

## **Chapter 7 Necessary pedagogical innovations: university internationalization initiatives and virtual environments in front of COVID-19**

### **Capítulo 7 Innovaciones pedagógicas necesarias: iniciativas de internacionalización universitaria y entornos virtuales ante COVID-19**

JUÁREZ-SALOMO, Norma Angélica†\*, SILVEYRA-ROSALES, Mariana Teresa, AGUILAR-ROCHA, Irving Samadhi and CUEVAS-OLASCOAGA, Miguel Ángel

*Universidad Autónoma del Estado de Morelos, Mexico.*

ID 1<sup>st</sup> Author: *Norma Angélica, Juárez-Salomo* / **ORC ID:** 0000-0002-9685-1998, **CVU CONACYT ID:** 669011

ID 1<sup>st</sup> Co-author: *Mariana Teresa, Silveyra-Rosales* / **ORC ID:** 0000-0003-0883-6809, **CVU CONACYT ID:** 552716

ID 2<sup>nd</sup> Co-author: *Irving Samadhi, Aguilar-Roche* / **ORC ID:** 0000-0002-0755-8010, **CVU CONACYT ID:** 550977

ID 3<sup>rd</sup> Co-author: *Miguel Ángel, Cuevas-Olascoaga* / **ORC ID:** 0000-0002-6427-7370, **CVU CONACYT ID:** 242182

**DOI:** 10.35429/H.2021.10.82.96

N. Juárez, M. Silveyra, I. Aguilar and M. Cuevas

\* salomo@uaem.mx

A. Marroquín, J. Olivares, D. Ventura, L. Cruz. (Coord.) CIERMMI Women in Science TX Humanities and Behavioral Sciences. Handbooks-©ECORFAN-México, Querétaro, 2021.

## Abstract

The objective of this writing is to share innovative initiatives of internationalization at home (I at H) emerged at the Universidad Autónoma del Estado de Morelos, facing COVID 19, through technologies at the service of internationalization of universities "*internationatics*" (Juárez-Salomo, 2012) as the main resource of management and pedagogical strengthening of multinational institutions, emphasizing the "all of us", in front of a common cause: find ways to recover from the health emergency of COVID 19.

The shared methodology includes the results of a research conducted among teachers from eight Latin American countries; some pedagogical strategies considering cognitive, behavioral, and emotional components; and provide examples of initiatives carried out, including the results of international collaborations achieved.

Conceiving the internationalization not only as an indicator of quality of higher education institutions, but also as a strategy to provide academic alternatives aimed at addressing planetary challenges, it seeks to contribute punctually to the development of virtual environments for the training of professionals committed to the planet, aware of the diversity of thoughts, creative and flexible in their actions, adopting proactive initiatives, especially in the focus of the Sustainable Development Goals (UNESCO, 2017).

## Pedagogy, Internationalization, Virtuality

### Resumen

El objetivo de este escrito es compartir las iniciativas innovadoras de internacionalización en casa (I en H) surgidas en la Universidad Autónoma del Estado de Morelos, frente al COVID 19, a través de las tecnologías al servicio de la internacionalización de las universidades "*internationatics*" (Juárez-Salomo, 2012) como principal recurso de gestión y fortalecimiento pedagógico de las instituciones multinacionales, haciendo énfasis en el "todos nosotros", frente a una causa común: encontrar formas de recuperación de la emergencia sanitaria del COVID 19.

La metodología compartida incluye los resultados de una investigación realizada entre docentes de ocho países de América Latina; algunas estrategias pedagógicas que consideran componentes cognitivos, conductuales y emocionales; y proporcionan ejemplos de iniciativas llevadas a cabo, incluyendo los resultados de las colaboraciones internacionales logradas.

Concibiendo la internacionalización no sólo como un indicador de calidad de las instituciones de educación superior, sino también como una estrategia para ofrecer alternativas académicas orientadas a abordar los desafíos planetarios, se busca contribuir puntualmente al desarrollo de entornos virtuales para la formación de profesionales comprometidos con el planeta, conscientes de la diversidad de pensamientos, creativos y flexibles en sus acciones, adoptando iniciativas proactivas, especialmente en el enfoque de los Objetivos de Desarrollo Sostenible (UNESCO, 2017).

## Pedagogía, Internacionalización, Virtualidad

### 7.1 Introduction

The internationalization of universities during the most recent two decades has been established not only as an indicator of the quality of Higher Education Institutions (HEIs), but also as a clear strategy to provide academic alternatives that, oriented towards the commitment to face planetary contingencies in the various areas of knowledge, contribute to the training of professionals devoted to the environment, aware of the diversity of thoughts, creative and flexible in their actions, making proactive decisions, fundamentally to face challenges such as the unexpected pandemic of COVID 19, which has involved more than 192 countries, causing thousands of infections and deaths (considering the June data 2021, there were more than 91,360 cases worldwide - World Health Organization, WHO, 2021). The health emergency in question, has motivated the mobilization of multiple social sectors, leading the list the doctors, pharmacists, and food service employees, forcing accelerated reinvention of academic spaces and management of educational institutions, to keep going, despite the obvious challenges.

In a timely manner, HEIs have taken on the challenge of getting ahead by fulfill their mission, providing training opportunities to all the students, especially those who were in the most vulnerable conditions and environments. According to *Francesc Pedró*, director of the UNESCO International Institute for Higher Education in Latin America and the Caribbean (IESALC, 2021) it was shown to the world that, pedagogical continuity required, more than ever, technological solutions within the reach of institutions, teachers, and students. However, it is important to act with caution and based on reality considering that, for example, technological disconnection, where only 51% of households in Latin America and the Caribbean are properly equipped to receive classes. Just as relevant is personal disconnection, in which the economic students concern tops the list of priorities to attend before their classes and, finally, the pedagogical disconnection, which occurs due to the lack of preparation to teach classes via digital, which are very different from the courses carried out in person.

Even with all the aforementioned considerations, invaluable experiences have been carried out in universities that are necessary to recover in order to learn from them and, for this reason, the objective of this paper is to share innovative proposals for internationalization at Home (IatH) emerged at the Universidad Autónoma del Estado de Morelos, in Mexico (UAEM) with international peers, first, as a way to continue collaboration and, second, as a pedagogical transformation strategy necessary to face the health emergency that, since almost two years, has involved educational communities and where technologies at the service of university internationalization, the *internationatics* (Juárez-Salomo 2012), have proven their strengths as well as their limitations for the development of pedagogical activities, management and strengthening of the communities of various countries, accentuating the cooperation in front of a shared misfortune.

This article presents research related to university teaching strategies that were developed and implemented, carried out by the Academic Cohort (CA by its acronym in Spanish) of the Faculty of Architecture (CA-UAEMOR-145: “Management of Tourist and Cultural Heritage”, 2017) research group that had developed an empirical-methodological proposal for the School of Tourism and the Department of Architecture, with very particular characteristics, considering not only their dimensions, but also for being an emergent proposal raised from multinational focus groups that, in an accelerated way, required actions in order to achieve technological empowerment of the teachers and, at the same time, consider the processes and needs of the students, that depended not only of the knowledge they had in the areas of tourism and architecture, but also on emotional attention required by the students.

In addition to the technological and pedagogical aspects, a central challenge was to consider the instructional design, to address the need to promote the development of global and intercultural competencies and encourage the participants, more than ever, to develop planetary consciousness, holding as a hypothesis that, even through virtual environments, it is possible to achieve the continuation and strengthening of international collaboration by amalgamating the strengths of each university, emphasizing the commitment to the planet, even in times when student mobility, the displacement of academics and researchers, and especially financial support and scholarships, have been practically canceled.

The CA-145 UAEMOR decision to work with focus groups was based on the need to have different points of view, rather than on statistical data, since reasoned alternatives for action were pursued. In that way, the scope of the first multinational focus groups made possible to carry out a diagnosis effected among teachers from eight Latin American countries with which the university had previous collaboration agreements, among them more than forty academics with teaching tasks participated, for the definition of specific exchanges between peers, considering cognitive, behavioral, and emotional components. From the first review, specific proposals emerged and were adopted during the first year and have served as a reference to continue with the current work and plans. After a year, a new forum was held, where more than 20 universities from 10 Latin American countries shared their experiences and concerns related to the way their institutions had reacted, some of these reflections will be shared in this writing.

In addition to the reflections and considerations of the aforementioned forums, this article includes some examples of initiatives carried out, as the result of international collaborations achieved by the Academic Cohort (AC) of the Faculty of Architecture, which have motivated the strengthening and continuation of projects with an emphasis on the areas of international education, architecture and tourism, also some concepts clarifications were made; contextual aspects were raised; Methodological details and examples of specific inter- and multinational alliances were included that, through internationalization, have strengthened teaching practice with an international focus.

Finally, considering that effective collaboration requires positive attitude and technical support to facilitate exchange, some reflections had emerged about the identification of existing resources in each university and the selection of virtual tools, platforms, social networks and applications susceptible to be used for collaboration, production and design, emphasizing the permanent and intentional use of innovative emerging pedagogies (such as collaborative online learning, mirror classes, problem learning, inquiry-focused learning, among others) were identified, in order to procure meaningful experiences for students, by getting involved, together with their tutors and group colleagues, in a logic of exchange and construction in virtual environments, strengthening learning communities and fostering a cyberculture that triggers a diaspora of information and knowledge.

## **7.2 Challenging context**

In order to measure and raise awareness of the phenomenon that is experienced in the present, and surely for several years affecting the educational systems, and therefore the history of their communities, it is necessary to review the UNICEF report called “Education one year after COVID-19”, where it is declared that progress in education worldwide has receded due to the closure of schools and 168 million children in the world who had not yet returned to the classroom after a year of pandemic, according to data February 2021 (UNICEF, 2021) raises an obviously alarming figure, especially considering the implications and resources required for its recovery in order to attend present and future students.

With this panorama, the various educational institutions are affected by the pandemic at different levels, depending on academic, financial and infrastructure resources, and have been forced to proceed to adjust their technology-based training processes, but without neglecting the idea of accompanying teachers, giving the task of seeing how to define and evaluate practical activities. Such was the case of the UAEM, whose Multimodal Training model that has been operating for more than 10 years, with a view to underpinning the activities of teaching, research and management of projects mediated by Information and Communication Technology (ICT) and multimodal alternatives. Despite having such a valuable institutional environment and experience, the sudden need to virtualize almost all university courses exceeded, at least in the first months, the existing human and technological resources, so it became necessary, for teachers and researchers, to assume a role of co-responsibility in reacting to the needs, collaborating with less experience colleagues in virtual environments, developing content and programs, while assessing the scope and recovering the results obtained, in order to propose the necessary strategies to respond proactively in present and future contingencies.

It is worth remembering that in the month of March 2020, the great part of the personnel and students at the universities, especially the Latin American ones, received the instruction to keep distance from their work areas and academic environments, without having a specific deadline to rejoin again the regular courses. More than 400 days later, there is still no clear date or feasible strategies for all universities to return to their classrooms. Depending on their location, some institutions conduct courses or attend offices in person, hybrid or virtually, often intermittently, to live somehow "the normality", without accepting that, quite possibly, new job forms will have to be adopted permanently. Alternatives such as security measures, maintaining the integrity and health of the university communities will last as a way to avoid major impacts.

In the case of this research, to define an action initiative, it has been important to learn about the experiences of related institutions through multinational focus groups, especially in Latin America, where COVID 19 cases continue to increase. The shared situations are generally very similar, it has been possible to know that various institutions have provided support to the neediest students giving them financial support, computer equipment, sharing internet services just as an example.

It has also highlighted in the information exchanges, that students and academics had report lack connectivity and access to the internet connections or unstable services, equipment is insufficient and / or outdated, inadequate work spaces, most of the students use their mobile device (cell phone) to connect to classes and do not have all the programs to carry out their activities and / or tasks, they do not always have access to all the functions that institutional platforms use, and they experience visual fatigue by spending too many hours straining their eyes to comply with the minimum required, coinciding with the slogans of the report shared by UNICEF (2021), the above without mentioning the technical and pedagogical difficulties to work in a multimodal logic, requiring intensive training processes for managing platforms, applications and digital tools.

Specifically, regarding the provision of virtual classrooms, it has been widely referred the strong impact that teachers and institutions have faced, when they were not familiar with virtual environments, being affected not only by the unexpected health situation, but also by the abrupt nature of the situation and transformation of their work environments, having to work from improvised places in their homes and with great disparity of resources and conditions, coining names such as *coronateaching*<sup>1</sup>, a term used to ironically refer to the enormous difficulties of connection, technological implements and knowledge that, to date, cause ravages of various kinds in educational institutions. In this sense, it is not enough to express an appreciation to teachers and their institutions for the progress made, as well as the guidance on necessary aspects for understanding, and why not say it, the action in the face of an obvious historical educational breakdown.

It is important to mention that, even though a no lesser number of institutions have reported having distance and / or virtual educational programs, the bulk of the universities taught classes in face-to-face programs that, emerging, had to be converted into online courses, but without having the appropriate pedagogical design, leaving aside the practices, laboratories, guided and field visits, among other aspects. It goes without saying that all these involuntary adjustments have generated a great deal of stress, uncertainty, fear, sadness, feelings of loneliness and abandonment, but it has also contributed to developing, intentionally or not, enormous capacities to react in a committed, innovative, and connective way, learning to combine collaborative and autonomous work, face-to-face and virtual work, that is to say, a resilience to solve both collective and individual problems among teachers and student, visualized in the same way mentioned.

In addition to the above, in the case of the internationalization processes of higher education institutions (HEIs) in Latin America, it is recognized that the usual practice of collaboration has focused mainly on the issue of physical mobility of students and academics, those who have valued carrying out studies and / or research in national and international institutions other than their own, avoiding financial aspects, political crises, health emergencies; aspects that over time have limited participation and made it difficult for the international experience to permeate a significant number of students per institution. In Mexico, for example, the offer of financial support for student mobility and, in a lesser number, of academics, is provided with resources from each University and / or through organizations such as ANUIES (National Association of Universities and Institutions of Higher Education), CUMEX (Consortium of Mexican Universities), ECOES (Common Space for Higher Education), SEP (Secretariat of Public Education), DGRI-SEP (General Directorate of International Relations of the SEP) or FIDERH of the Bank of Mexico, among others. However, the scope of the resources is insufficient to support a significant percentage of students, and, in the face of the pandemic, the majority have been postponed or canceled.

To contribute to the understanding of the challenge due to the lack of resources for student mobility and therefore the international opening of HEIs, according to figures from the Ministry of Public Education, (SEP / DGPPyEE, 2020, p. 36) in the 2019-2020 period in Mexico 4.6 million students enrolled in about 5,716 Superior Education Institutions (SEI). Of these, reviewing the reports in base 911, the institutions that report having had at least one student participating in a mobility program abroad during the 2019/2020 school year, is not greater than 10% of the total number of students, however the numbers vary between public and private institutions, as well as the sources of financing, which in most cases occurs with their own financial support (partial or totally).

---

<sup>1</sup> The definition comes from a conference by Luz Montero, UC Online director of the *Pontifical Catholic University of Chile*, defining the process of "transforming face-to-face classes into a virtual mode, but without changing the curriculum or the methodology" (in UNESCO-IESALC, 2020-a).

Internationalizing universities encompasses much more than academic mobility which, coinciding with Knight (2003), refers to the process of integration of dimensions, international, intercultural, and global, including aspects of university life that consider all capacities and strategies which an institution uses, either in person and / or virtually, to face the various training challenges in an increasingly interconnected world. To achieve the aforementioned dimensions, strategies related to languages, internalization of the curriculum, internationalization of research, use of communication and information platforms and technologies for international collaboration, among others, emerging indicators that are considered increasingly relevant for evaluations of educational quality (Gao, 2019) and, in the presence of face-to-face impediments such as those imposed by the COVID19 pandemic, they are for the moment the only alternative to continue with international cooperation work.

Existing for several years, but becoming fashionable since the pandemic, the strategies that became very popular during the pandemic among universities in different parts of the world were those based on the Collaborative On Line International Learning (COIL), which focuses on the exchange between academic peers and students, in order to seek the development of competencies while involving participants in “*glocal*”<sup>2</sup> dynamics (Juárez, N; Cuevas, M, and Gama , G. 2017), but they are not the only way, and it is of special interest for this writing to propose additional alternatives that, even for almost a decade, have been leading to the pedagogy that is considered necessary to face a world in constant transformations that, unfortunately, many of these are not for the better. Hence the emergence of a common agenda through the Sustainable Development Goals (ODS, 2017) that must, or should mark the universal work through its substantive functions of teaching, research, and extension.

Summarizing, reacting positively to the chiaroscuro of pandemic and crisis situations, a “chaordic space” arises (between chaos and order) that shows that the unexpected virtualization exposes stale problems, the deficiencies of administrative management and the emerging pedagogical demands, at least it has been exposed how much must be learned to act proactively to meet present needs, and also how necessary is to highlight and recognize the resilience of university communities, especially among the teachers and students, recognizing the patience, empathy, and the value of time that have resized their academic work, playing a leading role in front of the educational urgency.

### 7.3 Methodology

To develop proposals for collaboration and virtual training, not only the activities for the students should be considered, but also the accompaniment of teachers (tutors, facilitators) qualified for the design and monitoring of the activities, establishing themselves as detonating agents of interest and capacities of their students. To do this, academics must familiarize themselves with Virtual Learning Environments (VLE) taking advantage of resources. With the idea of recovering the experience, in the present study an ethnographic methodology has been used, incorporating various resources and tools to investigate the effects of the pandemic. Through interviews and focus groups, it proceeds to the planning and implementation of actions to understand and react to situation of eminent urgency. Considering that, regardless of the urgency, it was necessary to act sensibly, in the methodology that is shared below, fundamental aspects were considered to develop virtual collaboration actions:

First, it was necessary to discuss and adopt measures related to the security and connectivity possibilities of the people involved, considering not only the students and teachers, but also all the staff (including the families of the participants). On this point, alternatives were sought to establish contact with participants with connectivity problems, free access resources were defined, institutional virtual environments were shared, and, above all, the state of physical and emotional health linked to the pandemic was monitored, of the participants and their families.

Second, a very important point, was the review of the existing budgets, considering the possible contingencies related to funds, including the financing of projects, publications and / or ongoing research, looking for alternatives to meet the financial commitments. On this point, the planned academic stays and / or trips had to be canceled, fieldwork postponed, equipment or services purchased to improve connectivity, among other situations.

---

<sup>2</sup> The “glocal” adjective is a well-formed acronym from global and local, which is frequently used in the economic sphere, but also in others such as culture (FUNDEU, 2019).

Third, communication strategies had to be defined and agreed between the main collaborators to maintain clear, transparent, and timely communications, ensuring the continuity of activities. As a curious detail, in the online collaboration activities, since the participants were confined to their respective homes, communication was more focused and frequent, especially among students who socialized through platforms and social networks. Another very important aspect was to identify the resources from which the students accessed, since almost all of them used their data and mobile phones as a base.

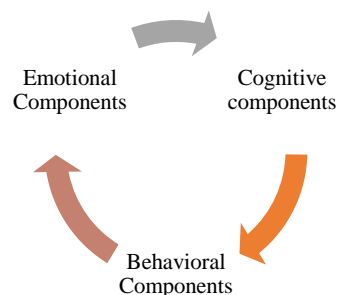
Finally, once the effects and actions of COVID-19 decreased, at least in part, the establishment of plans for the continuity of institutional activities were proceeded and are still in progress, addressing the lack of infrastructure or authorization, the shortage of qualified personnel, in virtual education or external social problems.

Even with the progress in the application of vaccines and awareness of the unavoidable health measures, in front of a possible return to face-to-face or mixed activities, the institutions should consider the possibility of establishing new internal guidelines based on the lessons learned, as well as robust contingency plans to build resilience and better respond to latent future crises.

As part of the diagnosis and awareness of such unexpected event, just after the pandemic began, a series of interviews were conducted with colleagues from Latin American universities with whom the research cohort was already working in virtual environments such as UNIMINUTO University (Colombia), Toribio Rodríguez University de Mendoza (Peru), various Mexican universities started by the Universidad Autónoma del Estado de Morelos, the Technological Institute of Sonora, La Salle University, El Colegio de Morelos, to name a few, and conferences, webinars and focus groups were held with different Latin American universities among which are the Catholic University of Temuco (Chile); Caribbean University Corporation (CECAR, Colombia); Luis Núñez University Corporation (Colombia); Network for the Internationalization of the Curriculum of Colombian Universities (RIUC, Colombia); National Autonomous University of Honduras (Honduras); University of Sinú (Colombia) and; UNIMINUTO University Virtual Headquarters (UVD UNIMINUTO, Colombia).

From the interviews and focus groups, the most recurrent concerns expressed by teachers, investigators and managers were rescued, especially those applicable to the areas of knowledge of the CA responsible for the research obtaining, first, a general list and later a classification of all the emerging elements, considering three main components to define the problems expressed by the referent participants to attend to the students during and post-pandemic. The first two refer to the cognitive and behavioral part, and the third deals with emotional aspects, working closely with each other, as shown in figure 7.1.

**Figure 7.1** Triad of components interrelated to describe the affectations caused by COVID-19



*Source: Juárez-Salomo, Norma Angélica (JSNA), 2021*

According to the previous graph (Figure 1), the effects described by students and academics caused by COVID 19 are closely related, and can be highlight their main concerns at the three levels as below:

#### The cognitive components:

- The urgent training and certification need focused properly in students, academics, and managers, specially about virtual environments, the uses of platforms, the identification of activities and resources, the use of applications for specific purposes, as well as familiarization with digital tools and applications likely to be used for academic activities, including criteria for identifying the most appropriate resources depending on the needs.
- Under the premise that not all the interesting topics are relevant to de different objectives, teachers' difficulty to identify, propose and / or develop activities that, due to their characteristics and dynamics, promote meaningful learning and, if possible, applicable, especially related to training that require practical activities such as laboratories, workshops, services, field practices, among other aspects.
- Lack of knowledge or lack of expertise of academics and students, in the management of technological tools, especially those related to design and production, incorporating audio and video resources, work on virtual platforms and environments, streaming resources, incorporation of social networks for educational purposes and digital narratives.
- Considering that until recently studies through virtual environments were not contemplated by the ministries of education with the same validity as face-to-face ones, concerns still prevail about the validity of the courses, about the assessments, including aspects about the evaluative forms and procedures.
- Overvaluation or generalization about students' skills (technological, communication, time management, among other aspects), discovering the challenges faced by students to carry out academic work and conceive their needs, styles and learning trajectories, especially pondering (in most cases) its main object-resource of communication and production, such as the cell phone.
- Difficulty finding learning alternatives with international, intercultural, and interdisciplinary approaches focused on the generation of projects aimed to solve real problems of a local and / or global nature (for example, Sustainable Development Goals).

#### The Behavioral Components:

- Lack of knowledge of electronic, administrative and management processes such as the opening of sophisticated virtual classrooms, electronic signatures, generation of documents to validate records, degree exams, minutes, to mention the most important.
- Academics report difficulty in defining criteria and strategies that they could establish to generate balanced proposals between activities and tasks, considering the management of real teaching time, administration, curricular content, forms of evaluation, among other aspects.
- Difficulty in establishing empathic links and developing commitment and collaboration mechanisms with students to promote timely and punctual participation, avoiding behaviors that do not contribute to the integral formation of students (values, involvement, commitment, etc.).
- Insecurity to define the most useful strategies to confront with solvency the didactic challenges caused by lack of familiarization with certain pedagogical models, virtual environments, emerging inter-institutional requirements.
- Urgency to develop organization mechanisms and definition of priorities avoiding jobs that increase volume or consume time in an unreasonable way.

Finally, regarding the Emotional Components, it was detected that the concerns were applicable to teachers as well as students:



- Manifestation of various levels of anguish related to the uncertainty about the near and distant future, standing out the fear of losing work, health, economic stability, among others.
- Concerns and ignorance about the generation of evidence of teaching and learning that confirms the work carried out and how to manage them at the request of the authorities.
- Uncertainty about the delivery of courses, design of *ad hoc* materials and implementation of evaluation and control mechanisms.
- Lack of control in the face of unexpected attitudes as an effect of distance and lack of presence (manifestations of disinterest, anger, boredom, absenteeism, among others).
- Burdened by the number of tasks and the consultancies that do not consider working hours, duration and / or format.
- Feelings of sadness, loneliness and / or absence motivated by lack of contact or behavioral introjection as a defense mechanism.
- Physical and mental exhaustion in the face of hours of screen and inactivity motivated by them.
- Shame before the open camera of students who allow others to interfere in their intimate spaces in their homes.

Bearing in mind the components stated considering the *Internationatics*<sup>3</sup>, we proceeded to the pedagogical underpinning, the results of which will be shared in the subsequent section, but in general the following items were detected:

- **Teacher Training.** The Universidad Autónoma del Estado de Morelos (Mexico) for just over 10 years, has had a formal training space for teaching in virtual environments, however, the creation of an alternative among professors to answer questions and receive advice was proposed between peers. Additionally, workshops were organized for reflection and implications of emerging pedagogies with an emphasis on international collaboration.
- **Collaborative Courses.** Regarding collaborative courses, and already between international peers, two specific Collaborative International Online courses (COIL) were designed and implemented.
- **Underpinning and consolidation of Research and Academic Cohort.** Taking advantage of virtual resources, research projects and Pan-American publications were proposed on topics common to the interest of universities and the adherence to Latin American research networks was made, generating new research groups and networks through which tutorials and co-tutelage of national and international theses are carried out.
- **Participation in outreach activities.** Virtual diplomas; Conferences, workshops and teacher update courses; Mirror Chairs and International Travelers; Itinerant thematic seminars; and Web site design to share international research products.

All the enunciated initiatives set the tone for the establishment of an internationalization strategy at home, initially considered for pedagogical strengthening but later as the need to include students and managers, expanding the scope.

---

<sup>3</sup> A term that refers to the set of communication and information technologies used in the internationalization process of universities. (Juárez-Salomo, 2012).

## 7.4 Results

The Universidad Autónoma del Estado de Morelos, like many universities in the world, conceived the need to initiate strategies of opening to the world inspired by the emerging globalization and the development of the Internet, in the mid-nineties, a time when virtual environments and international collaboration were in an incipient state of development. The use of educational platforms and distance training were just a dream and was unexpected to have other education model than face-to-face. It was far from imagining the interest that virtual environments would arouse, in the search for innovative teaching-learning strategies, and much less that information and communication technologies (ICT) would be the saving resource in a health emergency that, according to UNESCO-IESALC reports, it has affected more than 1.5 billion students in the world, highlighting inequalities in the field of education. It is with great concern that they receive the projections that indicate that almost 24 million students from primary to university are at risk of dropping out due to the current economic and health crisis (UNESCO-IESALC, 2020-b).

Since the emergency, efforts have been aimed to keep educational institutions open and functioning, to serve the affected populations, a matter of greater relevance since, as stated by Mr. Antonio Guterres, Secretary General of the United Nations (UN) "the decisions taken now in this regard will have a lasting effect on hundreds of millions of people and on the development of their countries" (UN, 2020). Today more than ever, the implications of local phenomena are understood globally, becoming "*glocal*" phenomena that concern humanity

It was by acting proactively in front of the pandemic, that the members of the CA of the Faculty of Architecture and the School of Tourism, understood the importance of contributing to the training of students and academics, taking advantage of the capacities developed over the years and, defining, as an axis of action, the safeguarding of heritage. Therefore, various strategies were proposed based on the methodology described in the previous section, underlining the importance of considering cultural diversity, multiple worldviews, and the importance of language learning, but this time "without leaving home". This is how the Internationalization Strategies at Home and *Internationatics* that are shared in this document were designed.

It should be noted that, in addition to the language courses taught in the faculty and the multimodal training programs in which the CA teachers have participated, five years ago experiences of Collaborative International Online Learning (COIL) began, first with two universities in New York (Rockland Community College and Nassau Community College), later with the National University of Costa Rica and more recently with the UNIMINUTO University of Colombia with which, just at the beginning of the pandemic, a program was being carried out of Cultural Dynamics, thanks to which it was possible to continue working among academics and students from Mexico and Colombia, being able to react immediately to the health emergency.

While it is true that the timely training of their teachers in virtual educational models can alleviate the difficulties, the reality is that not all teachers are in the same conditions. Even when an institution has access to databases with updated information on scientific research, with the possibility of accessing technological resources, or areas of multimodal education, until before the pandemic, very few teachers envisioned their teaching as a through virtuality with an infinity of hours of attention to the student.

Considering the experience of CA from the Faculty of Architecture and Tourism, after bittersweet experiences of training and accelerated development of materials, the virtual spaces established through international collaboration have reaped concrete results, contributing to the generation of knowledge, establishing a clear commitment with the cultural heritage of each country involved, creating ties in the context of cultural dynamics. The construction of joint learning about the built, natural, immaterial and community wealth, have given a sense of belonging, respect, and appreciation for the Mexican, American, Costa Rican and Colombian cultures, building in turn, fusions from the intellectual convergence. This type of experience has meant only a starting point towards the development of inquiry and research communities and specific topics with a greater number of participants, always in search of transformative social learning.

Just to illustrate the products of the intense work carried out during the pandemic, is possible to mention:

- a) Related to teacher training, a strengthening program was generated where more than a dozen workshops and virtual training conferences have been given, between the months of April to August 2020 and from January to August 2021 on teaching strategies, technologies for internationalization, emerging pedagogies, among others.

It is important to mention that, in principle, it was not the objective to generate research on teacher training or to design specific virtual environments, but the exchanges and participation in the institutions collaborated to detect the main problems faced by teachers due to the pandemic, so it was necessary to succumb to serendipity<sup>4</sup> and elevate reflections to action, generating a space for virtual collaboration in order to respond to the emerging demands of teachers.

- b) Regardless of the health emergency, the Faculty of Architecture and the School of Tourism were already participating in the COIL courses, seeking to strengthen the global competencies of their students, first with New York universities and later with central and South American universities, which allowed to react promptly to the health emergency.

COIL courses, based on the model, last regularly between 5 and 15 weeks and can be created in a disciplinary or interdisciplinary way; this model encourage active collaboration and teamwork; and it is possible to use any technological tool to achieve the learning objectives (SUNY-COIL, 2017). In the case of UAEM and UNIMINUTO, due to the sanitary emergency, it lasted from 6 to 18 weeks because, taking advantage of the Moodle platform, belonging to the UAEM, the students continued activities complementary to the program.

- c) In addition to the training courses and collaborative experiences, research projects and international publications emerged such as "Pedagogical and International Strengthening: A Necessary Pair to Face Emerging Social Challenges (Colombia); Online Collaborative International Learning Initiatives for the Development of Global Competencies in Tourism Students: Entrepreneurship for the Establishment of Cultural Dynamics Mexico-Colombia; Social Dynamics and Cultural Diversity: Online Collaborative International Teaching and Learning Strategies (ANEFEP-Mexico), only a few to mention.
- d) Research groups and networks. Considering the collaboration with national and international partners, the tutors and co-tutors were incorporated to the "Network of Latin American Researchers" *Kuélap*<sup>5</sup>, through which academic meetings, virtual diplomas, mirror seminars and international itinerant courses started to happen.

Even though internationalization is fundamentally related to the mobility of students and teachers and academic exchange, really the concept is much broader as it refers to all institutional capacities and strategies that range from language learning, access to bibliographies and international databases, curricular contents, intercultural strategies, and pedagogical models with multinational approaches, use of ICT, among other aspects.

Through international collaboration, in combination with technologies, the UAEM, through its research groups, seeks to strengthen the professional profile of its graduates, seeking to provide professional training to citizens capable of facing the problems that afflict their local communities and that may be the result of globalization.

## 7.5 Acknowledgments

To start, it should be mentioned that the carrying out of virtual environment research and production activities arose at the initiative of CA UAEMOR-145; "Management of the Tourist and Cultural Heritage", belonging to the Faculty of Architecture and the School of Tourism, and the unconditional support of its directors, administrative teams and students is recognized.

---

<sup>4</sup> The word 'serendipity', although it is not registered in the RAE dictionary, has been taken from English (serendipity) and is commonly used to indicate an interesting or valuable finding made by chance.

<sup>5</sup> Organization that is recognized by Rectoral Resolution No. 160-2020-UNTRM / R.

Regarding the initial proposals of COIL, it is to recognize the invaluable support to the United States Embassy and the coordinators of the SUNY-COIL initiative, sponsored by the network of New York universities that, together with the support and collaboration of the National University of Costa Rica and the UNIMINUTO University of Colombia, it has been possible to extend the action and with the accompaniment of the e-UAEM Coordination, it was possible to count with virtual classrooms and technical support to carry out the activities.

Finally and in a very special way, a sincere recognition to the Kuélap Network and the Toribio Rodríguez de Mendoza University (Peru), to the academics of the Universidad Autónoma del Estado de Morelos, the Technological Institute of Sonora, the La Salle University, to The College of Morelos, to the Catholic University of Temuco (Chile); the Caribbean University Corporation (CECAR, Colombia); the Luis Núñez University Corporation (Colombia); the Network for the Internationalization of the Curriculum of Colombian Universities (RIUC, Colombia); the National Autonomous University of Honduras (Honduras); the University of Sinú (Colombia) and; UNIMINUTO University Virtual Headquarters (UVD UNIMINUTO, Colombia) which, through the meetings held, allowed the holding of conferences, webinars and focus groups that motivated this research work.

## 7.6 Conclusions

The need to identify the pedagogical alternatives necessary to fulfill the mission through innovation, but also those resulting from experience and culture, often implies moving quite variegated administrative and social apparatuses that are installed in their certainties and resist little-known models, to include strategies of virtual environments, can be a challenge that is not easy to achieve, however considering the results and the responses of the students, it is not only possible, but desirable for a training more in line with today's society.

The experiences of collaboration and online pedagogies generated in the Department of Architecture and the School of Tourism at UAEM, have collaborated to the construction of local and international learning communities, contributing to the emergence of exchange synergies and connections for the generation of knowledge, based on the concepts of social constructivism and collaborative learning. Both the COIL courses and the pedagogical strengthening activities have been proposed to add a enriched dimension to the internationalization of the curriculum and the *internationatics* (Juárez-Salomo *et al.*, 2018) and, in front of the pandemic, they have been the best way to understand how the pedagogical design using technologies can give a sense of reality and planetary relevance without leaving home, incorporating, for example, alternatives to achieve the Sustainable Development Goals, from the various areas of knowledge, in order to generate awareness and spirit, both of teachers and students.

In addition to the experiences and resources listed, there are materials such as UNESCO's COVID 19 Education Response Manual (UNESCO COVID-19, 2020) made available to help build communities of teachers who share and enrich resources and practices, contributing to their professional growth and in the institutionalization of their professional work. Even though it is ironic, it should not be forgotten that *coronateaching* existed as a reflection of a pandemic that has led to paralysis and even the abandonment of university activities. It should be noted that ignorance as well as an excess of technological resources can be overwhelming and counterproductive.

During the present pandemic, even for the most accustomed, it has been clear that managing multiple resources at the same time generates tension, uncertainty, overwhelm and a reduction in the level of productivity. Work with different screens open while an email, a tweet, a message arrives on social platforms (Google Calendar, WhatsApp, Facebook, or LinkedIn) or announces the start of a virtual conference in Zoom, WebEx Adobe Connect or Google Meet for example is not only confusing, but also harmful to the nervous system.

Faced with the imminent challenges, the answer has not been to waste time on complaints and discouragement, but to take advantage of this experience to positively change the conception of pedagogy, incorporating knowledge and actions with meaning and relevance, to promote the formation of more reflective, imaginative students, creative and purposeful, from bringing them closer to a more tangible knowledge and closer to their reality; to favor proactive and creative minds that apply innovative ideas in solving everyday problems.

The changing and challenging recent planetary history, especially since COVID-19, has led to the conception of a new paradigm of the international order where the reconfiguration of citizen and power axes have proposed terms such as human security, where the appropriate reference for the definition of security should be the individual and not the state; or the Responsibility to Protect, adopted in 2005 at the World Summit, understood as the international collective -ethical- responsibility to act in the face of massive atrocities and to protect populations from genocide, war crimes, ethnic cleansing and crimes against humanity. Based on these concepts, the 2030 Development Agenda and the 2015 Paris Agreement have been promoted, setting a historical precedent for the commitment to implement a global development agenda (the SDGs that have already been mentioned).

As already mentioned, incorporating the international dimension is to promote creativity, convinced that UNESCO's cultural conventions (2020) ...

“... They constitute a unique global platform for international cooperation and establish a comprehensive cultural governing body based on human rights and common values. These international treaties seek to protect and conserve the cultural and natural heritage of our planet such as archaeological sites, underwater heritage, museum collections, intangible heritage - oral traditions, for example - and other forms of heritage. They also encourage creativity, innovation and the emergence of dynamic cultural sectors”.

If the events and impacts of social and cultural phenomena are global, so is heritage, but not in this intention to homogenize their representations and manifestations, but to recognize that human beings have many more elements that unite them and identify them with their fellow human beings. and, therefore, the exchange will contribute to the wealth of knowledge and local knowledge, as well as to international collaboration for the collective creation of strategies to dignify heritage.

In line with Zurab Pololikashvili, UNWTO Secretary General (2021), given the spread of COVID international mobility, especially tourism, continues to be a fundamental economic force and it is likely that it will take at least five years for the student mobility flows could be reestablished, and it is most certain that they will be different and with dynamics not yet known. For this reason, it is necessary to work and deepen in international alternatives beyond mobility.

Heritage-oriented innovation must be present in various aspects such as promoting visits using multiple resources including social networks, disseminating its value through academic productions, research and outreach projects aimed at all audiences, raising awareness in various settings. about its fragility, to interest citizens and authorities in the importance of its preservation, among other actions, all this organized, with adequate techniques, with well-endowed plans, with well-organized campaigns, to make a difference to achieve existence and prevent extinction. It is necessary to understand that, for the protection of heritage, the participation of collaborators from various areas, who make the cause their own, is required, and this includes the inhabitants of the communities' raising proposals for education in culture for the various segments of society.

In a favorable sense, from the line of educational tourism, the incorporation of technologies, new trends and approaches towards sustainability are on the rise, waiting for conscious, creative and proactive specialists in this area, particularly with emphasis on sustainability and the care of heritage, material and immaterial, and through education, contributing to the training of professionals who will face multicultural and intercultural work and learning spaces, permeated by increasingly challenging planetary defies.

Both the COIL courses as well as the pedagogical and research strengthening courses at UAEM have influenced the development of global competencies such as empathy and solidarity among participants, based on a culture of peace. Attributes such as flexibility, curiosity, sensitivity, responsibility, commitment, as well as awareness of cultural differences, are among the wonderful assets that this type of course encourages and allows to develop. Regarding the extension activities for collaboration, it is difficult to determine the number of participants in the conferences because in virtual environments, the participants can be several hundreds on each occasion. However, the number of teachers is not the focal point of the research, but the obvious coincidences between each of the groups that motivated the list and classification presented in the methodology. Additionally, the approaches and needs to "be addressed" were determined, resulting in the following needs:

- Production of materials for awareness and motivation among colleagues Webinars, Podcast, Testimonials, resource bank, online channels, and blogs.
- Specific training on distance learning and e-learning through virtual and hybrid workshops to learn about pedagogical alternatives.
- Strengthening of existing e-learning alternatives: Propose and implement strategies based on emerging pedagogies.
- Develop the "laboratory of experiences" for teaching: Conduct and follow up on experiences with innovative technological tools.
- Respond to requests for accompaniment on virtualization and internationalization of the curriculum: Provide pedagogical, technological, and multimedia production advice in coordination with the institutional multimodal education areas.
- Promote and accompany the design of Learning Units: Provide pedagogical, technological, and multimedia production advice in coordination with the multimodal education areas.

One of the most difficult learning to assimilate is the transformation in the communicating and relating ways, both in personal and in social life and work activities, modifying the processes and even the formal structures of the universities. The studies have been recognized and the virtual agreements have been validated, labor, evaluation and management mechanisms have been defined and concrete actions have been established to address diversity and social inclusion, acting for vulnerable populations attention, strengthen institutional identity, work more towards social responsibility and design strategic plans for the development of communities and much more.

The challenges are multiple and complex and have been addressed in an accelerated and often improvised manner, but the time has come to propose the necessary strategies to face the new reality in a more organized way, consistent with current demands and, above all, safeguarding the integrity of people, their families, and their work environments. There is still a lot to do, especially in the attention of the cognitive and behavioral components and in a very special way to the emotional ones.

## 7.7 References

Cuevas, M., Hernández, G. and Juárez, N. (2017). *The Investigation of the Academic Bodies in Education and Humanities. "Management of the Tourist and Cultural Heritage"*. Mexico. Universidad Autónoma del Estado de Morelos.

Fudéu-RAE (2019). Glocal, valid term- URL: <https://www.fundeu.es/recomendacion/glocal-termino-valido/> (last visited August 17, 2021).

Gao, Catherine Yuan (2019) *Measuring University Internationalization, Indicators Across National Context*. Palgrave Macmillan.

IESALC, 2021. *Higher Education in Nicaragua and the Impact of COVID-19*. Lecture by C. Frances Pedró organized by the National Autonomous University of Nicaragua (UNAN). URL: <https://www.iesalc.unesco.org/evento/foro-la-educacion-superior-en-nicaragua-2020-y-el-impacto-de-la-covid-19/#.YMjZ1C2xBQI> (last visit May 10, 2021).

Juárez-Salomo, Norma (2012). *The Internationatics: Technologies at the Service of International Education*. Mexican Association for International Education, Mexico. AMPEI.

Juárez-Salomo, N., Cuevas Olascoaga, M., & Gama Hernández, G. (2017). *Internationalization strategies for comprehensive training in tourism. Inventio, the genesis of university culture in Morelos*. UAEM. Mexico.

Juárez-Salomo, N., Cuevas, M. y Gama, G. Curricular Strengthening Development of Global Competencies in Face-to-face and Virtual Environments for the Bachelor of Tourism. *Inventio*. Magazine of the Universidad Autónoma del Estado de Morelos. October-January 2018.

Knight, Jane (2003). *Updating the Definition of Internationalization*. Toronto International Higher Education. URL: [https://www.researchgate.net/publication/248809738\\_Updated\\_Internationalization\\_Definition/citation/download](https://www.researchgate.net/publication/248809738_Updated_Internationalization_Definition/citation/download) (last accessed June 9, 2021).

OMT (2021). *Guide the Recovery of Tourism*. UNWTO World Crisis Committee. URL: <https://www.unwto.org/es/turismo-covid-19> (last consulted June 11, 2021).

World Health Organization -WHO- (2021). *WHO Urges Countries to Build a Fairer and Healthier World After the COVID 19 Pandemic*. URL: <https://www.who.int/es/news/item/06-04-2021-who-urges-countries-to-build-a-fairer-healthier-world-post-covid-19> (last consulted June 9, 2021)

United Nations Organization (2017). *Goals of the Sustainable Development Goals*. URL: [https://www.onu.org.mx/wp-content/uploads/2017/07/180131\\_ODS-metas-digital.pdf](https://www.onu.org.mx/wp-content/uploads/2017/07/180131_ODS-metas-digital.pdf) (last visited June 10, 2021).

UNESCO-IESALC (2020-a). *Coronateaching Syndrome or New Opportunity for Reflection? I / Ii* URL. <https://www.iesalc.unesco.org/2020/07/02/coronateaching-sindrome-o-nueva-oportunidad-para-la-reflexion-i-ii/#ref9> (last visited August 17, 2021).

UNESCO-IESALC (2020-b). *Of the immediate effects the day after. Analysis of impacts, policy responses and recommendations*. Caracas: UNESCO International Institute for Higher Education in Latin America and the Caribbean (IESALC). URL: <http://www.iesalc.unesco.org/wp-content/uploads/2020/05/COVID-19-ES-130520.pdf> (last consulted March 3, 2021)

UNICEF (2021) *COVID-19 and School Closures. One Year of Education Disruption*. URL: <https://data.unicef.org/resources/one-year-of-covid-19-and-school-closures/> (last accessed April 10, 2021)

SEP / DGPPyEE (2020) *Continuous Statistics System. Format 911. "Higher Education Statistics"* URL: [https://www.planeacion.sep.gob.mx/Doc/estadistica\\_e\\_indicadores/principales\\_cifras/principales\\_cifras\\_2019\\_2020\\_bolsillo.pdf](https://www.planeacion.sep.gob.mx/Doc/estadistica_e_indicadores/principales_cifras/principales_cifras_2019_2020_bolsillo.pdf) Accessed on May 26, 2021.

SUNY-COIL (2017) *WHAT IS COIL?* Website: <https://online.suny.edu/introtocoil/que-es-coil/> Accessed August 14, 2020.

UNESCO COVID-19 (2020). *Distance Learning Solutions*. Website: <https://en.unesco.org/covid19/educationresponse/solutions> Accessed August 14, 2020.

UNESCO (2020) *Global Monitoring of School Closings Caused by COVID19*. Website: <https://es.unesco.org/covid19/educationresponse> Accessed on August 19, 2020.