- Distinguish between the cultural, political, economic, and environmental complexities of management in multinational environments;
- Examine management issues and conflicts experienced by global enterprises from a business and cultural perspective;
- Analyze and conduct a country-level analysis of global corporate management components and issues;
- Describe the knowledge, skills, and abilities (KSAs) of a globally competent manager-leader;
- Evaluate the impact of economic, political, legal, and technological forces on international management, including the implications of current world developments and events;
- Critically examine the ethical considerations and pressures that global companies confront;
- Evaluate the influence of national culture and organizational culture on international management;
- Evaluate the international expansion plans and assess their potential for success;
- Apply theories of culture and management to address the challenges to managing individuals, groups, and organizations in an increasingly diverse global context;
- Integrate and apply the fundamental elements of international strategic management, including the pressures and cost/benefits of strategies that emphasize global integration versus local adaptation;
- Understand the different challenges that businesses face when operating in an international environment;
- Compare different theoretical approaches to the concept of culture and the implications of these differences for international and cross-cultural managers;

- Apply theories of culture and management to address the challenges in managing individuals, groups, and organizations in an increasingly diverse global context;
- Gain first-hand experience working in a global virtual team and regarding addressing and overcoming cross-cultural differences.

In addition to the intercultural virtual exchange experience, the courses delivered the desired learning outcomes and with the exchange, the experience for the students was elevated to an interactive, practical, and interculturally educational experience.

# RESULTS

In order to analyze the mean differences between both groups, a paired t-test analysis was conducted. The results are summarized in Table 3.

A significant improvement was observed in the test groups in the overall average, willingness to engage, and cognitive flexibility; a marginally significant improvement was observed in the same cohort for ethnocultural empathy. There were significant improvements in the control group's willingness to engage and ethnocultural empathy, while a significant decrease in cognitive flexibility and openness were also noted. In addition to the intercultural virtual exchange experience, the courses delivered the desired learning outcomes and with the exchange, the experience for the students was elevated to an interactive, practical, and intercultural practice. Since the effects of global exchange experiences are only beginning to be understood, academic research is necessary to better comprehend the impacts of such activities on students' skills and competences, as well as to help develop proper teaching practices that optimize the process, results, and the effort demands and requirements.

Dimension	Mean	TEST GROUP				CONTROL GROUP					
		Mean	Ν	t	df	Sig.	Mean	Ν	t	df	Sig.
Willingness to	PRE GLE	4.5	32	-2.388	31	0.023	4.4	24	-2.863	23	0.009
engage	POST										
	GLE	4.9					4.9				
Cognitive	PRE GLE	4.6	32	-2.861	31	0.007	4.5	24	9.386	23	0.000
flexibility and	POST										
openness	GLE	5.0					2.7				
Emotional	PRE GLE	4.4	32	-0.586	31	0.562	4.8	24	1.229	23	0.232
regulation	POST										
	GLE	4.5					4.6				
Tolerance of	PRE GLE	4.5	32	-0.809	31	0.425	4.4	24	-0.354	23	0.727
uncertainty	POST										
	GLE	4.6					4.5				
Self-efficacy	PRE GLE	4.7	32	-1.158	31	0.256	4.8	24	0.917	23	0.369
	POST										
	GLE	4.9					4.7				
Ethnocultural	PRE GLE	3.3	32	-2.016	31	0.053	2.6	24	<b>-</b> 6.681	23	0.000
empathy	POST										
	GLE	3.6					4.7				
Overall average	PRE GLE	4.3	32	-2.266	31	0.031	4.1	24	-1.039	23	0.310
	POST										
	GLE	4.6					4.3				

# TABLE 3PAIRED T TEST RESULTS

Source: Research data

A significant improvement was observed in the test groups in the overall average, willingness to engage, and cognitive flexibility; a marginally significant improvement was observed in the same cohort for ethnocultural empathy. There were significant improvements in the control group's willingness to engage and ethnocultural empathy, while a significant decrease in cognitive flexibility and openness were also noted. Keeping this in mind, the project was structured as an experiment using students who participated in the global learning experience project as the test group and another group, consisting of students not included in the virtual exchange experience, as the control group. We used quantitative and qualitative research methods that included a cultural questionnaire, pre- and post- administrations of the Intercultural Development Inventory (IDI), and journaling to learn about the students' experience, progress, and perception of their own cross-cultural competence development.

#### **Reflection Component**

Two journal assignments that serve as qualitative research for this ongoing experiment were incorporated; the first one was a mid-term submission in which the students reflected on their experience and interactions; the second one was an end of the term submission, after all the project work was completed, which reflected the knowledge acquired and described their experiences as they advanced through the course and worked on major projects.

As their first task, they had to select a company for which they would plan the international expansion strategy. The next step was to agree on two countries for which the international expansion of the chosen company seemed feasible and justify their choices. Based on this framework, students had to perform an analysis of the culture as well as the macro and microenvironments, identify the constraints of their internationalization strategy in each of those markets, and compare and contrast the two markets. Each step was documented and served as a building block for composing the final paper, a partial but major requisite to pass the course. Additionally, they had to create a PowerPoint presentation summarizing their final project proposal.

The reflections show a considerable skills acquisition and improvement and cultural awareness as a result of the virtual exchange, as demonstrated next. These reflections are quoted from students on the same teams, and from different countries:

"The fact that we didn't finish the paper early like we were hoping to was probably the most frustrating aspect of the experience for me. We all had the expectation that we would finish our parts of the paper by Friday, and then revise and turn in by Sunday. While I had finished and formatted my paper with references as such, we still had members that hadn't started their parts of the paper. Since this happened, we made it clear to the group that the paper should be completed by the deadline that is expected, and that if any trouble arises, it should be communicated to the group. (A.K. GLE group #11)."

"I've learned so far how to communicate in order to work with graduation students from another country and culture, since their system of dealing with deadlines is a little bit different from ours. In the case of communicating in a virtual team, I believe it's always a challenge, because the whole group has to be organized and efficient for the project to succeed, so everyone has to do their part along with the other members. One challenge during Paper #1 was to coordinate everyone's assignments. I asked the project leader to give us assignments in order to organize which part each of us should do. Despite that, it was still hard to get everybody to execute their parts. We've had one group member that did not collaborate with any, so I set out to do his part myself, otherwise we would send the paper incomplete. (L.C. GLE group #11)."

"Communication across cultures taught me to be more conscious with North American slang and abbreviations. I avoided using any slang and abbreviations going forward with

my team in order to evade any confusion or miscommunication. In a virtual team, I learned to better accommodate time differences between North America and Latin America. This forced me to plan ahead on assignments, and to maintain fluid communication with all my team members in order to keep my team on track with assignments. Some challenges our team faced was lack of communication from some team members and procrastination. (G.L. GLE group #9)."

"Overall, it was great to pass through this experience, which was very different from our usual routine of studies. I believe the lessons learned will contribute to the development of our competencies and increase our employability in the future. I thank to all the professors involved in this project (J. M. GLE group #9)."

# IN CONCLUSION AND FUTURE RESEARCH

Some basic aspects of the participating students' intercultural competence development were measured for identifying how the experience improved their ability to work in a complex intercultural environment. This was undertaken through a cross-cultural competence inventory and students' overall cultural competence was observed to improve. Based on participants' experiences in these virtual teaming projects, our recommendations include the emphasis on relationship building, the importance of cultural competence, the need to create an inclusive teamwork process for planning, problem-solving and task accomplishment, while balancing balance individual control with shared objectives.

We believe that the link between business, future trends, curricula and constant adaption in higher education can be accomplished by a software-oriented methodology, and how the methodology can support skill and competency acquisition when operating in a global environment. Since our worldview is determined by our cultural lens through which we think we understand the world, with the emergence of AI, would we become more cultural inclusive, or less? Are we going to 'program' tomorrow's bots using our personal biases, vulnerabilities and cultural divide to build an injustice and unequal global approach? Or, can we take advantage of such intercultural virtual exchange experiments and learn how to craft a more impartial and deep understanding of intercultural exchanges? Considering the relationship between cross-cultural issues observed and measured in this virtual exchange, and understanding the environment of international business, it is possible to say that there are many common behaviors that may suggest that educational organizations develop an agent-based model.

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